CRITICAL SUCCESS FACTORS IN GOVERNMENT CONTRACT MANAGEMENT

Rene G. Rendon

Rene G. Rendon, D.B.A., is Associate Professor of Acquisition Management in the Graduate School of Business and Public Policy at the Naval Postgraduate School in Monterey, California. His teaching and research interests are in supply management, contract management, and project management.

ABSTRACT

Critical success factors have a direct impact on an organization's project management and contract management processes as well as resulting outcomes. This paper presents the results of survey-based research on contract management critical success factors, derived from the responses of approximately 400 contracting officers who represent 7 Department of Defense (DoD) agencies. The principal contributions of this paper are to show the similarities in both project management and contract management critical success factors and the implications for the DoD. The overall conclusion is that focusing on these critical success factors can improve the DoD's management of both projects as well as contracts. The recommendation is that the DoD should focus on the common knowledge areas and processes impacting project management and contract management by addressing the identified critical success factors in the areas of individual competencies and organizational structures and processes.

INTRODUCTION

The United States federal government continues to increase its level of public spending for supplies and services. Within the federal government, the Department of Defense (DoD) is the largest contracting agency, procuring approximately $370 billion in FY2009 (FPDS, 2010). This was an increase from $133 billion in FY2000. The DoD acquisition workforce professionals are responsible for managing over 3 million contract actions for the procurement of critical supplies and services, ranging from commercial-type supplies, professional and administrative services, highly complex information technology systems, and major defense weapon systems (FPDS, 2010).

The extent and amount of defense procurement spending necessitates that these contract management processes be well managed (Thai, 2004). However, this is not necessarily the case. Between 2001 and 2009, the Government Accountability Office (GAO) has issued 16 reports related to trends, challenges, and deficiencies in federal government contracting. Also, between 2002 and 2008, the DoD Inspector General (DoD IG) issued 142 reports on deficiencies in the DoD acquisition and contract administration processes. These reports have identified project management and contract management as some of the critical deficient areas in DoD contracts. The essence of DoD contract management is the proper planning, award, and administration of contracts and the oversight of contractor performance (Rendon & Snider, 2008). The lack of effective contract administration and contractor oversight increases the government's risk of jeopardizing the total value for the dollars spent on supplies and services. GAO and DoD IG reports have consistently identified contract administration and contractor oversight as problem areas in the management of service contracts (GAO, 2005; GAO, 2007; OIG, 2009). The DoD is at risk of paying higher prices than necessary for supplies and services. Because of this, the GAO has identified DoD contract management as a "high-risk" area since 1992 (GAO, 2009, January). This "high-risk" status reflects the DoD's challenges in achieving desired outcomes in terms of meeting procurement cost, schedule, and performance objectives.

In response to this high-risk rating, the DoD is placing an extensive emphasis in the areas of education, training, and the development of workforce competence models (Newell, 2007; GAO, 2009, March). In addition to a focus on increasing individual contract management competency, organizations are now focusing on increasing organizational contract management competence through the use of organizational process maturity models (Rendon, 2009b). Just as individual competence will lead to greater success in performing tasks, organizational process capability will ensure consistent and superior results for the enterprise (Frame, 1999; Kerzner, 2001; Garrett & Rendon, 2005).

A stream of research has been generated on organizational contract management process capability. The research is focused on assessing an organization's contract management process capability and using the assessment results for determining and implementing process capability improvement initiatives. A Contract Management Maturity Model (CMMM) was first developed and then applied to an Air Force space systems contracting agency (Rendon, 2003). The CMMM was then

applied at various Air Force, Army, and Navy contracting agencies for the purpose of assessing contract management process capability and identifying process improvements, as well as obtaining empirical data for use in characterizing the state of contract management process capability throughout the DoD (Rendon, 2008; Rendon, 2009b).

The CMMM organizational assessments have also resulted in obtaining empirical data on contract management critical success factors. Critical success factors have a direct influence on an agency's project management and contract management processes and resultant projects and contracts.

Contract management and project management are integrally related. The management of projects typically includes planning, awarding, and administering contracts for the performance of the project-related effort. Effective contract administration is integral to successful project management. Contract administration has often been described as "putting the teeth in project monitoring and control" (Rendon, 2009a, p. 70). Indeed, the close relationship between project management and contract management is reflected in the Project Management Institute's *Guide to the Project Management Body of Knowledge (PMBOK Guide)* (PMI, 2008) as well as the National Contract Management Association's *Annotated Guide to the Contract Management Body of Knowledge (CMBOK)* (NCMA, 2006). The *PMBOK Guide* includes a discussion of the procurement knowledge area, and the *CMBOK* includes a discussion of project management aspects of managing contracts. The recent reports from the GAO and the DoD IG identify both project management and contract management as deficiencies in the DoD's contracts. Thus, both project management and contract management are critical processes for the DoD. If successful project management and contract management processes are critical for the success of the DoD's acquisition mission, how do critical success factors for project management compare with critical success factors for contract management? This is the focus of this research.

This paper presents the results of survey-based research on contract management critical success factors, derived from the responses of approximately 400 contracting officers who represent 7 DoD agencies. An analysis of the survey responses is conducted to identify similarities between the survey responses and the critical success factors identified in the project management and contract management literature. The purpose of this paper is to compare the project management and contract

management critical success factors as identified in the literature with the contract management critical success factors indentified in our survey-based research. The principal contributions of this paper are to show the similarities in both project management and contract management critical success factors and to discuss the implications for the DoD in terms of individual and organizational competence. The overall conclusion is that focusing on these critical success factors can improve the DoD's management of both its projects and its contracts.

