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Defining and Measuring the Success of Service Contracts

31 May 2012

by

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DEFINING AND MEASURING THE SUCCESS OF SERVICE CONTRACTS

ABSTRACT

Services acquisition in the U.S. Department of Defense (DoD) has continued to increase in scope and dollars in the past decade. The DoD has spent more on services, approximately 57% of total acquisition expenditures and nearly a third of the total DoD budget, than on supplies, equipment, and goods together. As a result, the agency must give greater attention to the management of services acquisition. Stakeholder theory illustrates how acquisition team members often have conflicting goals and objectives, leading to differing definitions and measurements of a successful service contact. We used stakeholder theory to address the following questions: (1) how are successful service contracts within the DoD being defined by different stakeholders; (2) how are service contracts being measured within the DoD by different stakeholders; and (3) how should service contracts be defined and measured within the DoD. We conducted 41 interviews and surveys of key stakeholders. Our findings reveal no standardized definition or measurement for the success of service contracts. However, some salient characterstics of definitions are staying on schedule, maintaining costs, and having well-defined requirements. With respect to measurements, relevant characteristics included performance and cost. Based on these findings, we provide recommendations on establishing standardized definitions and measurements of success.

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LIST OF ACRONYMS AND ABBREVIATIONS

C.F.R.	*Code of Federal Regulations*
COR	Contractor Officer Representative
DAWIA	Defense Acquisition Workforce Improvement Act
DFARS	Defense Federal Acquistion Regulation Supplement
DoD	Department of Defense
FAR	Federal Acquisition Regulation
FLC	Fleet Logistics Center
FY	Fiscal Year
GAO	Government Accountability Office
GTE	Government Technical Evaluator
GTR	Government Technical Representative
IACCM	International Association of Contract and Commercial Management
IG	Inspector General
IPMA	International Project Management Association
IPT	Integrated Product Team
ISM	Institute for Supply Management
NAVAIR	Naval Air Systems Command
NAVSEA	Naval Sea Systems Command
NCMA	National Contract Management Association
QASP	Quality Assurance Surveillance Plan
PCO	Principal Contracting Officer
PM	Program Manager

PMI	Project Management Institute
S.M.A.R.T.	Specific Measurable Assignable Realistic Time
SOO	Statement of Objectives
SOW	Statement of Work
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logisitcs

I. INTRODUCTION

A. BACKGROUND

Over the last few decades, Department of Defense (DoD) service contracts have increased in dollar value. Relative to supply contracts, services acquisition has continued to grow in terms both of dollar value and of range of acquisitions. This trend is shown in Figure 1 (Rendon, Apte, & Apte, 2012). This figure demonstrates that between fiscal year (FY) 2000 and FY2010, growth in service contracts more than doubled. Contract obligations rose to over $387 billion in 2008, with nearly $200 billion spent on services alone (Hutton & Solis, 2009). As such, a management and oversight plan, and clearly defined metrics for successful service contracts are important.

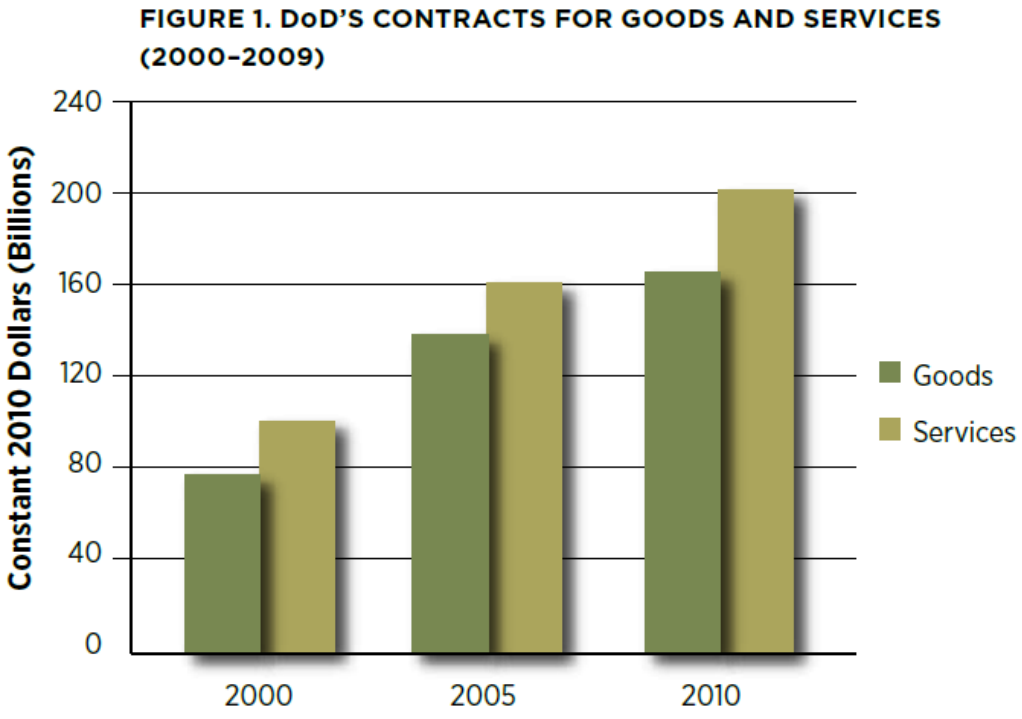

Figure 1. DoD Contracts for Goods and Services
(Rendon, Apte, & Apte, 2012)

Figure 2 clearly demonstrates this growing trend in service contract expenditures. Funding spent on service contracts grew steadily from 1990–2010, constituting roughly 42% of the total spending on contracts by the DoD, exclusive of research and development

services contracts. Notably, service contracts showed the highest growth in percentage of expenditures over the last 21 years, with a rise of nearly 6.1% annually (Ellman, Livergood, Morrow, & Sanders, 2011). An in-depth study of services acquisition will help develop recommendations to evaluate the factors of success in services contracting.

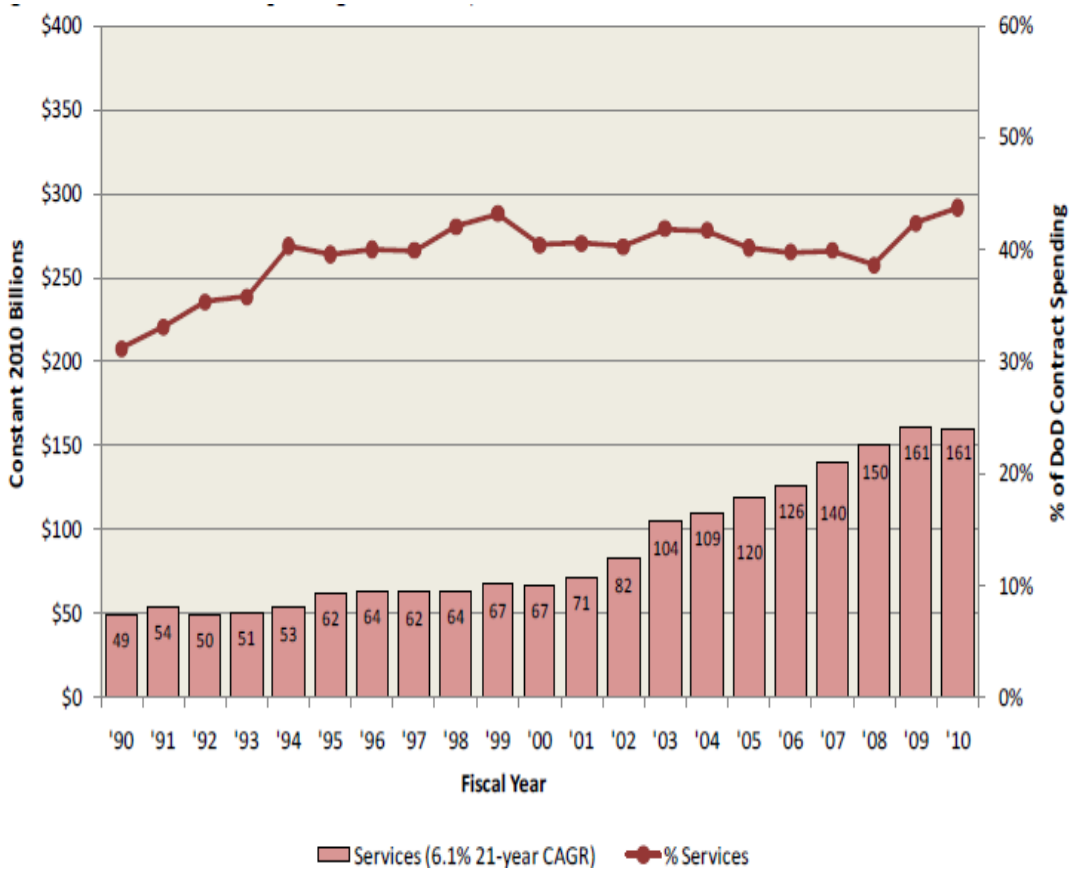

Figure 2. Growth in DoD Service Contract Expenditures
(Ellman et al., 2011)

The definition and measurement of successful service contracts should align with the overarching initiatives, as illustrated by the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L]). The USD(AT&L) outlined these initiatives in his June 2010 memorandum on acquisition efficiency. In his memorandum, he noted that the Department of Defense currently spends nearly $400 billion out of its $700 billion budget on contracted goods and services. The DoD has set a goal to achieve savings of more than $100

billion over the next five fiscal years. The USD(AT&L) describes this initiative in terms of an efficiency and cost-effectiveness overhaul. The DoD, according to the USD(AT&L), has the potential of increasing its warfighter capability by 2–3% annually, without future budget increases. In addition, identifying and cutting unproductive or low-value programs and contracts will free up funding to transfer to more productive warfighter programs. The USD(AT&L) states that the United States is entering a period of budget reform, stunting the budget growth of the previous decade. The ability to properly manage and access every service contract is essential to reduce inefficiencies and eliminate nonperformance, and, consequentially, to achieve the level of savings required by the DoD savings initiative (USD[AT&L], 2010).

B. PURPOSE

Our purpose with this research was to conduct a comprehensive investigation into the definition and metrics of a successful service contract from the perspective of various stakeholders. Our primary data collection method was interviews conducted with DoD stakeholders. With our research, we determined if the stakeholders define and measure the success of service contracts differently. The results of this project support ongoing research being conducted by the Acquisition Research Program at the Naval Postgraduate School concerning the DoD's management of service contracts (Apte, Apte, & Rendon, 2010).

C. RESEARCH QUESTIONS

With our research, we attempt to answer the following questions as they relate to the definition and measurement of successful service contracts within the DoD, and as determined by the different identified stakeholders:

1. How are successful service contracts within the DoD being defined by different stakeholders?
2. How are service contracts being measured within the DoD by different stakeholders?
3. How should service contracts be defined and measured within the DoD?

D. BENEFITS AND LIMITATIONS OF THIS RESEARCH

In addition to identifying how stakeholders currently define and measure the success of service contracts, we aim to provide key information to develop sound protocols and metrics for future service contract success. By determining how each stakeholder within the DoD defines a successful service contract, we endeavor to distinguish the key driving factors of service contract success that lead to greater performance and savings.

This research was limited by the sample size and scope of the population of stakeholders interviewed. Of the numerous organizations within the DoD, a small percentage of these stakeholders participated in the research.

E. RESEARCH METHODOLOGY

This research utilized a web-based survey, telephone interviews, and personal interviews of the various stakeholders within DoD service contract activities. The survey consisted of two open-ended questions and three demographic questions. We conducted a review of the literature on service contract management and stakeholder theory. We then developed a survey to investigate the definition and measurement of successful service contracts. The survey was deployed across three contracting commands within the Navy. The responses of all participants were analyzed and examined for differences and commonalities. We then developed conclusions and provided recommendations for the definition and measurement of a successful service contract process. Finally, we analyzed and examined the results to identify and categorize how stakeholders define and measure successful service contracts.