This paper is organized in four sections. The remainder of this first section provides a brief background on the theoretical framework and a literature review on identifying critical success factors in project management and contract management. In the second section, I discuss the research methods, followed by the third section on research findings and results. Finally, in the fourth section I present a discussion of the identified critical success factors and compare them with the literature.

Theoretical Framework

Academic research in contract management is founded on several economic and management theories, the most often referred to is agency theory (Eisenhardt, 1989). A contract between the government and a contractor reflects a principal-agent relationship. The principal (government) contracts with the agent (contractor) to perform some level of effort, such as developing or manufacturing a product or providing a service. In this relationship, the government's objectives include obtaining the product or service at the right quality, right quantity, right source, right time, and at the right price (Lee & Dobler, 1971). The federal government also has the additional objective of ensuring the product or service is procured in accordance with public policy and statutory requirements (FAR, 2010).

Contractors, on the other hand pursue the objectives of earning a profit, ensuring company growth, maintaining or increasing market share, and improving cash flow, just to name a few. Because of the different and conflicting objectives between the principal and agent, each party is motivated and incentivized to behave in a certain manner. This behavior includes either withholding or sharing information. In principal-agent relationships that involve higher levels of uncertainty, which result in higher risk (such as developing an advanced technology weapon system), the information available to the government and contractor is typically asymmetrical.

Agency theory is concerned with the conflicting goals between the principal and agent in obtaining their respective objectives and is focused on mechanisms related to obtaining information (for example, about the marketplace, the supply or service, or the contractor), selecting the agent (to counter the problem of adverse selection), and monitoring the agent's performance (to counter the effects of moral hazard). Thus, how contracts are planned (for example, competitive or sole source), structured (fixed price or cost reimbursement, with or without incentives), awarded (based on lowest priced, technically acceptable offer, or the highest technically rated offer), and administered (centralized or decentralized, level and type of surveillance, and use of project teams…), has its basis in agency theory and the principal-agent problem. Agency theory can also be applied to project management, specifically in the management of government projects (Moe, 1984). In government projects, the same principal-agent model exists. The principal, in this case the project manager, is faced with the problem of ensuring the agents, in this context the members of the project team, will choose to pursue the principal's best interests.

Critical success factors have a direct relationship on an organization's processes and resulting outcomes, such as projects and contracts. Thus, their importance is crucial to an organization's process improvement efforts. The next section of this paper will present a literature review on critical success factors for project management and contract management.

Literature Review

This literature review will first focus on the basics of critical success factors and then transition to success factors in project management and contract management.

There has been much written on the identification and value of critical success factors in business organizations. Daniel (1961) discusses critical versus non critical elements of a business leading to success. Rockart (1979) identifies the use of critical success factors in helping executives define their information needs. He identifies critical success factors as the "limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organization" (1979, p. 85). Rockart also discusses an interview method for determining a manager's critical success factors. Bullen and Rockart (1981) differentiate critical success factors from other organizational management terms such as "strategy," "objective," "goals," "measures,"

and "problems." They also identify five prime sources of critical success factors (industry, competitive strategy/industry position, environmental factors, temporal factors, and managerial position) and a classification scheme for critical success factors (internal versus external and monitoring versus building/adapting), as well as a hierarchy of critical success factors (industry, corporate, sub-organization, and individual) (Bullen & Rockart, 1981).

The project management literature also provides some insight on critical factors for project success. However, for a discussion on different perceptions of what is considered project success, see Pinto and Slevin (1989). Rubin and Seeling (1967) introduce success and failure factors for projects and conclude that a project manager's performance is determined more by the size of projects previously managed as opposed to the project manager's experience. Avots (1969) identifies project manager selection, project termination, and top management support as factors related to project failure. Baker, Murphy, and Fisher (1983) propose using perceived performance as the measure for project success, instead of the usual triple constraints of cost, schedule, and performance. Others such as Hughes (1986) and Morris and Hough (1987) identify various factors related to project failure or success. Schultz, Slevin, and Pinto (1987) identify categories of project success factors (strategic and tactical) and the impact these factor categories have on the project during the various project management phases. Baccarini (1987) develops a logical framework method for defining project success that consists of four levels of project objectives (goal, purpose, output, and input) and differentiates between product success and project management success. Belassi and Tukel (1996) propose a new framework for determining project critical success factors, grouping them into four categories—project-related, project team/manager related, organization-related, and external environment related.

Specifically related to organizational success factors, Frame (1999) identifies seven key elements that lead to organizational competence in project management: 1) clearly defined and well-formulated procedures for performing work, 2) access to information needed to perform work effectively, 3) sufficient quantities of human and material resources, 4) opportunities for training and education, 5) clearly defined visions of where the organization is headed, 6) a culture of openness, and 7) institutionalization of project management. Crawford (2002) analyzes and compares many of the results of the previous studies of project success factors and identifies the top six factors: 1) planning

(integrative); 2) monitoring and control (integrative), team selection, and technical performance; 3) communication, leadership, strategic direction, and team development; 4) monitoring and control (risk), organizational support, and stakeholder management (other); 5) organizational structure; and 6) project definition and stakeholder management (client). Finally, in a survey of over 150 project management professionals, Baccarini and Collins (2003) identify fifteen critical factors for project success. These factors, listed in Table 5, will be discussed later in the paper.

The literature on contract management critical success factors is not as extensive as on project management. There are studies on critical success factors for specific aspects of procurement. For example, Trent and Monczka (1994) identify critical success factors for cross-functional sourcing teams such as organizational resources, involvement of suppliers, decision-making authority, team leadership, and team effort. Monczka, Petersen, Handfield, and Ragatz (1998) identify the following success factors in strategic supplier alliances: trust and coordination, interdependence, information quality and participation, information sharing, joint problem solving, avoiding the use of severe conflict resolution tactics, and a formal alliance selection process. Gottschalk and Solli-Saether (2005) researched various management theories and identify core competence management and stakeholder management as the most theory-based critical success factors for information technology outsourcing. Finally, Angeles and Nath (2007), in their research on success factors for implementing business to business e-procurement practices, identify three success factors: supplier and contract management, end-user behavior, e-procurement business processes, and information and e-procurement infrastructure.

Although the literature did not indicate research specifically on critical success factors for government contract management, a literature search did identify best practices and lessons learned in federal government contract management. Cohen and Eimicke (2008) identify twenty problems in government contracting that fall into five categories: 1) problems relating to letting contracts, 2) communication issues, 3) contractor internal management issues, 4) government contract management issues, and 5) environment or external issues. Additionally, in empirical studies of DoD contracting agencies, Rendon (2009b) identifies five organizational contract management process best practice categories---1) process strength, 2) successful results, 3) management support, 4) process integration, and 5) process measurement.

In the next section, I discuss this paper's research methods and the research results. A discussion of the research findings compared to the literature will then be presented.

METHODS

The overall objective of this research is to develop a comprehensive understanding of the critical success factors in public contract management. The specific objective and the research question posed were driven by the findings of the GAO and DoD IG reports, as well as by the survey of academic literature discussed earlier. Consequently, this study is focused on answering the following research question: What are the critical success factors needed by DoD contracting agencies to accomplish their mission? The methodology for this research is similar to accepted techniques (Baccarini & Collins, 2003) and involves the use of a web-based survey instrument with open-ended questions. The survey included the following open-ended question: What are the critical success factors needed to allow your organization to achieve its mission? The focus of the analysis is to compare the survey responses with the literature to identify any similarities or differences. (The web-based survey also contained questions related to organizational contract management process capability. An analysis of those responses is the subject of a separate paper.)

The survey used a purposeful sampling method, designed to acquire data on critical success factors in government contract management. Purposeful sampling ensures samples are knowledgeable and informative about the phenomena being researched, thus increasing the utility of the information obtained from small samples (McMillan & Schumacher, 2001; Creswell, 2003). Therefore, the survey was only administered to warranted contracting officers and fully qualified contract specialists. The sampling in this research consisted of agency employees either designated as warranted contracting officers or individuals that were considered fully qualified in the government contracting career field, in accordance with the *Defense Acquisition Workforce Improvement Act (DAWIA)*. Warranted contracting officers are those individuals that have specific authority to enter into, administer, or terminate contracts and make related determinations and findings on behalf of the United States Government (FAR, 2010). Full qualification in the contracting career field is interpreted to mean achievement of Level 2 certification in contracting under *DAWIA*. Level 2 certification requires completion of a

baccalaureate degree with at least 24 semester hours of coursework in accounting, law, business, finance, contracts, purchasing, economics, industrial management, marketing, quantitative methods, and organization and management; two years of contracting experience; and completion of the required contract training courses (DAWIA, 2009).

During 2008 and 2009, the survey website link was emailed to the contracting officials for the following DoD contracting agencies:

US Transportation Command (TRANSCOM)

US Navy Command Fleet Industrial Supply Center (COMFISC)

Army Contracting Command Joint Munitions & Lethality Contracting Center (ACC JM&L)

Army Contracting Command National Capital Region Contracting Center (ACC NCR)

Army Contracting Command Aviation and Missile Command Contracting Center (ACC AMCOM)

US Special Operations Command (USSOCOM)

Department of Defense Educational Activity (DoDEA)

The survey was then forwarded to the eligible contracting personnel for completion. Reminder emails were sent approximately two weeks into the survey period. (For TRANSCOM, the surveys were administered via video-teleconferencing, completed hard-copy, and returned by mail.) The survey instrument included the appropriate confidentiality and protection of human subject provisions.

Below are profiles of the contracting agencies that participated in the survey.

US Transportation Command (TRANSCOM). The US Transportation Command's (TRANSCOM) mission is to provide air, land, and sea transportation for the Department of Defense, both in times of peace and times of war. In support of this mission, USTRANSCOM acquires distribution and transportation services for global movement in support of the warfighter. The directorate of acquisition provides acquisition

support of USTRANSCOM's mission. The directorate typically processes approximately 6,000 contract actions, with an annual spend of approximately $6 billion (USTRANSCOM, 2009).

Navy Command Fleet Industrial Supply Centers (COMFISCS). COMFISCS is comprised of the following seven individual FISC commands: FISC-San Diego, FISC-Norfolk, FISC-Puget Sound, FISC-Pearl Harbor, FISC-Yokosuka, FISC-Sigonella, and FISC-Jacksonville. COMFISCS is responsible for supplying the Navy fleet with a wide variety of supplies and services, including appliances, information technology equipment, office furniture, and ship copiers. Services procured include ship repair, husbanding functions, laundry, consulting, and tugboats. In FY 2008, COMFISCS had completed 89,343 contracting actions that obligated a total of $4.2 billion (Bautista & Ward, 2009).