F. ORGANIZATION OF REPORT

This report is organized into five chapters. In Chapter I, we include background information, the purpose of the research, our research questions, the benefits and limitations of the research, and the research methodology. In Chapter II, we review past and current literature on the services contracting process. We describe the members of the acquisition team, their roles and responsibilities, as well as their goals and objectives. We then identify the deficiencies in service contract management evidenced through several Government

Accountability Office (GAO) and Inspector General (IG) findings. Further, we present the research on stakeholder theory and how it relates to the service contract management process. In Chapter III, we outline our research methodology, which includes our data collection and analytical process. In Chapter IV, we examine and analyze the research findings. In Chapter V, we provide the summary, conclusions, and areas for further research.

G. SUMMARY

In this chapter, we provided background information on service acquisition within the DoD, the purpose of the report, our research questions, the benefits and limitations of our research, and the methodology and organization of the report. The information we provided outlined the objectives described by the USD(AT&L) and how these objectives relate to the definition and measurement of successful service contracts. The research questions are the primary focus of this report. In Chapter II, we review past and current literature on the service contracting process, the acquisition team, roles and responsibilities of service acquisition personnel, goals and objectives of service acquisition personnel, deficiencies in service contracts, and stakeholder theory.

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II. LITERATURE REVIEW

A. INTRODUCTION

In Chapter I, we established the foundation of this research. In Chapter II, we introduce past and current literature on the service contracting process, the acquisition team, roles and responsibilities of service acquisition personnel, goals and objectives of service acquisition personnel, deficiencies in service contracts, and stakeholder theory.

B. SERVICE CONTRACTING PROCESS

Service contract management is defined as the art and science of managing an agreement throughout the process of contracting (Rendon & Snider, 2008). The contract management process can be described utilizing a six-step model. Following is the list of phases within the process and the key activities of each phase:

1. Procurement Planning: Identification of which organization or business needs can be best achieved by procurement of services or products external to the organization. Key activities include determining the scope of work; completing market research, technology analysis, and funding determination; and creating estimates for cost and schedule.
2. Solicitation Planning: Preparation of solicitation documentation to support the acquisition. Key activities include using standardized forms, model contracts, specifications and descriptions of items, and terms and conditions of the contract.
3. Solicitation: Obtaining bids and proposals from prospective contractors on how to meet the objectives of the service contract. Pertinent activities include conducting advertising to identify new sources and compiling a list of interested offerors.
4. Source Selection: Receipt of proposed bids and application of selection criteria for supplier products or services. Activities specific to this phase

include using evaluation criteria centered on management, technical, and cost factors and considering an offeror's past performance in evaluating proposals.

5. Contract Administration: Ensuring that each supplier's performance is in accordance with contractual requirements. Key activities include employing an integrated team approach to monitor the contractor's cost, schedule, and performance. Additionally, this phase includes establishing a process for administering incentives for award fee provisions.
6. Contract Closeout: Validation of administrative matters pertaining to completed contracts. Activities unique to this phase include using checklists and forms for documentation of closed contracts and maintaining lessons learned and best practices for use in future contracts (Rendon & Garrett, 2005).

The outlined activities and steps in the service contract process are performed by the various members of the acquisition team, as discussed in the next section.

C. THE ACQUISITION TEAM

Throughout the federal acquisition service contracting process, the vision is to deliver the best value to the customer in a timely manner, while maintaining the public's trust and fulfilling public policy objectives (FAR, 2012). The Federal Acquisition Regulation (FAR) further delineates that all the participants in the acquisition process should work together as a team and should be empowered to make decisions within their area of responsibility (FAR, 2012). The FAR defines the acquisition team as consisting of all participants in government acquisition, including not only representatives of the technical, supply, and procurement communities, but also the customers they serve and the contractors who provide the products and services (FAR, 2012). According to the FAR, the role of each member of the acquisition team is to exercise personal initiative and sound business judgment in providing the best value product or service to meet the customer's needs (FAR, 2012). These team members can be senior agency leaders, government personnel, administrative employees, and even support employees (U.S. Merit Systems Protection Board, 2005).

Many commercial organizational structures have incorporated the use of cross-functional teams in an effort to improve communication, coordination, and collaboration among the team (Monczka, Handfield, Giunipero, & Patterson, 2011). The DoD implements the cross-functional team through the use of an Integrated Product Team (IPT). It is useful to note that the IPT is primarily used in contracting for products to facilitate the process of meeting cost, performance, and schedule objectives from product concept through production, including field support ("Integrated Product Team (IPT)," n.d.). In service contracting the IPT is a team composed of representatives from appropriate functional disciplines working together to identify and resolve issues; make sound, timely recommendations in an effort to facilitate decision-making; and build successful programs that meet the warfighter's needs ("IPT," n.d.).

This research examines the internal members who could be considered stakeholders of the acquisition, specifically the program manager (PM), principal contracting officer (PCO), and contracting officer representative (COR).

1. Project Manager

The project management profession is principally represented by the Project Management Institute (PMI) and the International Project Management Association (IPMA); each group has its own representative professional certification (Garrett, 2010). Project management is defined as the centralized, coordinated management of a program to achieve the program's strategic objectives and benefits (PMI, 2008). For the purposes of this report, the project manager is termed *program manager* (PM). The PM has the ultimate responsibility for all cost, schedule, and technical aspects of the program (Deneault & Stambaugh, 2000, p. 22). A PM's responsibilities cut across multiple acquisition functional areas (e.g., business, contracting, facilities engineering, information technology, life cycle logistics, quality, systems planning) as well as knowledge in other technical areas (Krieger, 2011a, p. 24). In most companies, PMs serve as multifunctional team leaders on one or more projects, responsible for achieving the desired results for the projects (Garrett, 2010). However, most PMs lack the authority to sign, modify, or cancel contracts that legally bind companies (Garrett, 2010). The same is true for DoD PMs. In the DoD, the PM is

responsible for identifying the requirements; managing the project processes; and planning, monitoring, and executing the project. Further, the PM is accountable for addressing the various needs, concerns, and expectations of the stakeholders as the project is planned and executed (PMI, 2008). In carrying out the role of PM, various constraints must be balanced. The most common constraints are the following: scope, quality, schedule, budget, resources, and risk (PMI, 2008). These are often competing constraints as the project progresses. The scope is defined as the work that needs to be accomplished to deliver the service. Included in the scope is the management plan, the description of how the project will be managed and controlled as well as a baseline that is compared to the actual results. Quality is the results toward which the constraints are driving. The schedule is the sequence of activities and duration to complete the service. The budget is managing, estimating, and controlling costs of the service. Resources refer to the human personnel constraint that must be managed. In all projects, risk must be identified, monitored, and managed. All of these common constraints and their interdependencies are best illustrated in the project management triangle, shown in Figure 3. Each side represents a constraint. These three constraints often compete: increased scope typically means increased time and increased cost, a tight time constraint could mean increased costs and reduced scope, and a tight budget could mean increased time and reduced scope (Sekhar, 2010). The DoD 5000 Series is a regulatory document that provides guidance and policy for the management of defense acquisitions. Program management is the management of all of the project goals and objectives, while honoring the preconceived constraints as well as ensuring compliance with the 5000 Series directives in the *Defense Acquisition Guidebook* (Krieger, 2011a).

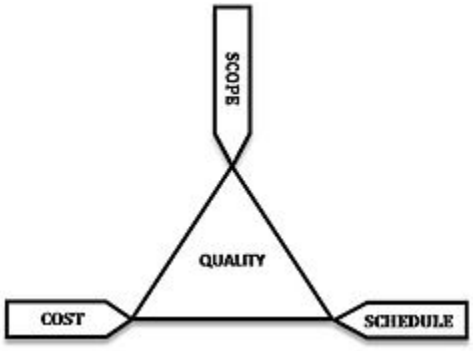

Figure 3. Project Management Triangle

According to *A Guide to Best Practices for Contract Administration*, program management activities include planning, organizing, securing, and managing resources to achieve specific goals (Office of Federal Procurement Policy, 1994). The PM adapts to various internal procedures of the contracting process and forms close links with the various stakeholders. To achieve client satisfaction, it is essential that the PM realize key issues of cost, schedule, and performance. In government acquisition, the PM should obtain integrated cost and schedule performance data at an appropriate level in order to monitor program execution. The PM should require contractors and government activities to use internal management control systems that accomplish the following:

- relate time-phased budgets to specific tasks identified in the statement of work;
- produce data that indicate work progress;
- properly relate cost, schedule, and technical accomplishment; and
- produce data that are valid, timely, and auditable. (USD[AT&L]), 2008)

In government acquisition the PM is ultimately accountable to the end user and Congress. Therefore, the PM activities include extensive coordination with internal and external stakeholders (Deneault & Stambaugh, 2000, p. 23). The PM owns the acquisition strategy which drives the acquisition plan (Krieger, 2011a, p. 42). This strategy shall be in writing and prepared in accordance with all the requirements of subpart 7.1. of the FAR (2012). The strategy is the PM's overall plan for satisfying the mission need in the most effective, economical, and timely manner, so before there is a contract, the PM owns the acquisition strategy that the contracting officer will seek to implement (Krieger, 2011b, p. 42).

In government acquisition, PMs are seen as successful if they continue to perpetuate their program through the acquisition life cycle. This focus tends to take precedence over reporting realistic program status. PMs are, by nature, becoming program advocates. A PM's future assignments and promotions depend on the success of the program, and it becomes very difficult for the PM to "blow the whistle," hoping that they will be transferred before the true costs of the project become known (Fox, Hirsch, Krikorian, & Schumacher, 1994). The PM receives guidance and oversight from all three branches of the government;

serious problems with a program can significantly jeopardize congressional and Office of the Secretary of Defense support for the program (Krieger, 2011a). PMs sometimes lack realism and have undue optimism; a program cancellation or reduction in scope is perceived by service superiors as a PM's failure. Therefore, a conflict exists between reporting realistic program status and doing what is necessary to keep programs funded and moving through the acquisition life cycle (Fox et al., 1994).

2. Principal Contracting Officer

The contract management profession is represented by three professional associations: the National Contract Management Association (NCMA), the Institute for Supply Management (ISM), and the International Association of Contract and Commercial Management (IACCM). Each group has its own professional certifications (Garrett, 2010). Contract management is a career field that takes significant on-the-job training to become truly competent (Deneault & Stambaugh, 2000, p. 21). Only a few educational institutions offer degrees or professional certificates in government contract management, and education does not always equate to experience (Deneault & Stambaugh, 2000, p. 21) A contract manager must be able to integrate functional inputs into a solicitation and the resulting contract (Krieger, 2011a, p. 25). Despite the fact that contract managers are seldom responsible for daily project planning or operation, they are authorized to enter their organizations into legally binding contractual arrangements (Garrett, 2010). Contract managers must be able to examine the contractual meaning of pre-contractual events and documents. Contract managers must discern the objectives, needs, limitations, and even prejudices of other stakeholders (Hirsch, 1986). When a contract manager has this sensitivity, the contract manager can reduce strife and gain empathy towards other members of the acquisition team (Hirsch, 1986). A contract manager must have the skills to answer the following questions: (1) What is the work? (2) What are and where do we find the skills to perform the tasks? and (3) How do we ensure the work is done effectively at the lowest price (Cohen & Eimicke, 2008)? Most organizations empower one or more employees in the role of contract management, and in some agencies a relatively small number of high-level officials are designated contracting managers solely by virtue of their positions (National Archives and Records Administration, 2012). This employee (the contract manager) is

referred to in contract law as the agent; the source of authority is referred to as the principal (Garrett, 2010). In DoD contracting this agent is called the principal contracting officer (PCO) and the principal is the federal government. PCOs have the sole authority of the government to legally bind, enter into, administer, and terminate contracts and make related determinations and findings. PCOs may bind the government only to the extent of the authority delegated to them in clear, written instructions as to the limits of their authority through their warrant (FAR, 2012). The PCO is responsible for meeting the conditions of the contract, and, therefore, spends more time on business and legal issues and contract administration (Deneault & Stambaugh, 2000, p. 23). A PCO's warrant is taken very seriously; it distinguishes an individual for taking on a significant amount of responsibility and accountability.