Army Contracting Command Joint Munitions & Lethality Contracting Center (ACC JM&L). Part of the Army Contracting Command, the Joint Munitions & Lethality (JM&L) Contracting Center is responsible for providing procurement support for lifecycle program management of armaments and munitions. Some of the systems procured by JM&L include research and development prototypes to major weapon systems, such as the Army's 155mm Precision Guided Extended Range Artillery Projectile known as Excalibur, XM982. The total JM&L contract dollars obligated in FY2008 was $3.5 billion (Puma & Sherr, 2009).

Army Contracting Command National Capital Region (ACC NCR). The Army Contracting Command National Capital Region Contracting Center consists of the Contracting Center of Excellence (CCE) and the Information Technology, E-Commerce and Commercial Contracting Center (ITEC4). CCE provides contracting support to the Army Secretariat and the Army Staff for the procurement of telecommunication equipment and services, advertising, training, and studies. The ITEC4 provides worldwide information technology contracting support and procures enterprise information technology support and equipment for Army and other DoD activities. During FY2009, CCE awarded 3663 actions totaling approximately $1.2 billion. ITEC4 awarded 6,526 actions totaling approximately $2.5 billion during fiscal year 2009 (Jeffers, 2009).

Army Contracting Command Aviation and Missile Command (ACC AMCOM). The Army Aviation and Missile Command (AMCOM) is

responsible for lifecycle management of Army missile, helicopter, unmanned ground vehicle, and unmanned aerial vehicle weapon systems. These weapon systems include the Patriot air defense missile system, Hellfire and Javelin missile system, and Apache, Black Hawk, and Chinook helicopters. The AMCOM Contracting Center provides acquisition and contracting support for these weapon systems. In FY2008, the AMCOM Contracting Center processed approximately 23,600 contract actions and obligated approximately $20.6 billion (AMCOM, 2009).

US Special Operations Command (USSOCOM). USSOCOM Special Operations Acquisition and Logistics Center, Directorate of Procurement procures systems and services in support of the USSOCOM. These systems and services include research and development, equipment-related services, knowledge-based services, medical services, construction services, transportation services, and facility-related services. The systems procured include such items as SILENT KNIGHT Radar, Ground Penetrating Radar, Multi-role Anti-armor Anti-personnel Weapon System, Anti-structure Munitions, Advanced Lightweight Grenade Launcher, Multiband Inter/Intra Team Radio, and the Dynamic Optimal Tag System. In providing support for USSOCOM, the directorate procures a myriad of systems and services. In Fiscal Year 2007, the directorate spent $737 million on systems and $1.143 billion on services (Anglin & Good, 2009).

Department of Defense Educational Activity (DoDEA). DoDEA provides education to eligible DoD military and civilian dependents from pre-kindergarten through 12th grade; it consists of the Department of Defense Dependents Schools (DoDDS) located overseas and the Department of Defense Domestic Dependent Elementary and Secondary Schools (DDESS) located in the United States and its territories and possessions. DoDEA procures supplies and services such as textbooks and other educational materials, playground equipment, school bus transportation, information technology, school band uniforms, sports equipment, and anything else needed by a typical public school system. DoDEA's annual procurements are typically in excess of $10 million (Neely, 2009).

Although each of these DoD agencies procures different supplies and services, they all comply with the federal contracting statutes and DoD contract management regulations and policies. In addition, they all

follow, to some extent, the same contract management lifecycle (Rendon & Snider, 2008).

RESULTS

The survey was deployed to the seven agencies discussed in the previous section. Table 1 shows, for each organization, the number of eligible responders from the organization, the number of actual responders, the response rate, and the number of actual responses. Of the total 821 eligible survey participants, 425 completed the survey, generating a response rate of approximately 59%. The 425 survey participants submitted a total of 1,531 responses to the open-ended question on critical success factors.

Table 1

Agency	Number of Eligible Responders	Number of Responders	Organization Response Rate	Number of Responses
TRANSCOM	27	24	89%	93
COMFISC	75	49	65%	188
ACC JM&L	52	46	88%	102
ACC NCR	204	137	67%	400
DODEA	27	20	74%	53
ACC AMCOM	387	175	45%	564
SOCOM	49	34	69%	131
Total	821	485	59%	1531

.

along with the percentage of responses.

Table 2

Category	Number of Responses	Percent of Responses
Workforce	566	37%
Processes	251	16%
Relationships	237	15%
Resources	134	9%
Leadership	132	9%
Other	97	6%
Policies	66	4%
Requirements	48	3%
Total	1531	100%

DISCUSSION

The qualitative content analysis provides the following insight on critical success factors for these DoD contracting agencies:

Workforce (37%)
The Workforce category reflects the largest percentage of survey responses. Common responses included statements related to having an adequate number of personnel; proper staffing of vacant positions; continuous hiring and recruitment of personnel; and a trained, experienced, and competent workforce.

Also included in this category were responses related to the need for specific workforce expertise (such as price analyst, quality assurance personnel, policy specialists, and procurement analyst) and the establishment of specific organizational entities (such as a contract administration team, contract closeout team, full-time policy section, separate small purchase section).

Other common responses related to promotion of deserving personnel, removal of non-productive personnel, mentoring of interns and junior-level personnel, and empowerment of employees.