> Warrants are not taken for granted after they are received because they can be lost through job changes or the belief by superiors that a person lacks the skills or knowledge necessary to uphold the position. When a warrant is lost a contracting officer has no choice but to change careers or earn another warrant. (Deneault & Stambaugh, 2000, p. 22)

The government's warrant authorizes the PCO as the only individual who can financially obligate the organization and requires them to be involved in all communications (Deneault & Stambaugh, 2000, p. 22). Thus, a significant amount of training is required on the constraints of the law and requirements of the contract (Deneault & Stambaugh, 2000, p. 22). No contract shall be entered into unless the PCO ensures that all requirements of law, executive orders, regulations, and other applicable procedures, including clearances and approvals, have been met (FAR, 2012). Further, PCOs are responsible for ensuring performance of all necessary actions for effective contracting, to include ensuring compliance with the terms of the contract and safeguarding the interests of the United States in its contractual relationships while ensuring adherence to procurement laws and regulations, given their ability and instructed by title 48 of the *Code of Federal Regulations* (C.F.R.), the FAR (2012), and the Defense Federal Acquisition Regulation Supplement (DFARS; 2010). Additionally, the PCO is responsible for assisting in clarifying agency needs, conducting market research, determining contract methods, planning acquisitions, competing and meeting source selection requirements, and conducting negotiations (Hirsch,

1986). In order to perform these responsibilities, contracting officers should be allowed wide latitude to exercise business judgment. The FAR specifically mandates that contracting officers shall

(a) Ensure that the requirements of 1.602-1(b) (FAR 2012) have been met, and that sufficient funds are available for obligation;

(b) Ensure that contractors receive impartial, fair, and equitable treatment; and

(c) Request and consider the advice of specialists in audit, law, engineering, information security, transportation, and other fields, as appropriate.

(d) Unless the contracting officer retains and executes the COR duties, in accordance with agency procedures, designate and authorize, in writing, a COR on all contracts and orders other than those that are firm-fixed price, and for firm-fixed-price contracts and orders as appropriate. (FAR, 2012)

3. Project Manager and Principal Contracting Officer Similarities and Differences

Often PMs and PCOs work in a matrix organization characterized by multifunctional teams. PMs' and PCOs' roles often overlap in terms of competencies and responsibilities. This is evident in looking at their professional certification programs, bodies of knowledge, and day-to-day interactions (Garrett, 2010). On the acquisition team, the PM is responsible for what needs to be done to execute the program through the phases outlined in the acquisition strategy; the PCO and the other members of the acquisition team implement the strategy through the contract (Krieger, 2011b, p. 42). In successful programs PMs and PCOs work together effectively, yet there is a great deal of conflict. In some instances, the PM is separated from the supported team members (Deneault & Stambaugh, 2000, p. 22). PMs rely on their functional departmental support to achieve program success. In this interaction, there is a potential for conflicts between the stakeholders' interests; the PM is in charge overall, but the PCO is the only member that can challenge the PM's authority (Deneault & Stambaugh, 2000, p. 22). PMs often feel that their flexibility is constrained by the conservative interpretations of the PCO (Deneault & Stambaugh, 2000). PM and PCO roles overlap at the intersection where program execution meets contracting officers' authority.

Flexibility and adaptability have become prerequisite traits for PMs and PCOs to succeed (Deneault & Stambaugh, 2000, p. 22).

As previously discussed, the PM is focused on meeting cost, schedule, and performance objectives while progressing through the project life cycle. The PCO is responsible for ensuring all aspects of the law are complied with and protecting the government's interests. These two different perspectives are often in conflict with each other. The PCO's objectives do not align with the PM's. This could be the reason why one could say the PCO is the unpopular player on the acquisition team (Hirsch, 1986).

4. Contracting Officer Representative

PCOs designate and authorize the CORs. As the technical subject matter expert on the acquisition team, the COR is an integral stakeholder in the contracting process and is the first line of surveillance on government contracts. The COR also plays a critical role in contract administration. Agencies and departments have many different titles to describe the COR. Other titles used for this role are government technical representative (GTR) and government technical evaluator (GTE; Office of Federal Procurement Policy, 1994). In this thesis, we use COR because it is the most common title for this function. The COR is nominated by the PCO, as early as practicable in the acquisition process (FAR, 2012). The COR's administrative duties range from simple to complex, dependent on the type of contract, contractor performance, and the nature of the work. The COR functions as the "eyes and ears" of the contracting officer and monitors technical performance, reporting any potential or actual problems to the contracting officer (Office of Federal Procurement Policy, 1994). A COR must stay in close communication with the contracting officer, relaying any information that may affect contractual commitments and requirements. The FAR (2012) specifically mandates that a COR must meet the following criteria:

- shall be a government employee, unless otherwise authorized in agency regulations;
- shall be certified and maintain certification;
- must be qualified;

- may not re-delegate responsibility to perform functions that have been delegated;
- has no authority to make any commitments or changes that affect price, quality, quantity, delivery, or other terms and conditions of the contract; and
- nominated by the requirements official.

It should be noted that although the COR is a critical member of the acquisition team as defined by the FAR, the COR is not a member of the acquisition work force, as defined by the Defense Acquisition Work Force Improvement Act (DAWIA; 1990).

The COR provides the technical expertise necessary for successful contracting and plays a critical role in affecting the outcome of the contract administration process, as well as ensuring maximum return on contract dollars. The following is an example taken from the researchers' own experience of COR duties for a consulting services contract:

- Control all government technical interfaces with the contractor;
- Ensure that a copy of all government technical correspondence is forwarded to the contracting officer for placement in the contract (delivery/task order) file;
- Promptly furnish documentation on any requests for change, deviation, or waiver, whether generated by the government or the contracting officer (and ordering officer) for their action;
- Determine causes when the contract is not progressing as expected and make recommendations to the contracting officer for corrective action;
- Monitor contractor performance to ensure individual contractor employees are of the skill levels required and are actually performing at the levels charged against the contract during the performance period;
- Monitor contractor performance to ensure that the labor hours charged against the contract are consistent and reasonable for the effort completed and that any travel charged was necessary and actually occurred;
- Monitor government furnished property;

- Ensure that property provided to the contractor is authorized by the contract; and
- Complete the COR Report of Contractor's Performance in accordance with the schedule established in the contract administration plan for a contract.

The PM, PCO, and COR are critical stakeholders responsible for overall program success. These stakeholders hold key decision-making positions and at times may overexert their influence based on their positions, resulting in difficult and contentious conflicts (Deneault & Stambaugh, 2000).

As previously discussed, each stakeholder has conflicting goals and objectives, as well as different guiding policies and directives. These all could lead to deficiencies in DoD services contracting. We will present these deficiencies in the next section.

D. DEFICIENCIES IN SERVICE CONTRACTS

The DoD's contract obligations doubled between fiscal years 2001 and 2008 to over $387 billion with $200 billion expended on services (Government Accountability Office [GAO], 2009). Commensurately, the acquisition workforce declined from 500,000 to 200,000 personnel in 2006 (Gansler, 2011, p. 237). The downsizing of the defense acquisition workforce has reduced a qualified contracting and acquisition workforce necessary to manage the increased service contract workload (GAO, 2002b, 2009). Human capital problems are debilitating many agencies and threaten the ability of others to perform their missions efficiently and effectively (GAO, 2001). Both the GAO and the DoD Inspector General (IG) have indicated that failing to maintain an adequate workforce to manage billion-dollar acquisitions increases the risk of poor acquisition outcomes and the likelihood of fraud, waste, and abuse (GAO, 2009). From 2001 to 2009, the GAO issued 16 reports identifying deficiencies, trends, and challenges in contract management. In addition, the DoD IG issued 142 reports on deficiencies in the DoD acquisition and contract administration process. Deficiencies include selection of an inappropriate contract type allocating unnecessary risk to the government. DoD contracting officers have selected risk-laden cost contracts for services in which a fixed contract type could have been used, diverting the majority of the risk to the contractor (GAO, 2001; DoD IG, 2009). Additionally, GAO and

DoD IG reports have expanded on the government's lack of adequate market research relevant to determining the proper contracting strategy during the procurement planning of service contracts (GAO, 2002a; DoD IG, 2009).

Requirements management is required to effectively define and meet the customers' needs and expectations. Despite the importance of requirements management, the DoD IG and GAO have indicated poorly defined requirements and inadequate requirements management as a problem in service contracting (GAO, 2007c; DoD IG, 2009). Although the implementation of project management tools and processes, such as cross-functional teams, is considered a best practice in service contracts and would improve the coordination and management of service acquisitions, the GAO has indicated the DoD lacks management structure and processes for managing service contracts (GAO, 2002b, 2007c; DoD IG, 2009). The GAO has described the DoD's current approach to service contract management as reactive and not fully addressing the key factors of success (GAO, 2007c). Oversight and surveillance are prudent to achieving contractors' adequate performance of services and assist in precluding any contractor performance problems. Lack of oversight compromises the government's ability to provide complete value to its constituents. Yet, DoD IG and GAO reports have consistently identified issues in service contract administration and oversight (GAO, 2005, 2007a, 2007c; DoD IG, 2009). According to the GAO, the poor management of service contracts has undermined the government's ability to obtain a good value for the money spent and contributed to the GAO's decision to designate contract management a high-risk area for the DoD (GAO, 2001, 2007b, 2011).

The DoD IG's and GAO's finding on deficiencies in the service contract process can be further explained by utilizing stakeholder theory.

E. STAKEHOLDER THEORY

1. Definition and Implication for DoD Services Contracting

Stakeholder theory can be used to analyze and discuss the similarities and differences that we anticipate will exist in defining and measuring the success of a service contract between the PM, PCO, and COR. In this section, we describe the foundations of stakeholder theory and how that theory relates to DoD service contracting. Using stakeholder theory can

lead to a better understanding of both the conflicting and common interests the PM, PCO, and COR might have. This can help acquisition professionals to better understand why various stakeholders in DoD service contracting define and measure the success of service contracts differently.

There have been numerous definitions of what a stakeholder is, but no definition is more important than that of Edward Freeman (1984). Considered a pioneer in the field of stakeholder theory, Freeman defined a stakeholder as any group or individual person(s) that can be affected by an organization or identity achieving its mission or objectives (Freeman, 1984). Freeman, Wicks, and Parmar (2004) of the Darden School of Business, have stated that stakeholder theory illustrates clear conflicts of interest between the different stakeholders within a project. They stated that these conflicts of interest can have negative effects (such as inefficiencies and waste) on numerous projects. Differing goals and objectives of the various stakeholders drive these negative impacts (Freeman et al., 2004). Donaldson and Preston (1995) further explain that organizations that actively manage the often-conflicting interests of internal stakeholders fare far better in traditional measures of success, such as return on investment and profits, than those who do not (Donaldson & Preston, 1995). What this means for DoD services contracting is quite apparent. With the differing goals, objectives, and responsibilities of the various stakeholders (PM, PCO, COR) within DoD services contracting, it is prudent to assume that conflicts will arise with regard to how a service contract is processed, as well as answering the questions of how a successful service contract is defined and measured. While profit and return on investment are not applicable to defense services contracting, it is important to note the impact that managing stakeholder interests will have on the public sector, specifically in the area of public interest, by increasing integrity, accountability, and transparency in the contracting process. By managing the stakeholders' conflicting interests, the DoD may achieve some of the additional efficiencies received by its counterparts in the private sector.

2. Stakeholder Management

Stakeholder management is described as the management of the individuals and institutions that share a stake or interest in a project (Cleland, 1986). In the case of DoD

services contracting, the "project" is the acquisition of the service. Cleland describes the principle justification for utilizing a stakeholder management perspective to be the need to recognize the ability of key stakeholders to influence projects (Cleland, 1986). As presented earlier in this chapter, the PM, PCO, and COR all have different roles and responsibilities within DoD services contracting. As such, they routinely have conflicting interests and objectives on a service contract, which in turn may lead to conflicting definitions and measures of a successful service contract. Stakeholder theory holds that the various stakeholders will routinely have not just differing objectives and motives for outcomes within a project, but additionally will have differing ideas as to which factors are the most important for determining the success of a project. This can present additional future challenges when balancing the tradeoffs between different performance criteria (such as cost and schedule) of a contract (PMI, 2008). Understanding stakeholder theory and how these different stakeholders maintain conflicting interests that will impact the contract allows us to better prepare for mitigating the adverse results of such conflicting objectives. This relates directly to our research into the definitions and metrics for a successful service contract, as held by its chief stakeholders: PMs, PCOs, and CORs. Cleland states that *positive* stakeholder management can lead to cooperation within the project (or service contract) between the different stakeholders, resulting in enhanced project objective achievement. Lack of positive stakeholder management will result in a reduction in project objective achievement (Cleland, 1986). Translated into DoD services contracting, this means that proper management and mitigation of conflicting stakeholder objectives will lead to more effective and efficient services contracts. Additionally, this may lead to a more standardized definition and measure of successful service contracts by DoD PMs, PCOs, and CORs. Understanding this concept allows acquisition professionals to predict and even aid in controlling the conflicting goals of different stakeholders within DoD services contracting.

One approach to standardized measures is S.M.A.R.T. metrics. S.M.A.R.T. is a tool utilized by corporate officers, managers, and supervisors in helping to determine quantifiable metrics and objectives for their project and company mission. The establishment of objectives and the development of action plans are extremely important steps in any

organization's management process (Doran, 1981). Each metric should have the following attributes:

- Specific: It targets a specific area for improvement
- Measurable: It quantifies or provides an indicator of progress.
- Assignable: Someone is determined to have responsibility for it.
- Realistic: It can realistically be obtained, given resource constraints.
- Time related: It is specific to when the results can be achieved. (Doran, 1981)

F. SUMMARY

In this chapter, we introduced past and current literature on the service contracting process, the acquisition team, roles and responsibilities of service acquisition personnel, goals and objectives of service acquisition personnel, deficiencies in service contracts, and stakeholder theory.

The next chapter describes our research methodology, including the type of analysis, the location of data collection, and the interview questions.

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III. RESEARCH METHODOLOGY

A. INTRODUCTION

In this chapter, we provide an overview of how we collected and analyzed our data in order to achieve our objectives and answer the research questions discussed in Chapter I. We discuss the formulation of the interview questions, the survey, and our analytical process. In this chapter, we also include a description of the qualitative methods we used in analyzing the data collected from the Navy contracting activities. Our purpose was to conduct an exploratory research analysis of the definition and measurement of successful services contracts. The objective of the research was to build upon the understanding developed in prior research and to explain what metrics are utilized to help identify the factors that influence the efficiency and effectiveness of service contracts. We analyzed the collected data qualitatively in order to draw conclusions about the definition and measurement of success of service contracts, as well as the commonalities and distinctions among the stakeholders.

B. DATA COLLECTION

We conducted interviews and surveys with the PMs, PCOs, and CORs located at and associated with the following contracting commands: Naval Sea Systems Command (NAVSEA), Naval Air Systems Command (NAVAIR), and Naval Fleet Logistics Center (FLC) Philadelphia. Table 1 identifies the number of stakeholders interviewed and surveyed.

Table 1. Interviews and Surveys Conducted

STAKEHOLDER	# INTERVIEWED	# SURVEYED	**TOTAL RESPONDENTS**
CONTRACTOR	2	N/A	**2**
PRINCIPAL CONTRACTING OFFICER/ CONTRACT SPECIALISTS	22	N/A	**22**
CONTRACTING OFFICER REPRESENTATIVE	13	1	**14**
PROGRAM MANAGER	1	2	**3**

1. Participating Commands

NAVSEA's overarching mission is to engineer, build, buy, and maintain ships, submarines, and combat systems to meet the United States Navy's current and future operational needs. NAVSEA's fiscal budget is 25% of the Navy's entire budget, at nearly $30 billion. NAVSEA manages over 150 acquisition programs, to include foreign and domestic military sales. NAVSEA is an essential system command for the United States Navy, providing efficient resources and support for the nation (NAVSEA, 2012.).

NAVAIR's mission is to provide full life cycle support of naval aviation aircraft, weapons, and systems for the United States Navy: to provide the right capability, at the right time, at the right cost. This support includes research, design, development, systems engineering, acquisition, test and evaluation, training, repair, and logistics support. NAVAIR also provides support to its program executive officers with its assigned duties of meeting cost, schedule, and performance requirements within its respective programs (NAVAIR, 2012).

FLC Philadelphia is a subordinate command of Naval Supply Systems Command. FLC Philadelphia's mission is to deliver sustained global logistics resources to the United States Navy and the joint warfighter. FLC Philadelphia manages supply chains that provide material for Navy aircraft, surface ships, submarines, and their weapon systems. Additionally, they provide logistics support services, material management and warehousing services, contracting and acquisition, as well as all food service operational support ashore and afloat (Naval Supply Systems Command, 2012).

2. Interview Questions

We developed interview questions and a survey to answer the following core research questions:

- What is the definition of a successful service contract?
- How is the success of a service contract being measured?

We used the following five survey and interview questions:

1. What is your branch of service or service affiliation?

2. What is your current functional role?

3. What is your DAWIA level certification?

4. How do you define a successful service contract and what factors are included in your definition?

5. How do you measure the success of a service contract and what metrics are included in your measurements?

The first two questions of the survey and interviews identify the demographics of the respondents to establish broad categories. The third question, on DAWIA level certification, gives insight into the respondents' level of training, experience, and education. The DAWIA establishes a procedure through which acquisition workforce personnel are recognized as having achieved qualification in their core discipline. Certification is the procedure through which a DoD component determines that an employee has met the necessary education, training, and experience standards. These standards are required for a career in government acquisition, technology, and logistics fields. DAWIA level certifications are categorized as Level I, Level II, and Level III. The remaining two questions address the primary purpose of our research, to determine how stakeholders define and measure the success of service contracts.

C. ANALYTICAL PROCESS

We chose open-ended questions to gain qualitative data for our research and to accommodate differentiated responses from varied stakeholders. In Chapter IV, we present this qualitative data in graphical and tabular formats. By consolidating the data into categories, we were able to conduct further analysis. We identify commonalities and relationships in the data to determine the answers to our research questions, identified in Chapter I. Additionally, we determine if the stakeholders (PM, PCO, and COR) are in fact utilizing effective and quantifiable S.M.A.R.T. metrics.

D. SUMMARY

In Chapter III, we identified which Navy organizations we surveyed and interviewed, how we formulated our survey and interview questions, and how we collected and analyzed

the data. In Chapter IV, we present the data, analyze the findings, and make recommendations.

IV. INTERVIEW INSTRUMENT, RESULTS, AND ANALYSIS

A. INTRODUCTION

In this chapter, we examine the interview responses. The objective of this research was to define and measure the success of service contracts by collecting interview and survey data. We utilized a standard script of five questions presented to each stakeholder. The interviews were conducted at the following contracting activities: NAVSEA, NAVAIR, and FLC Philadelphia. Additionally, interviews were conducted with CORs associated with these contracting activities.

B. INTERVIEW QUESTIONS

The interview consisted of three demographic questions and two core research questions:

1. What is your branch of service or service affiliation?
2. What is your current functional role?
3. What is your DAWIA level certification?
4. How do you define a successful service contract and what factors are included in your definition?
5. How do you measure the success of a service contract and what metrics are included in your measurements?

The purpose of the demographic questions was twofold: to establish the individual's level of knowledge, experience, and education (DAIWA level certification) and to identify the individual's role (PM, PCO, or COR) and branch of service (Navy, Marine Corps, Air Force, or Army).

The purpose of the core research questions was to identify the key definitions and factors determining the definition of a successful service contract and to discover the metrics used to measure a successful service contract.

C. PROJECT MANAGER FINDINGS

In the course of our research, we were only able to survey and interview three PMs. We found that service contracts generally do not have a designated PM and that the role is typically filled by the incumbent COR. The definitions and measurements of success given by the proxy PMs aligned with the responsibilities of a traditional PM and focused on cost, schedule, and performance. We found that the PMs considered the following measures as key to defining the success of a service contract: clarity in the statement of work, effectiveness, unproblematic, schedule, and tracking costs. Further, the PMs stated that end user evaluations, customer satisfaction, and performance (meeting the requirements in the statement of work) were essential in measuring the success of a service contract.

D. DATA ANALYSIS OF PRINCIPAL CONTRACTING OFFICERS

1. Overview of Data Collected From Principal Contracting Officer

Of the 22 interviews conducted, 16 were with PCOs and six were with contract specialists. The DAWIA level certification of the PCO and contract specialists ranged widely: 15 had a Level III certification, four had a Level II certification, and three had a Level I certification. Based on the interviews of the PCOs and contract specialists, the responses for defining the success of service contracts were classified into nine categories, presented in Table 2.

Table 2. PCO Success Definitions

SUCCESS CATEGORY	COMMON DESCRIPTORS
Schedule (Outcome)	• Executing contract on time • Doing it in a timely manner • Meeting milestones • Getting contracts awarded on time • Keeping to the schedule
Unproblematic (Process)	• "Don't have to do a lot of administrative modifications and adjustments to the end contract"

	• "Successful bid process where there is not any animosity between the parties" • Relatively unproblematic • Runs smoothly • Operates seamlessly • "Not hearing from the customer"
Customer Satisfaction (Outcome)	• Meeting customer requirements • Business-like concern for the customer • Motivated contractor performance • Got what we paid for • Satisfies the mission requirements • Delivers the service that your customer expected • "Responsive to the needs of the contract and the needs of the activity" • Customers are happy.
Well-Defined Requirements (Process)	• Clearly defined statement of work • Well-defined requirement • "Satisfies the test requirements identified in the Performance Work Statement" • "How are the services defined and is it defined in a way that it is clear to industry." • "Understanding needs of the customers"
Communication (Process)	• Customer involvement • Partnership with industry • "Contractor has to be motivated to perform." • "Contracting group as well as the programs side all know what needs to get done." • "Able to work with all parties involved." • "A lot of integration up front with the customer and our office" • "Mutual understanding as to what is required, the manner in which it will be furnished and then how we will monitor those services or the performance, a good relationship"

	• "You are able to talk and work things through and come up with solutions."
Contract Vehicle (Process)	• "Choosing the right contract" • "Flexibility in your contract vehicle"
Efficient (Process)	• "There would be some sort of result in efficiency that came about during the performance of that particular contract."
Adherence to Regulation (Process)	• "Maintain rules and regulations."
Maintain Costs (Outcome)	• "Services at the right price" • "Spending dollars wisely" • "Keep within cost" • No overruns • "Contractor's costs well controlled" • "Perform the work within the budget" • "Not running into issues where the contractor's been performing but hasn't had funding"

Of the 22 contracting officers and specialists interviewed, 68% of respondents specified customer satisfaction and maintaining costs as definitions of success. Fifty-five percent of respondents indicated unproblematic as a key catgory in the success of a service contract. At 45%, the third most prominent definition of success was well-defined requirements. Thirty-six percent of the respondents indicated communication as relevant to the success of a service contract. Twenty-three percent of the contracting officers indicated that maintaining the schedule is relevant to the success of a service contract. The final three criteria—adherence to regulations, contract vehicle, efficiency—were specified by 5%, 9%, and 9% of the respondents, respectively. PCOs' response rates for each definition of success can be seen in Figure 4.