The Workforce category constituted 566 of the 1,531 responses. Of these 566 responses, this category could be broken down into subcategories of Training (222 responses), Organizational Realignment (33 responses), Experience (28 responses), Promotion (15 responses), and Mentoring (8 responses), as reflected in Table 3. Table 4 provides a sample of survey responses related to this category.

Table 3

Workforce	260	46%
Training	222	39%
Organizational	33	6%
Experience	28	5%
Promotion	15	3%
Mentoring	8	1%
Total	566	100%

Table 4

Workforce
Adequate Staffing Levels
Appropriate Number Of Personnel To Complete The Work
Core Competencies Of Professionals
Dedicated Workforce
Develop Human Resources
Experienced PCO/Coaches
Expertise
Filling Open Slots - Not Enough People
Flexible/Timely Recruiting And Promotion Practices
Focus On Creating Critical Thinkers Instead Of The Clerk Mindset
Foster A Learning Organization
Good People
Great Personnel Attitudes
Higher Grade Structures
Infrastructure Improvements
Integrity In The Promotion Process.
Adequate/Trained Employees
Applicable Training
At-The-Desk, On-The-Job Training
Classroom Training
Continue Periodic Refresher Training On Critical Issues Like Pricing.
Continuous Training
Cross-Training Between Requiring Activity And Contracting
Detailed Training
Formal Training
In House Training
More In-Depth, Hands-On Training In Pricing
More OJT Training Provided From Senior Employees
More Rotational Training For Logistics Personnel
A Procurement Analyst Is Needed That Would Oversee Training, And Would Serve As A Reviewer On All Solicitations
Cost And Pricing Personnel On Board
Establish A Contract Close Out Team Or Section
Have More Pricers Available.
Organize
Organize System Of Management Of Work
Re-Establishment Of An Independent Pricing Directorate
Price Analysts Support Back In Acquisition
Promoting Experienced Contract Specialists
Developing A More Experienced Workforce.
Experience Pricing Professionals
Promotions Based On Merit
Promote Worthy Individuals
Mentoring
Mentorship

Processes (16%)

The Processes category constituted 251 of the 1,531 responses. Responses included statements related to having documented, standardized, consistent, efficient, effective, enforced, and streamlined contracting processes. The most prominent response specifically related to having standardized processes (39). Also included in this category were responses related to flexible processes, sufficient time to perform specific processes such as procurement planning, risk management, and the integration of processes throughout the organization, and price and cost analysis processes. This category also includes responses related to the use of templates, and processes that were measured and continuously improved through the establishment of lessons learned and best practices. Processes specifically identified in the responses included procurement planning (28), contract administration (16), source selection (15), solicitation (10), contract closeout (4), and solicitation planning (3). In addition, risk management (2) and project management (2) were also identified as critical processes. Table 5 provides a sample of survey responses related to this category.

Table 5

Processes
Disciplined/Structured Process But Flexible & Non-Bureaucratic At Same Time
Have A Standardized Operational Procedures For Each Phase Of The Acquisition Process
Have Standard Templates For Each Phase Of The Acquisition Process
Review Of Processes By Outside Source (Versus Internal) To Improve Processes That Appear Antiquated
Well Defined Processes/OIs/Templates
Dissemination Of New Processes & Procedures
Effective And Efficient Procurement Process
Consistency Among Various Divisions, Field Offices Where Possible
Continue To Refine Our Toolbox "Portal" (I.E. SOFARS Sol. Provisions And Contract Clause Matrix, And Incorporate Lessons Learned Link)
Continuous Improvement
Documentation (Paper Trail)
Effective Review Process (Legal, Policy)
Establish And Standardize Processes Where Very Little If None Exist (I.E. Contract Administration)
Established Processes & Procedures
Expedient And Streamlined Review And Approval Processes
Fewest Approval Levels - Local Is Best!
Innovative Contracting Approaches
Room For A More Speedy Process If Needed Or Required
Standardized Processes
Streamline And Shorten Review Process All Phases With Legal And Policy
Streamlined Processes
Streamlined Review/Approval Process
Time To Plan
Timeliness Of Contract Documents
Adequate Acquisition Strategy
Adequate Cost/Price Evaluations
Adequate Planning
Adequate Technical Evaluations
All Divisions Be On The Same Page For Processes
Allow Specialists To Work Without Micromanaging The Award Process
An Efficient And Effective Close Out Process Or Team
Consistency
Continuous Improvement
Contract Closeout Procedures
Develop Internal SOP - Ensure Consistency
Good Use Of Lessons Learned
Implementing Lessons Learned
Integrated Work Process
Integrity Of Process
Not Enough Consistency Between Offices

Relationships (15%)

The survey results provided 237 of the 1,531 responses related to the Relationships category. Responses within this category included statements concerning cooperation among acquisition team members and end-users, coordination and support from program offices, good working relationships with contractors, trust, and collaboration.

This category was also broken down into subcategories of Communication, Teaming, and Customers, as reflected in Table 6. Responses related to Communication numbered 73 of 237 for this category. These responses included open communication, communication at all levels, communication up and down the chain, and more and better communication from higher headquarters. Teaming was another major subcategory, contributing to 53 of the 237 responses. This category included responses related to promoting teamwork, team focus, use of integrated product/process teams (IPTs), being a team player, and teaming with customers. Customers was also a significant subcategory, constituting 38 of the 237 responses. These responses related to having a customer focus, providing customer training, educating the customer, and understanding customer needs. Table 7 provides a sample of survey responses related to this category.