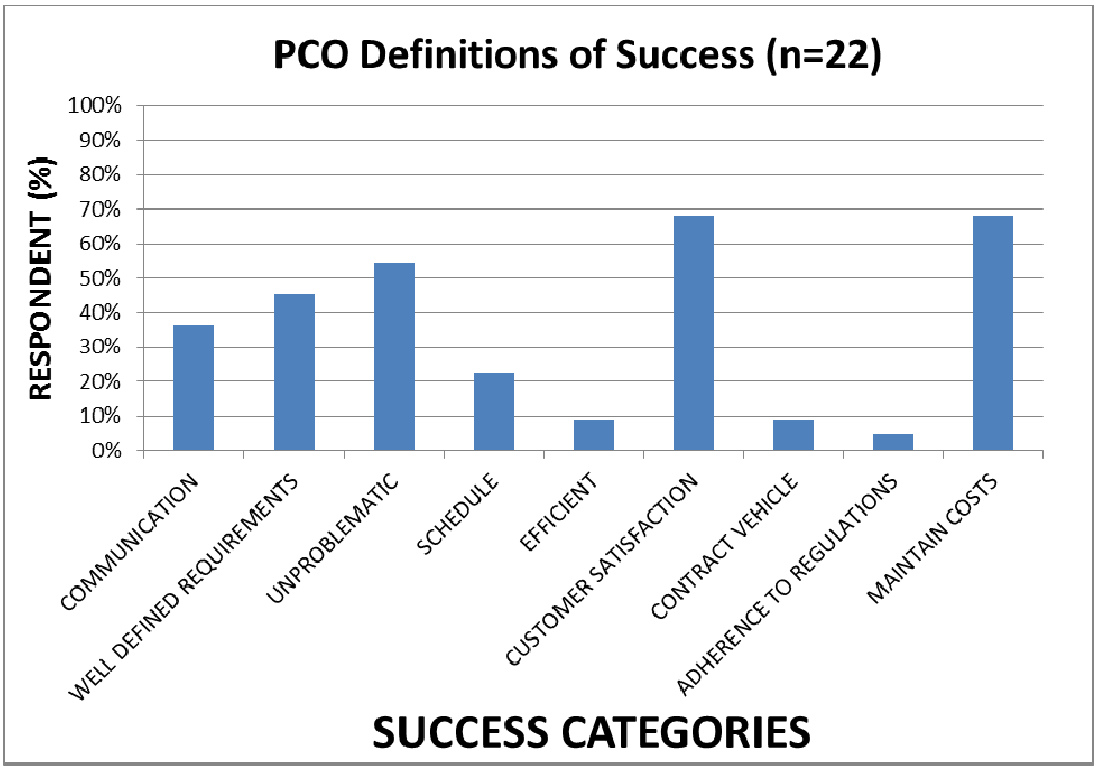

Figure 4. PCO Success Definitions

2. Overview of Data Collected on Contracting Officers

Based on the interviews with the contracting officers and specialists, the responses for measuring the success of service contracts were classified into five general categories, depicted in Table 3.

Table 3. PCO Measures of Success

METRIC CATEGORY	COMMON DESCRIPTORS
Past Performance (Outcome)	• Contractor Performance Assessment Reporting System (CPARS) • Past Performance Information Retrieval System (PPIRS) • COR annual report, mini CPARS, COR functional reviews • COR verbal periodic review

	• COR review, customer reviews • Prior contract performance • Subjective • Past history, or requests from customer to write a contactor a letter or amend the contract • Feedback from customers on contractor performance • Evaluation and recording • Ability to get future contracts • A way to track contractors
Surveillance Plan (Process)	• Is the contractor performing in accordance with the Quality Assurance Surveillance Plan (QASP) • Built-in measurements that measure quality • Deficiency reports • Measurements of successful performance • Realistic expectations • "Performance evaluation factors to gather from the contract" • "Frequency of when the service is performed" • "Something to easily put your eyes on" • "Performance standard metrics" • Quality control • "Requirement summary of the various tasks" • "How well the contractor is performing" • Monitoring turnaround times
Track Costs (Outcome)	• "Burning through ceiling faster than anticipated" • "Tracking: spend rates, proposed man hours compared to what is being delivered" • "Measuring performance to cost controls" • Measuring workload status • Maintaining good cost control • "Being involved with my COR early to say, are you looking at your burn rate?"

	• "Performance is measured via cost control tracking hours, dollars, and parameters to hours and dollars, not over or under running." • "Making sure that the costs in the end are at the proposed level and within budget, tracking different modifications to obligations, milestones on how long things are taking."
Customer Satisfaction (Outcome)	• Customer feedback • "Customer service surveys given to the activity for the contracting office, immediate feedback on vendor issues, am I (the agency) comfortable (uncomfortable) with the guy (the contractor)" • "Am I (the agency) not comfortable with the guy (the contractor)" • "A lot of times that's (customer satisfaction) built around personal interaction with the contractor more so than actual good or bad performance." • "Level of angst, complaints from discontent customers"
Track Schedule (Outcome)	• Meeting milestones • Awarded on time • Not a break in service • "Execution of procurement planning agreement" • "Internal work in progress (WIP) reports to track the number of days the contract has been in house or workload assigned in the system with no errors, timely delivery, all deliverables received, on schedule, are the deliverables on time."

Of the 22 PCOs and contract specialists interviewed, 59% of the respondents listed past performance as a measurement for service contract success. Having a surveillance plan was also indicated as a measurement for service contract success by 59% of respondents. Forty-one percent of the respondents identified customer satisfaction, 27% identified tracking costs, and 23% identified tracking schedule. PCO response rates for each measure of success are depicted in Figure 5.

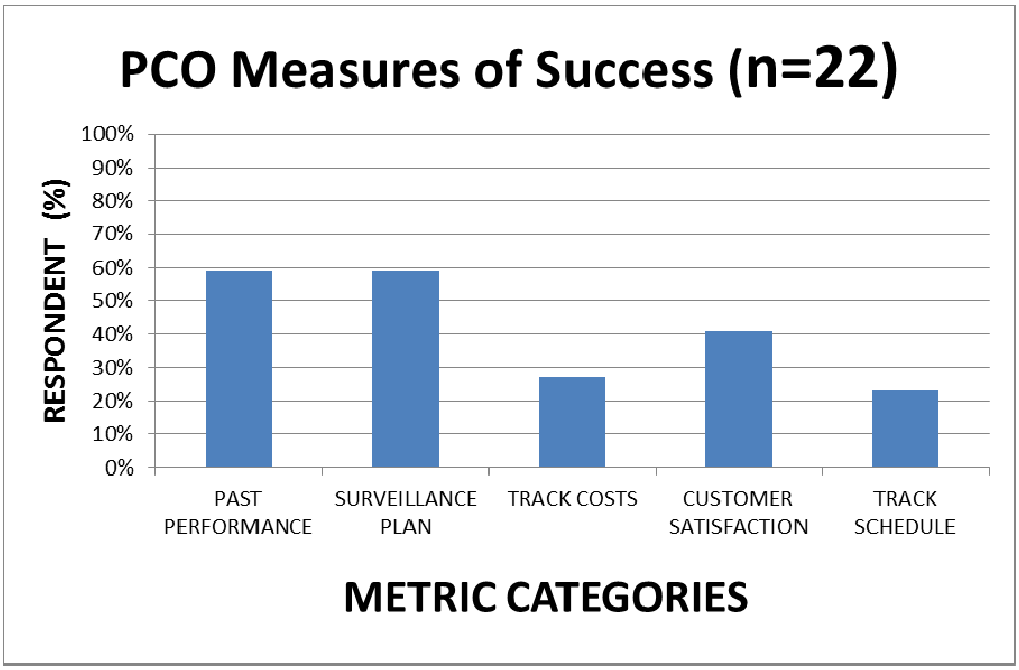

Figure 5. PCO Measures of Success

3. Research Findings From PCO Interviews

Findings for the PCOs produced no decisive definition of success; no category received an absolute majority of responses. Several categories did receive a strong rating, with over half of the respondents identifying these categories as indicators of a successful service contract. The most frequent definitions of a successful service contract were satisfying the customer and maintaining costs, both of which had 15 responses. Of nearly equal significance was the category unproblematic with 12 responses. Well-defined requirements was indicated as a definition of success by 10 respondents. The *Department of Defense COR Handbook* specifies a properly written statement of objectives (SOO) or statement of work (SOW) as increasing the likelihood of success (Director, Defense Procurement and Acquisition Policy, 2012). Eight PCOs identified communication expressed between primarily the contractor, customer, and PCO as an indicator of success. Communication is a trait necessary within a business organization; it allows the acquisition team to work together to successfully purchase a service (Garrett, 2010). In comparison with the FAR's performance requirements of cost, quality, and timeliness of the delivered service, five of the respondents indicated schedule, and, as previously mentioned, 15

indicated maintaining costs as definitions of success. Categories deemed to be defining factors of success to a lesser extent were contract vehicle, efficiency, and adherence to regulation with the following response rates: two, two, and one, respectively.

Similar to contract success definitions, the findings yielded no definitive measurement of success. Each response was grouped into five categories. With 13 responses each, the two most frequent responses were past performance and surveillance plan. Customer satisfaction yielded nine responses; tracking costs received six, and tracking schedule five. PCOs' responses revealed the measurements of service contract success are in a majority of cases very subjective and ambiguous. As summed up by several respondents: "At the end of the day, we don't have a numeric score of yes, this contractor gets a B+" and "[we have] CPARS ratings—but a lot of them are pretty subjective." An analysis of Figure 5 reveals, with respect to outcome-based measurements, past performance as documented through the COR annual reports in CPARS is the most common approach to measuring contract success.

4. Outcome Versus Process

Our findings on PCO definitions and metrics of a successful service contract demonstrate both an outcome- and process-oriented approach. The PCOs' definitions of a successful service contract aligned to a hybrid approach, with three of the nine categories of responses being outcome oriented, and five of the nine categories being process oriented. The two most common response categories were customer satisfaction and maintained costs: both are outcome-based definitions. The findings illustrate that the definition of a successful service contract incorporates both outcome- and process-driven criteria. While the two prominent definitions of success were outcome based, the majority of the definitions were process based. The majority of process-based definitions could be a result of the PCOs' greater involvement in the pre-award versus the post-award phase of the service contract process. The contracting offer is able to determine, through his pre-award actions, the subsequent results with respect to a successful service contract.

The results on PCO measurements of success show that four out of five response categories for the measurement of contract success were outcome-oriented approaches. The

two significant categories, past performance and surveillance plan, were process and outcome based, respectively. This mix of process and outcome are linked. The surveillance plan, a process approach, facilitates the measurement of past performance, an outcome approach, in the form of CPARS.

Of the five measurements, we found past performance, track costs, and track schedule met all the criteria of the S.M.A.R.T. tool. As previously discussed, the S.M.A.R.T. tool is utilized to assist corporate managers and supervisors to determine quantifiable metrics and objectives. Although surveillance plan accounted for 59% of the responses, it failed to properly address the criteria of realistic in S.M.A.R.T. Therefore the most quantifiable and appropriate measures for success of a service contract should be past performance, track costs, and track schedule. Table 4 shows how PCO responses align with the S.M.A.R.T. categories.

Table 4. S.M.A.R.T. PCO Metrics

CATEGORY	S	M	A	R	T
Past Performance	√	√	√	√	√
Surveillance Plan	√	√	√		√
Track Costs	√	√	√	√	√
Customer Satisfaction			√		
Track Schedule	√	√	√	√	√

E. DATA ANALYSIS OF CONTRACTING OFFICER REPRESENTATIVES

1. Overview of Data Collected From Contractive Officer Representatives

Fourteen CORs were interviewed for this research. DAWIA level certification had been obtained by 35% of the CORs we interviewed. This represented a smaller portion than we originally anticipated. However, DAWIA certification is not a requirement for appointment to a COR position.

Based on the COR interviews, we arranged the responses for defining the success of service contracts into four categories (identified as a process or outcome) with common descriptions of each category as depicted in Table 5.