Table 6

Relationships	73	31%
Communication	73	31%
Teaming	53	22%
Customers	38	16%
Total	237	100%

Table 7

Relationships
Cooperation From End Users, Requiring Activity Representatives
Cooperation From Members
Feedback
Respect For All Individuals
Willingness
Cooperation
Coordination
Partnership With End-Users
Program Office Support
Strategic Relationships
Support Of Customers
Open Communication With Personnel
Ability For Org To Communicate With Local Foreign Vendors
Ability To Communicate With Foreign Workforce In English.
Communication
Communication At All Levels
Communication With Customer/Contractor
Communication With Customers
Communication With Employees
Better Communication From Top Down
Communication Between All Divisions, Field Offices
Have Or Promote Team Concepts When Working On Acquisition
Cooperation Between Teams
Team Effort
Teaming
Team Building
Teaming Attitude
Teaming With Our Customer
Teamwork
Good IPT Working Relationship
Great Team Focus.
Customer Focused
Effective Customer Training To Better Understand Our Procedures And Requirements
Ability To Work More With The Customer To Achieve Both Goals
Cooperation With Customers
Customer Alignment/Focus
Customer And Organizational Partnering
Customer Support
Customers Understanding Their Role In The Contracting Process.
Support From Customer
Close Coupling With Customer
Early Involvement/Partnership With Customers/Users

Resources (9%)

The Resources category consisted of 134 of the 1,531 responses. The responses in this category included a wide variety of various resources needed in the contracting process such as automated contract writing systems, contract tracking tools, and other information technology resources. Also included in this category were facilities, equipment, supplies, technical support, and logistical support, as well as adequate travel funds. Table 8 provides a sample of survey responses related to this category.

Table 8

Resources
More Resources To Handle Workload
Resources To Perform Mission ($, Equipment, Supplies, Etc.)
Adequate Processing Time
Adequate Resources/Personnel
Ample Time To Properly Plan
Appropriate Resourcing.
Automated Systems That Enable Not Hinder
Efficient Automation System - SPS
Efficient Equipment (I.E. Hardware, Software, Supplies) To Accomplish The Task At Hand
Equipment That Works Properly!!! (Computers, Copiers, Faxes, Phones)
Funding For Travel From Time To Time
Good Electronic Systems For Completing Workload
Good Time Management
IT Systems That Actually Work Properly.
Maintaining Adequate Resources (Filling Key Vacancies)
Provide Adequate Facilities; i.e., Conference Rooms, Heating
Sufficient Funding
Comfortable Work Areas
Match Workload To Resources
Proper And Working IT
Reasonable Timeframes
Resources (People, Supplies, Equipment)
A Data Repository With Samples
Adequate Automated Resources
Adequate Program Support And Technical Support
Adequate Supplies

Leadership (9%)

The Leadership category accounted for 132 of the 1,531 responses. These responses were all related to the need for strong, empowered leadership and management support, quick decision-making, clear lines of authority, and people-oriented management. This category also included responses related to recognition of and support of contracting officers, and managerial ability and experience. Table 9 provides a sample of survey responses related to this category.

Table 9

Leadership
Reasonable Leadership Expectations
Senior Leadership Support
Senior Level Management Support To All Contracting Officers
Setting Goals
Strong Leadership With Focus On "Doing Good" Vice "Looking Good"
Clear Goals And Objectives
Clear Leadership And Guidance.
Flexible Management
Having Dynamic Leaders In Touch With Reality
Having Supervisors That Work For The Whole Organization's Success, Not Just Their Specific Parochial Division
Leadership
Management Support
Monthly ALL HANDS Meetings Will Help With Morale
Oversight
Prioritization
Quick Decision Making
Reasonable Amount Of Oversight
Reward The Productive Individuals And Not The Non Productive
Saying No To Customers That Are Wrong
Support From Management
Upper Management Support
Clear Line Of Authority
Clear Outline Of Goals And Direction
Clear Vision Of Mission Impact
Flexible Management (Div Chief Level)
Leadership
Less Micro Management From Division Chiefs
Management Support
Management Support On Key Decisions
Senior Leadership Support (Remove Barriers/Provide Top Cover)
Strong Senior Leadership
Support From Leadership And Holding People Accountable
Empowered Leaders
Great Leaders

Policies (4%)

The Policies category made up 66 of the 1,531 responses. This category included responses such as updated, clear, concise, uniform guidance, directions, and regulations. This category also included proper dissemination of headquarters policies and the enforcement and concise interpretation of policies. Also included in this category were responses related to reducing unnecessary reviews and approvals (such as peer reviews) and having realistic milestones and goals. Table 10 provides a sample of survey responses related to this category.

Table 10

Policies
Policy And Guidance Starting At OSD And Flowing Down
Updated Policy Relating To DTR And FAR Part 47
Written Up-To-Date Guidance And Regulations
Following Established Policies Concerning Acceptance Of Requirements Packages
Good Guidance And Less Oversight
More Overseas Specific Guidance (Most Instructions Are Written With A Bias Toward CONUS Activities)
Stable Policy
Clear Policies And Procedures, Adequate Automation
Flexibility With Regulations Too Burdensome
Following The Desk Guide
Guidelines
Less Prescriptive Regulations Added To Acquisition Regulation Requirements
More Sops
Regulation/Desktop Guidance.
Regulations Are Issued Only When Needed.
Updating Policy Guidelines
Become Consistent In Legal And Policy Reviews
Clear Goals
Established Policy Planning Procedures Training
Improved And Updated Sops Across The Entire Org
Lack Of Regulations Guidance (And Follow-Up)
Clear Concise Guidance
Continuous Updating Of Guidance Memoranda
Plain English Guidance Needs To Be Given
Sometimes Guidance Given To Few And Not Masses
Specific Interpretation Of Regulations
Compliance With Established Cutoff Dates
Standard Operating Procedures
Compliance With Regulations, Statutes, And Congressional Mandates

Requirements (3%)

Respondents provided 48 of the 1,531 responses within the Requirements category. The Requirements category consisted of statements related to complete, timely procurement request packages; complete, clear, defined and timely procurement requirements; proper technical reviews; and well-written statements of work (SOW), performance work statements (PWS), and justification and approvals (J&A). Also included in this category were responses related to complete and accurate budgets, stable funding, and adequate procurement funding. Table 11 provides a sample of survey responses related to this category.

Table 11

Requirements
A complete package from the requiring activity when our services are being requested-to include funding, defined clear requirements
Complete and accurate requirements packages
Holding customers accountable for proper requirements definition
Complete requirement packages
Proper technical review of requirements before assignment to contract specialists
Quality of Customer Requirement
Receiving Complete Procurement Packages
Sufficient technical criteria provided with PR
Clear requirements
Complete requirements packages
Effective input from end users
Have a complete package: Funding, SOW, J&A
Accuracy of planning packages/
Clear Statement of Work
Clearly defined requirements
Complete Contract Requirements Package
Customer understanding of what makes CRP
Forming an accurate Statement of Work (SOW)
Program budget stability
Quality of Program Manager's planning documents
Requirements not changing
Timeliness of Program Manager's planning documents
Timely receipt of quality Contract Requirements Packages
Adequate and Complete PWS, SOW, Eval Plans, etc.
Complete and accurate requirements package
Packages with appropriate time to process and award
Requiring activity having better knowledge of what they want
Submission of Complete Customer Requirements - Funding, etc
Continue to receive new requirements in a timely manner

Comparison with Literature Review Findings

A comparison of these research results with the literature review findings provides some interesting insight on project management and contract management critical success factors. The contract management critical success factors identified from this survey were similar to those identified as critical success factors for project management, as found in the literature review. Table 12 provides a comparison of the contract management critical success factors identified in this research study with the project management critical success factors identified in the literature. This comparison is discussed below.

Table 12

Contract Management Critical Success Factors (From Current Research)	Frame's Key Elements of Organizational Project Management Competence	Crawford's Analysis of Project Success Factors	Baccarini & Collin's Project Success Factors
Workforce (Including Training, Organizational Setting, Experience, Promotions, Mentoring)	Training and Education	Team Development, Organizational Structure	Competent Project Team, Problem Solving Abilities, Project Manager Authority
Processes	Defined Procedures	Planning, Monitoring and Control	Realistic Time and Cost Estimates, Adequate Project Control, Risk Management, Project Planning
Relationships (Including Communication, Teaming, Customers)	Culture of Openness	Team Selection, Communication, Stakeholder Management	Communication, Client Involvement, Teamwork, Top Management Support, Stakeholder Involvement
Resources	Human and Material Resources, Access to Information	Organizational Support	Resources, Top Management Support
Leadership	Organizational Vision, Institutionalization	Leadership, Strategic Direction, Organizational Support	Top Management Support
Policies	Defined Procedures, Access to Information, Institutionalization	Strategic Direction, Organizational Support	Top Management Support
Requirements	Access to Information	Project Definition, Planning	Project Understanding, Realistic Estimates, Resources

The critical success factor category of Processes was also identified by Crawford (Planning, Monitoring and Control), Frame (Defined Procedures) and Baccarini and Collins (Realistic Time and Cost

Estimates, Adequate Project Control, Risk Management, Project Planning).

The critical success factor category of Relationships (including Communication, Teaming, and Customers) was also common to Crawford (Team Selection, Communication, Stakeholder Management), Frame (Culture Of Openness), and Baccarini and Collins (Communication, Client Involvement, Teamwork, Top Management Support, Stakeholder Involvement).

The critical success factor category of Resources was also identified in the literature by Frame (Human and Material Resources) and Baccarini and Collins (Resources). Additionally, Resources could also be implied in Crawford's findings (Organizational Support), Frame's findings (Access to Information), and Baccarini and Collins' findings (Top Management Support).

The Leadership category was common to Crawford's findings (Leadership, Strategic Direction, Organizational Support) and Baccarini and Collins' findings (Top Management Support). Leadership could also be implied in Frame's findings (Organizational Vision and Institutionalization of Project Management).

Although the Policies category was not identified by Crawford, per se, it could be implied in the Strategic Direction factor. The Policies category was identified by Frame (Defined Procedures), and could also be implied by Frame's Organizational Vision and Institutionalization of Project Management, as well as by Baccarini and Collins' finding of Top Management Support.

The final critical success factor category, Requirements, is related to the procurement process and the need for complete procurement requirements (project scope, established budget and sufficient funding, and cost and schedule estimates). These same factors were also identified by Crawford (Project Definition) and Baccarini and Collins (Project Understanding, Realistic Time and Cost Estimates). This factor could also be implied by Frame's Access to Information factor.