Table 5. COR Definitions of Success

SUCCESS CATEGORY	COMMON DESCRIPTORS
Schedule (Outcome)	• Timeliness, (on) schedule • Deliverables met on time
Performance (Outcome)	• Responsive to statement of work (SOW) • Statement of objectives (SOO) • Satisfactory deliverables • Performance satisfactory with terms and conditions of contract • Maintained performance within conditions of contract • Objectives meet requirements.
Well-Defined Scope/ Requirements (Process)	• No deviation in work performed • Clarity in SOW/SOO • Requirements met needs of the end user • Clearly written contract • Well-defined criteria that are documented • Clarity of SOW allows for proper estimating in terms of preparing government cost estimation • Specific SOW requirements that mitigate scope creep by PM/PCO/COR
Communication (Process)	• Continuous feedback by and between COR/contractor/end user • Clear language and communication between contractor/customer • Open communication
Maintain Costs (Outcome)	• Adherence to budget, no cost overruns • No project creep • Fair and reasonable

	• Cost in line with services required • Fair cost to government • Meets price guidelines • Deliverables on time and within budget

Of the 14 CORs interviewed, 71% responded that well-defined scope and requirements were key factors in defining a successful service contract, while 58% of CORs responded that schedule was a key factor in defining the success of a service contract. Performance had the third highest response rate at 50%. The categories of communication and maintaining cost represented 21% of the responses. Response rates for these definitions of success are depicted in Figure 6.

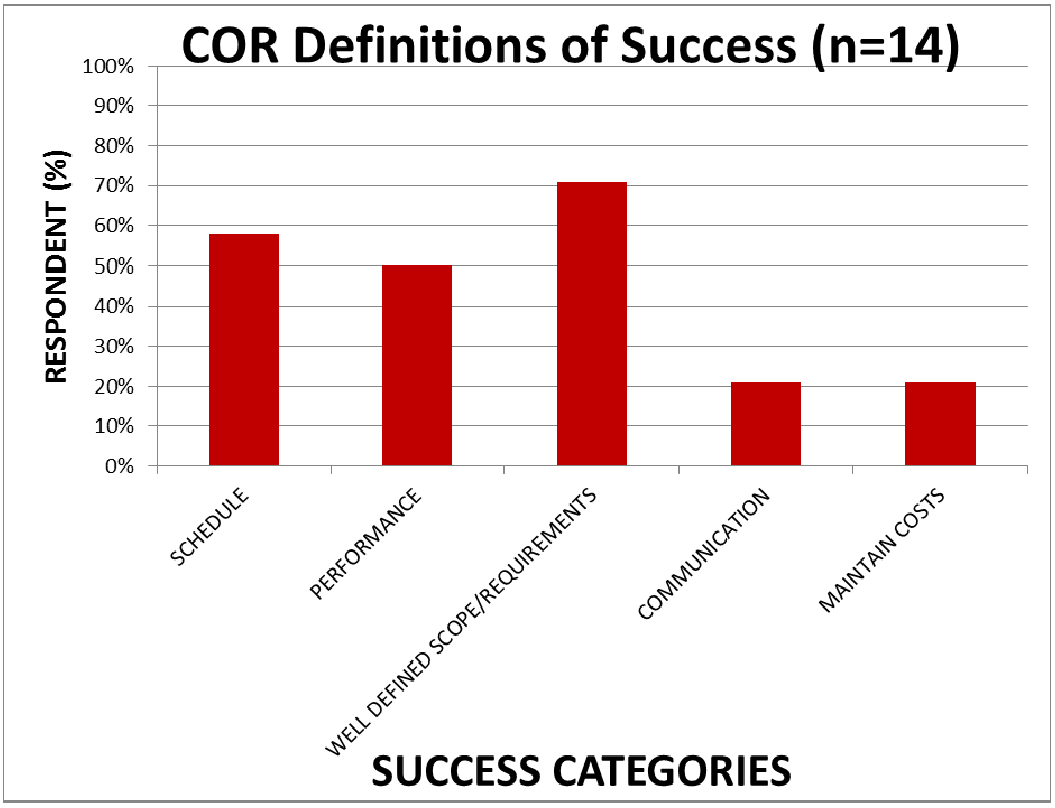

Figure 6. COR Definitions of Success

2. Overview of Data Collected on Contracting Officer Representatives

Based on the COR interviews, we categorized the responses for measuring the success of service contracts into seven categories (identified as a process or outcome) with common descriptions of each category, depicted in Table 6.

Table 6. COR Measures of Success

METRIC CATEGORY	COMMON DESCRIPTORS
Performance (Outcome)	• Contract performed in accordance with terms and conditions of the contract • Deliverables met quality requirements in SOW • Proven response times on service contracts
End User Evaluation (Outcome)	• Final product/service met needs as of end user as evaluated by end user • Summary reviews by technical experts
Track Schedule (Outcome)	• On time • Timeliness • All deliverables received
Communication (Process)	• Feedback loop maintained between contractor COR, PM, and/or end user • Required reporting delivered/received
No Rework (Outcome)	• No loss of time on rework • No additional resources utilized for corrections to end products/services

Track Costs (Outcome)	• Final costs remained within projected costs • No cost overruns • Billable hours matched contractual levels • Effectively tracked cost and related cost tracking to customer
No Protest (Outcome)	• No contractor protests • Unproblematic source selection and award process

Of the 14 CORs interviewed, 71% responded that performance was the key factor in defining the success of a service contract. Twenty-eight percent of respondents selected track schedule; 21% chose end user evaluation; and 14% chose adherence to budget. Seven percent of respondents selected each of the following criteria: good communication, no protest, and no rework. COR response rates for these measures of success are depicted in Figure 7.

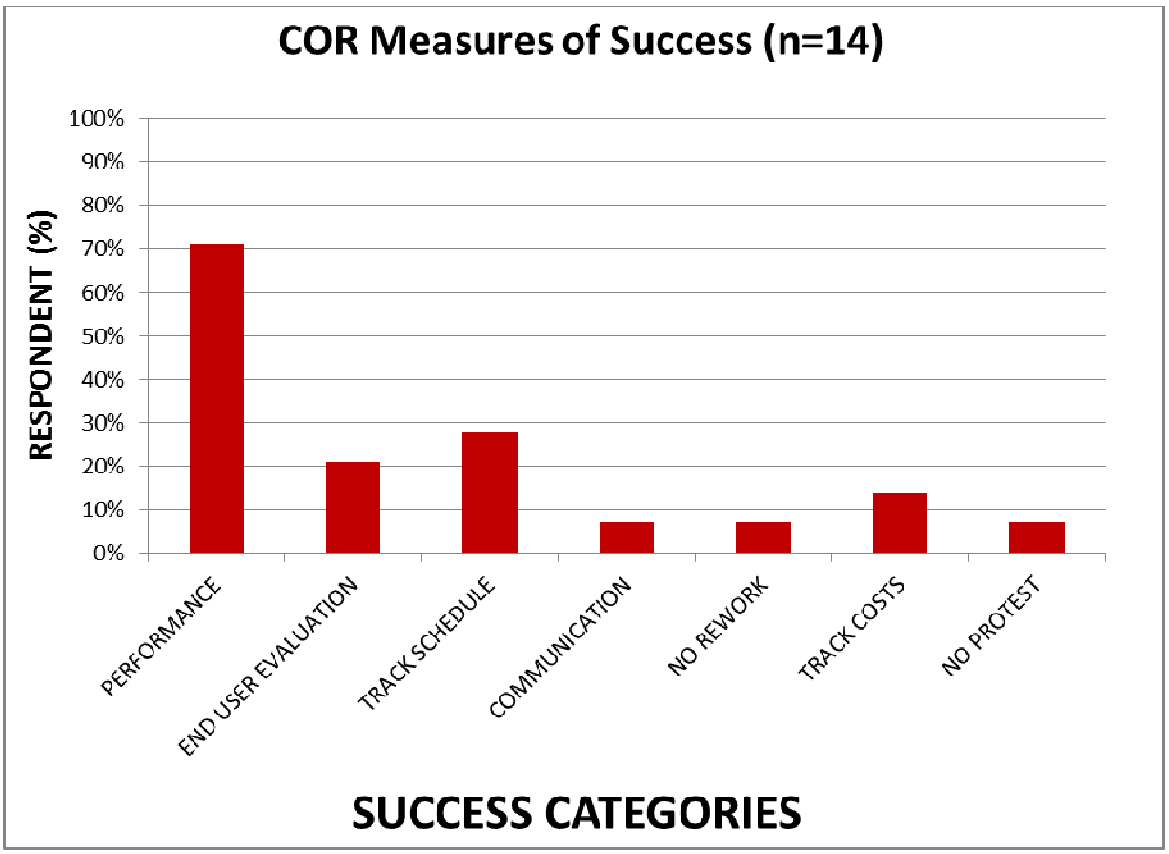

Figure 7. COR Measures of Success

3. Research Findings From COR Interviews

The research findings from our interviews conducted with CORs clearly demonstrated varying definitions for a successful service contract, as well as numerous ways in which to measure this success or lack thereof. Of the 14 CORs interviewed, the highest response category was performance, which received 10 responses, followed by the category of track schedule, with four responses. The remaining five categories of responses yielded as high as three responses or as few as one. Some of the variability found in the measurement of service contracts can be explained by the numerous types of services being contracted. These CORs represented contracts that range from medical supplies to legal counsel. The heavily diverse nature of these service contracts may have contributed to the lack of a consistent form of measurement.

The definitions of successful service contracts were less variable than the responses received for measuring the success of service contracts. Of the 14 CORs interviewed, 10 responded that well-defined scope/requirements was the most important criteria for defining a successful service contract, while the categories of schedule and performance had eight and seven responses, respectively. Communication and maintaining costs each had three responses. This outcome clearly shows that within the COR stakeholder group, there exists a more standardized definition of what is a successful service contract.

4. Outcome Versus Process

Our findings on COR definitions and metrics of a successful service contract demonstrate outcome-, process-, or hybrid-oriented approaches. The CORs' definition of a successful service contract aligned more to a hybrid-oriented approach, with three of the five categories of responses being outcome oriented and two of the five categories being process oriented. The two most common response categories were well-defined scope/requirements (process oriented) and schedule (outcome oriented). The significance of this finding is that it clarifies that, for CORs, both outcome- and process-driven criteria are important in determining the key factors defining a successful service contract.

The CORs' metrics for a successful service contract were overwhelmingly outcome driven, with six of the seven response categories being outcome oriented. Additionally, the two most prevalent responses were performance (outcome) and track schedule (outcome). These findings clearly demonstrate the importance that outcome-specific measurements have in the success of a service contract as determined by CORs.

When analyzing the findings on metrics for a successful service contract, we focused on whether each category was responsive to the demands found in the S.M.A.R.T. objectives protocol, as presented in Chapter II

Of the seven measurements, we found performance, track schedule, and track costs met all the criteria of the S.M.A.R.T. tool. As previously discussed, the S.M.A.R.T. tool is utilized to assist corporate managers and supervisors to determine quantifiable metrics and objectives. Although end user evaluation accounted for 21% of the responses, it only met the criteria of "assignable" in S.M.A.R.T. Therefore, the most quantifiable and appropriate

measures for success of a service contract should be performance, track schedule, and track costs, as shown in Table 7.

Table 7. Success Measurement Categories and S.M.A.R.T.

CATEGORY	S	M	A	R	T
Performance	√		√	√	√
End User Evaluation			√		
Track Schedule	√	√	√	√	√
Communication			√		
No Rework	√		√		
Track Costs	√	√	√	√	√
No Protest	√	√	√		

We discovered that the majority of the categories for COR measurements of a successful service contract failed to properly address the objectives of S.M.A.R.T. This clearly demonstrates that, currently, a substantial portion of CORs are not properly measuring the success of service contracts.

F. CONTRACTOR FINDINGS

Despite the emphasis of this research on the PCO and COR, we were able to interview two contractors and gain their perspective on the definition and measurements of success in a service contract. The contractors' definitions of success include winning repeat business, finding ways to innovate, satisfying the customer, helping the customer shape the SOW, and helping the government "folks get up to speed."

The contractors' measurements of success are profit and the ability to perform and execute the specific task. Based on this response, this measurement was aligned with FAR 46.105: "The contractor is responsible for carrying out its obligations under the contract" (FAR, 2012). Success is also measured in terms of spend rates—that is, over or under budget (how many people are put to work and how many people have to be hired to complete the

task). The definitions and measurements of success allude to maximizing profit as the overarching goal of a contractor.

G. CONTRACTING OFFICER REPRESENTATIVE AND PRINCIPAL CONTRACTING OFFICER COMPARISON

1. Contracting Officer Representative and Principal Contracting Officer Similarities in Definitions of Success

Our research revealed the following similarities between CORs and PCOs when defining the success of a service contract:

- schedule,
- maintaining costs,
- communication, and
- well-defined scope and requirements.

a. Schedule

The data show that both the PCO and COR identify maintaining schedule as a common definition of success. PCOs and CORs are both members of the acquisition team guided by the objectives and regulations of the FAR. In service contracts, the COR often performs the functions of a PM; thus, schedule is an important factor to the COR as well as progressing the contract through the acquisition life cycle. Additionally, the FAR states the acquisition team must satisfy the customer in terms of cost, quality, and timeliness of the delivered goods or services (FAR, 2012). Furthermore, the COR handbook states that the COR should ensure that the contract for goods or services is timely and highlights schedule as a key assessment factor (Director, Defense Procurement and Acquisition Policy, 2012). The schedule is the most visible and scrutinized performance measure for both the PCO and the COR. For example, the workload of the PCO is driven by their WIP report, which tracks the number of days the contract has been assigned in the system. One of the key assessment factors of the COR is schedule (Director, Defense Procurement and Acquisition Policy, 2012).

b. Maintain Costs

Sixty-eight percent of PCOs and 21% of CORs identified maintaining costs as a definition of success. Given the budget constraints, DoD acquisitions are limited by scarce resources. As such, maintaining costs is a high priority. Failure to maintain budget could result in a possible violation of the Anti-Deficiency Act, defined as an obligation in excess of available funds. As mentioned earlier, the COR often assumes the responsibilities of the PM on service contracts; therefore, cost becomes a responsibility. The data show a difference of 47% between PCO and COR responses. The disparity is a result of the PCOs' accountability for contract administration; therefore, the PCO places a higher emphasis on maintaining costs. This is supported by the FAR (2012), which states that PCOs "shall ensure that the requirements of 1.602-1(b) have been met and that sufficient funds are available for obligation."

c. Communication

The data indicate that CORs and PCOs share communication as an attribute definitive to success. Supporting this perspective, the FAR states the federal acquisition system will foster cooperative relationships between the government and its contractors. More important in each case, successful communication and continuous feedback between the PCO, COR, and acquisition team members contribute to service contract success. When all members of the project team communicate properly, clear and concise objectives are conveyed to the team and the goal is understood and identified. Additionally, clear communication is fundamental to overcoming deficiencies in service contracts.

d. Well-Defined Scope and Requirements

The data show that 71% of the CORs versus 45% of the PCOs define success as well-defined scope and requirements. The COR and the PCO are focused on meeting the activity's need and satisfying all technical aspects of the SOW. A well-defined scope and set of requirements lay the foundation for the required services. Therefore, the PCO and the COR have a vested interest in having a well-defined scope and in meeting requirements in the SOW. With a proper SOW, contract performance is more likely to be successful. One of the key pre-award duties in which the COR may be involved is documenting requirements.

The requirements package is critical to the success of an acquisition because it commits the funds and establishes the basis for a contractual action.

2. Contracting Officer Representative and Principal Contracting Officer Differences in Definitions of Success

Our research revealed the following differences between CORs and PCOs when defining the success of a service contract:

- unproblematic,
- customer satisfaction,
- adherence to rules and regulations,
- contract vehicle, and
- efficiency.

a. Unproblematic

Fifty-five percent of the PCOs stated unproblematic as a definition of success. The PCO is responsible for administrating all aspects of the contract; therefore, a problem-free contract reduces the workload associated with additional modifications and contract-related issues. Increases in workload are even more substantial given the inadequate size of the acquisition workforce. On the other hand, CORs are less concerned with contract administration and are more focused on technical evaluation factors. The COR is more concerned with the surveillance plan and delivering problems to the contractor. Problems are not a true concern to the COR. According to the COR handbook, the COR is responsible for bringing any issues or performance problems to the attention of the PCO.

b. Customer Satisfaction

Sixty-eight percent of the PCOs identified customer satisfaction as a definition of success, demonstrating the emphasis PCOs place on customer satisfaction. The PCO is more customer service oriented than the COR, whose primary purpose is to monitor the performance of the contract. A PCO must evaluate all relevant surrounding circumstances to discern the customers' expectations (Hirsch, 1986). Additionally, customer satisfaction plays

a central role in determining contractors' past performance, an evaluation factor required by the FAR that results in contract renewal or follow-on contracts.

c. Adherence to Rules and Regulations

Five percent of the PCOs stated adherence to rules and regulations was a definition of success. In accordance with the FAR, the PCO ensures all requirements of law, executive orders, regulations, and other applicable procedures, including clearances and approvals, are adhered to in government contracting. The COR, while a representative of the PCO, has no true authority to affect change, such as altering the terms and conditions of the contract; therefore, the COR places no emphasis on compliance to rules and regulations. The COR's only liability is in the form of unauthorized acts. Adherence to rules and regulations is a core function and inherent to the position of PCO; therefore, adherence to rules and regulations is implied.

d. Contract Vehicle

Nine percent of the PCOs specified the contract vehicle as definitive of success. The CORs did not indicate contract vehicle as a definition of success. This is owing to the possible lack of integration of the COR in the pre-award phase of the service contract process. The *Department of Defense COR Handbook* (Director, Defense Procurement and Acquisition Policy, 2012) only lists pre-award activities the COR *may* be involved with and makes no reference to required involvement.

e. Efficiency

Nine percent of PCOs interviewed specified efficiency as a definition of success. The CORs made no acknowledgment of efficiency as a definition of service contract success. As previously determined, the CORs' definition of success is primarily outcome oriented. The COR is concerned with tracking the contract's compliance according to its terms and conditions, and with delivery of the final product. In contrast, the PCO's definition of success is primarily process driven, and processes lend themselves to continuing improvement. As a PCO explained, contract efficiency leads to a reduction in contract risk,

allowing the government to switch contract vehicles from a risk-burdened cost contract to a fixed contract, which transfers risk to the contractor.

3. Contracting Officer Representative and Principal Contracting Officer Similarities in Measurements of Success

Our research revealed the following similarities between CORs and PCOs when measuring the success of a service contract:

- past performance and performance,
- track costs,
- track schedule, and
- customer satisfaction and end user evaluation.

a. Past Performance and Performance

Our data show that 59% of PCOs measure past performance and 71% of CORs measure performance as indicators of success. PCOs' and CORs' measures of performance are both outcome-based measurements. Both measures employ user feedback as a gauge of success. The COR measures performance according to the surveillance plan, which provides input to the PCO's measurement of past performance. Based on the research, performance and past performance are two of the most relevant tools used for measuring success.

b. Track Costs

Our data revealed that 27% of PCOs measure tracking costs and 14% of CORs measure adherence to budget as success metrics. This relates directly to the responsibilities of both the PCO and the COR. As outlined in the COR handbook, the COR must conduct surveillance to maintain costs (Director, Defense Procurement and Acquisition Policy, 2012). The FAR specifically mandates that PCOs ensure adherence to procurement laws and regulations, such as the Anti-Deficiency Act (FAR, 2012).

c. Track Schedule

We found that CORs and PCOs placed similar emphasis on tracking the schedule, with response rates of 28% and 23%, respectively. We found that the response rates for tracking the schedule were relatively low given the the requirements of both the COR and PCO, in accordance with the COR handbook, to ensure that contract performance is timely and within the scope of work (Director, Defense Procurement and Acquisition Policy, 2012). Additionally, the FAR states that the COR and PCO must satisfy the customer in terms of timeliness of the delivered service (FAR, 2012).

d. Customer Satisfaction and COR End User Evaluation

Our data revealed that PCOs placed a higher importance on customer satisfaction than the CORs; the two groups had response rates of 41% and 21%, respectively. This demonstrates that the PCO places more of an emphasis on customer satisfaction as a measure of success than the COR. The low response rate from CORs was surprising given the close interaction of CORs with end users and technical evaluators within services contracts. However, CORs are typically nominated for their technical expertise and not their customer relationship skills. Conversely, PCOs' positions are customer service oriented. Additionally, in certain cases, the COR is also the customer.

4. Contracting Officer Representative and Principal Contracting Officer Differences in Measurements of Success

Our research revealed the following differences between CORs and PCOs when measuring the success of a service contract:

- no rework, no protest, and good communication; and
- PCO surveillance plan

a. No Rework, No Protest, and Good Communication

CORs listed no rework, no protests, and good communication as measures of a successful service contract. However, the response rate for all three categories was only 7% each, equating to only one responder in each category. As such, these categories represent a less than significant metric for success in service contracts.

b. PCO Surveillance Plan

The PCO's surveillance plan represented one of the highest response rates at 59% (13 out of 22 respondents). The FAR states that government contract quality assurance shall be performed at such times and places as may be necessary to determine that the services conform to contract requirements (FAR, 2012). The COR handbook clearly states that the QASP is an important tool for assessing the service contract for the COR (Director, Defense Procurement and Acquisition Policy, 2012). However, the CORs exhibited zero responses for surveillance plan, demonstrating a possible lack of training or that CORs' experience involved contracts below the simplified threshold. Further, the QASP may have been prepared by the contractor. According to the FAR, "the Government may either prepare the quality assurance surveillance plan or require the offerors to submit a proposed quality assurance surveillance plan for the Government's consideration in development of the Government's plan" (FAR, 2012).

H. CONCLUSIONS

Our findings corroborate the deficiency found within the GAO report on best practices in acquisition services, which suggested there are few services contracting-related annual performance metrics (GAO, 2002a).

Further, we found that there is no standardized definition or measurement for success of service contracts. While similarities do exist between the definitions and measures of success of a service contract, the level of emphasis placed on those similar categories was often disproportionate.

In addition, those metrics in place were found to be lacking, both in terms of their ability to be quantified and their ability to meet the requirements of S.M.A.R.T. measurements.

We discovered that the differing objectives and duties of the stakeholders clearly affected the factors that each stakeholder emphasized when defining and measuring the success of service contracts. Stakeholder theory identifies the conflicts that arise between acquisition team members and how these conflicts can lead to this lack of uniformity.

In our research, we identified a clear lack of PMs within DoD services contracting. In many cases, the incumbent COR was the PM. This supports GAO findings that the DoD lacks the proper management structure and processes for managing services contracts (GAO, 2002b, 2007b; DoD IG, 2009)

Finally, we discovered that no uniform certification process was established and required for CORs within services contracting at the time of our research. This validates the GAO report's conclusions on defense acquisition workforce training, stating that a lack of training for defense acquisition workforce personnel continues to plague DoD services contracting efforts (GAO, 2002). To our knowledge, reform measures are in process for the COR training certification process.

We discovered that the COR is not as involved in the pre-award phase of service contracts. According to the COR handbook, the COR is responsible for preparing the SOW/PWS and surveillance plan. Our COR data indicate no reference to surveillance as a measure of success. Typically, the person who develops the SOW/PWS also develops the surveillance methods. The CORs' lack of reference to a surveillance plan implies no significant involvement in developing the SOW/PWS.

We found that the majority of PCOs put a large emphasis on past performance and surveillance plans, yet the QASP is only mandatory for use in acquisitions in excess of the simplified acquisition threshold. Additionally, CPARS is only mandated for services acquisitions in excess of $1 million. Yet, over 83% of United States federal acquisitions have an average dollar value of $25,000. Therefore, the majority of acquisitions are not required to possess any surveillance plan, nor are they required to have any evaluation on past performance. Only 1% of federal acquisition contracts are over $1 million (Garrett, 2011).

I. RECOMMENDATIONS

A standardized definition of a successful service contract must be implemented, incorporating the proper factors with the correct level of emphasis. Additionally, standardized and quantifiable measures must be implemented within DoD services contracting. These measures should align with S.M.A.R.T. metrics and incorporate a more

objective orientation. This standard should incorporate only those definitions and measures that both support the objectives and goals of the DoD, as outlined in Chapters I and II, and are validated by correlations in stakeholder responses. Furthermore, the standard metrics incorporated should meet the criteria outlined by S.M.A.R.T. We suggest utilizing a balanced outcome- and process-oriented approach, incorporating the following categories when defining a successful service contract:

- schedule,
- cost maintenance,
- communication,
- and well-defined requirements.

The standard measure for a successful service contract should incorporate solely an outcome-driven approach utilizing the following three metrics:

- performance,
- cost tracking, and
- schedule tracking.

These standard metrics are aligned with the FAR's determination that the customer should be satisfied in terms of cost, timeliness, and quality of the delivered product or service. Additionally, in accordance with the COR handbook, the COR and PCO must ensure that contract performance is timely and within the scope of work (Director, Defense Procurement and Acquisition Policy, 2012). Our recommended standards of defining and measuring the success of a service contract ensure adherence to these guidelines. These standards definitions and metrics for a successful service contract align with the goals and initiatives outlined by the USD (AT&L) to properly manage and assess each service contract to determine its performance. Incorporation of these standards will allow for a more uniform analysis of this performance and could lead directly to the goals and objectives of the USD (AT&L) to promote efficient and effective services contracting, while reducing waste and producing savings. Additionally, this standard set of metrics and definitions will lead to

better analysis of the performance of a service contractor, leading to a selection of more efficient and effective contractors in future programs.

In addition, these standards for defining and measuring a successful service contract could be represented using a scorecard approach. The balanced scorecard is a planning and management tool within government organizations to align activities to the goals and objectives of the organization, improve communications, and monitor organization performance against goals. The scorecard employs a performance measurement framework added to financial metrics to give managers a complete view of organizational performance (Monczka et al., 2011). Although important, cost is a lagging indicator of performance and not the only determining factor. The scorecard ensures other related factors (tracking schedule and performance) are given proper emphasis in evaluating service contract success.

Incorporating these standardized definitions and quantifiable measurements in the form of a scorecard will mitigate the conflicts that arise due to the differing objectives and goals of the various stakeholders within DoD services contracting.

The PM is an integral member of the IPT and an important stakeholder in the contracting process. Every service contract should be evaluated on complexity, and evaluators should recognize when a need exists to incorporate a properly trained and assignable PM as a key stakeholder (Phillips, 2007). PMs provide strong communication skills and leadership to the entire team.

An improved application of surveillance and past performance could be implemented. For example, the FAR should require a QASP for contracts below the simplified acquisition threshold. Incorporating a QASP will ensure oversight for the majority of service contracts. Even though the FAR 15.304 states that past performance should always be evaluated for negotiated competitive acquisitions expected to exceed the simplified acquisition threshold, CPARS is only required for acquisitions above the $1 million threshold. The CPARS threshold should be amended to include contracts below $1 million down to a minimum of the simplified acquisition threshold or to a point acceptable to capture the majority of service contract past performance data. In order to emphasize COR importance, individual

contracting agencies should include instructions and directives mandating involvement of the COR in pre-award phase activities, such as the development of the SOW/PWS.

J. SUMMARY

In this chapter we presented and analyzed the data we collected from the research to answer the three research questions:

1. How are successful service contracts within the DoD being defined by different stakeholders?
2. How are service contracts being measured within the DoD by different stakeholders?
3. How should service contracts be defined and measured within theDoD?

We presented conclusions and recommendations based on our analysis. In the next chapter, we summarize our findings and provide recommendations for further research.

V. SUMMARY, CONCLUSIONS, AND AREAS FOR FURTHER RESEARCH

A. SUMMARY

Over the last few decades, Department of Defense (DoD) contracting has experienced increased spending on service contracts. Relative to supply contracts, services acquisition has continued to grow in terms both of dollar value and of range of acquisitions. Contract obligations rose to over $387 billion in 2008, with nearly $200 billion spent on services alone (Hutton & Solis, 2009). Funding spent on service contracts grew steadily from 1990–2010, constituting roughly 42% of the total spending on contracts by the DoD, exclusive of research and development services contracts. As such, a standardized approach to defining and measuring the success of services contracts is essential.

The DoD IG and GAO have indicated poorly defined requirements and inadequate requirements management as problems in services contracting (GAO, 2007c; DoD IG 2009). The GAO has described the DoD's current approach to services contract management as reactive and not fully addressing the key factors of success (GAO, 2007c). DoD IG and GAO reports have consistently identified issues in services contract administration and oversight (GAO, 2005, 2007a, 2007c; DoD IG, 2009). According to the GAO, the poor management of services contracts has undermined the government's ability to obtain a good value for the money spent and contributed to the GAO's decision to designate contract management a high-risk area for the DoD (GAO, 2001, 2007b, 2011).

The DoD implements cross-functional teams through the use of an Integrated Product Team (IPT). It is useful to note that the IPT is primarily used in contracting for products to facilitate the process of meeting cost, performance, and schedule objectives from product concept through production, including field support ("IPT," n.d.). In service contracting, the IPT is a team composed of representatives from appropriate functional disciplines working together to identify and resolve issues; make sound, timely recommendations in an effort to facilitate decision-making; and build successful programs that meet the warfighter's needs ("IPT," n.d.).

With the differing goals, objectives, and responsibilities of the various stakeholders (PM, PCO, COR) within DoD services contracting, conflicts arise with regard to how a successful service contract is defined and measured by different stakeholders. This conflict is explained and understood through stakeholder theory.

B. CONCLUSIONS

1. Findings

Our research answered the questions contained in Chapter I:

1. How are successful service contracts within the DoD defined by different stakeholders and what factors are considered in their definitions?

2. How are service contracts being measured within the DoD by different stakeholders?

3. How should service contracts be defined and measured within the DoD?

We found that there is no standardized definition or measurement for success of service contracts. While similarities do exist between the definitions and measures of success of a service contract, the weighted value of each factor and metric varies between the stakeholders. Many of the metrics that were established failed to properly address the characteristics of S.M.A.R.T., either partially or entirely.

We discovered that the differing objectives and roles of each stakeholder clearly affected the factors that each considered when defining and measuring the success of service contracts. Our research revealed that CORs and PCOs define the factors of a successful service contract as staying on schedule, maintaining costs, facilitating communication, and having well-defined requirements. Additionally, we discovered CORs and PCOs similarly measure a successful service contract by tracking performance, costs, customer satisfaction and end user evaluations, and schedule.

Further, we discovered a lack of properly established PMs within DoD services contracting, which contributes to the deficiencies already present in services contracting.

Additionally, we discovered that no standardized certification process was established and required for CORs within services contracting.

We also discovered that the COR is not always involved in the pre-award phase of service contracts and current application of the QASP and CPARS is inadequate.

2. Recommendations

A standardized definition of a successful service contract must be implemented, incorporating the proper factors with the correct level of emphasis. Additionally, standardized and quantifiable measures must be implemented within DoD services contracting. These measures should align with S.M.A.R.T. metrics and incorporate a more objective orientation than currently exists. Incorporating these standardized definitions and quantifiable measurements will mitigate the conflicts that arise due to the differing objectives and goals of the various stakeholders within DoD services contracting. Every service contract should be evaluated on complexity and evaluators should recognize when a need exists for a PM. An improved application of surveillance and past performance should be implemented. In order to emphasize COR importance, individual contracting agencies should include instructions and directives mandating involvement of the COR in the pre-award phase activities, such as development of the SOW/PWS.

In addition, we suggest utilizing a balanced outcome- and process-oriented approach, incorporating the following categories when defining a successful service contract: staying on schedule, maintaining costs, facilitating communication, and having well-defined requirements. The standard measure for a successful service contract should incorporate solely an outcome-driven approach utilizing the following three metrics: performance, cost tracking, and schedule tracking. These standards for defining and measuring a successful service contract could be represented using a balanced scorecard approach. The balanced scorecard is a planning and management tool used by government organizations to align activities to the goals and objectives of the organization, improve communications, and monitor organization performance against goals. Incorporating these standardized definitions and quantifiable measurements in the form of a scorecard will mitigate the conflicts that arise

due to the differing objectives and goals of the various stakeholders within DoD services contracting.

C. AREAS FOR FURTHER RESEARCH

Our research participants consisted solely of commands associated with the United Sates Navy. As such, we recommend continuing this research into the various contracting commands within the United States Air Force, Army, and Marine Corps. We were also able to incorporate very little data from PMs and contractors within DoD services contracting. We recommend that future research incorporate a larger portion of PMs and contractors. Additionally, we recommend that future research incorporate greater use of survey tools, such as Survey Money, due to their ability to reach a larger audience more effectively and efficiently.

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- Software Requirements for OA
- Spiral Development
- Strategy for Defense Acquisition Research
- The Software, Hardware Asset Reuse Enterprise (SHARE) repository

Contract Management

- Commodity Sourcing Strategies
- Contracting Government Procurement Functions
- Contractors in 21st-century Combat Zone
- Joint Contingency Contracting
- Model for Optimizing Contingency Contracting, Planning and Execution
- Navy Contract Writing Guide
- Past Performance in Source Selection
- Strategic Contingency Contracting
- Transforming DoD Contract Closeout
- USAF Energy Savings Performance Contracts
- USAF IT Commodity Council
- USMC Contingency Contracting

Financial Management

- Acquisitions via Leasing: MPS case
- Budget Scoring
- Budgeting for Capabilities-based Planning
- Capital Budgeting for the DoD
- Energy Saving Contracts/DoD Mobile Assets
- Financing DoD Budget via PPPs
- Lessons from Private Sector Capital Budgeting for DoD Acquisition Budgeting Reform
- PPPs and Government Financing
- ROI of Information Warfare Systems
- Special Termination Liability in MDAPs
- Strategic Sourcing
- Transaction Cost Economics (TCE) to Improve Cost Estimates

Human Resources

- Indefinite Reenlistment
- Individual Augmentation
- Learning Management Systems
- Moral Conduct Waivers and First-term Attrition
- Retention
- The Navy's Selective Reenlistment Bonus (SRB) Management System
- Tuition Assistance

Logistics Management

- Analysis of LAV Depot Maintenance
- Army LOG MOD
- ASDS Product Support Analysis
- Cold-chain Logistics
- Contractors Supporting Military Operations
- Diffusion/Variability on Vendor Performance Evaluation
- Evolutionary Acquisition
- Lean Six Sigma to Reduce Costs and Improve Readiness
- Naval Aviation Maintenance and Process Improvement (2)

- Optimizing CIWS Lifecycle Support (LCS)
- Outsourcing the Pearl Harbor MK-48 Intermediate Maintenance Activity
- Pallet Management System
- PBL (4)
- Privatization-NOSL/NAWCI
- RFID (6)
- Risk Analysis for Performance-based Logistics
- R-TOC AEGIS Microwave Power Tubes
- Sense-and-Respond Logistics Network
- Strategic Sourcing

Program Management

- Building Collaborative Capacity
- Business Process Reengineering (BPR) for LCS Mission Module Acquisition
- Collaborative IT Tools Leveraging Competence
- Contractor vs. Organic Support
- Knowledge, Responsibilities and Decision Rights in MDAPs
- KVA Applied to AEGIS and SSDS
- Managing the Service Supply Chain
- Measuring Uncertainty in Earned Value
- Organizational Modeling and Simulation
- Public-Private Partnership
- Terminating Your Own Program
- Utilizing Collaborative and Three-dimensional Imaging Technology

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