We can also see similarities between the contract management critical success factors identified in this research and the contract management lessons learned and best practices identified from the literature. It is interesting to note that Cohen and Eimicke's five categories of

government contracting problems 1) problems relating to letting contracts, 2) communication issues, 3) contractor internal management issues, 4) government contract management issues, and 5) environment or external issues are similar to the identified contract management critical success factors identified in this research. This also holds true for Rendon's five organizational contract management process best practice categories: 1) process strength, 2) successful results, 3) management support, 4) process integration, and 5) process measurement. The final section of this paper will present conclusions and recommendations based on my research findings.

CONCLUSION AND RECOMMENDATIONS

This research has shown that the contract management critical success factor categories identified in the survey results are similar to critical success factor categories for project management identified in the literature. These research findings of similar success factors for both project management and contract management can provide valuable recommendations for improving organizational success in managing projects and contracts.

Project management and contract management have considerable overlap in terms of knowledge areas and processes, as described by the Project Management Institute and the National Contract Management Association. The research findings show that project management and contract management may also share organizational critical success factors as well. Both project management and contract management are considered high-risk areas in the DoD, due to lack of successful outcomes and results. The DoD's approach to improving project management and contract management treats each area as a separate field, requiring separate individual competencies (education, training, experience, etc.) and organizational competencies (structures, processes, metrics, etc.). This is true even among the various military departments and among different types of projects and contracts within each department. DoD project managers, and those involved in DoD project teams, such as technical managers, financial managers, and logisticians, have different training requirements than DoD contracting officers. A quick survey of DoD project management training curricula finds minimum coverage of contract management knowledge areas. A similar review of DoD contracting officer training curricula finds minimal coverage of project management knowledge areas.

These research findings suggest that the DoD should focus on the common knowledge areas and processes impacting project management and contract management by addressing the critical success factors of Workforce, Processes, Relationships, Resources, Leadership, and Polices. The DoD should consider combining some of the training and education provided to project managers and contracting officers, as well as consider integrating organizational structures and processes for managing both projects and contracts. Because of the direct relationship critical success factors have on an organization's processes and resulting outcomes, the DoD should address the critical success factor categories identified in this research in improving its management of projects and contracts.

ACKNOWLEDGEMENTS

The author gratefully acknowledges the support of recent graduates of the Naval Postgraduate School Contract Management degree program who contributed to this research: LCDR Romeo O. Bautista, US Navy; Capt. Christopher J. Anglin, US Air Force; Major Jason D. Good, US Army; LCDR Carl R. Ward, US Navy; Kevin P. Puma, Department of the Army; Beth A. Sherr, Department of the Army; Ralph M. Neely, Department of Defense; and Dina T. Jeffers, Department of the Army.

REFERENCES

Angeles, R., & Nath, R. (2007). "Business-to-Business E-procurement: Success Factors and Challenges to Implementation." *Supply Chain Management: An International Journal*, *12* (2): 104-115.

Anglin, C. J., & Good, J. D. (2009). *Contract Management Process and Mentorship Analysis of United States Special Operations Command's (USSOCOM) Special Operations Acquisition and Logistics Directorate of Procurement (SOAL-K). MBA Professional Repo*rt, Naval Postgraduate School, Monterey, CA.

Army Aviation and Missile Command (AMCOM). (2009). *AMCOM Units and Command*. [On-line]. Available at www.amcom.redstone.army.mil/. [Retrieved August 26, 2009]

Avots, I. (1969). "Why Does Project Management Fail?" *California Management Review*, *12*: 77-82.

Baccarini, D. (1987). "The Logical Framework Method for Defining Project Success." *Project Management Journal*, *30* (4): 25-32.

Baccarini, D., & Collins, A. (2003). "Project Success—A Survey." *Journal of Construction Research*, 5 (2): 211-231.

Baker, B. N, Murphy, D.C., & Fisher, D. (1983). "Factors Affecting Project Success." In D. I. Cleland and W. R. King (Eds.), *Project Management Handbook* (pp. 669-685). New York: Van Nostrand Reinhold.

Bautista, R. O., & Ward, C. R. (2009). *Analysis of Contract Management Processes at Fleet & Industrial Supply Centers (FISC) Worldwide*. MBA Professional Report, Naval Postgraduate School, Monterey, CA.

Belassi, W., & Tukel, O. I. (1996). "A New Framework for Determining Critical Success/Failure Factors in Projects." *International Journal of Project Management*, *14* (3): 141-151.

Bullen, C. V., & Rockart, J. F. (1981). *A Primer on Critical Success Factors* (CISR No. 69, Sloan WP No. 1220-81). Cambridge, MA: Center for Information Systems Research, Sloan School of Management, Massachusetts Institute of Technology.

Cohen, S., & Eimicke, W. (2008). *The Responsible Contract Manager: Protecting the Public Interest in an Outsourced World*. Washington, DC: Georgetown University Press.

Crawford, L. (2002). "Profiling the Competent Project Manager." In D. P. Slevin, D. I. Cleland, and J. K. Pinto (Eds.), *The Frontiers of Project Management Research* (pp. 151-176). Newton Square, PA: Project Management Institute.

Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousands Oaks, CA: Sage.

Daniel, D. R. (1961). "Management Information Crisis." *Harvard Business Review, 39* (5): 111-121.

Defense Acquisition Workforce Improvement Act (DAWIA), USC. (1990) Title 10, Chapter 87. Washington, DC: US Government Printing Office.

Eisenhardt, K. M. (1989). "Agency Theory: An Assessment and Review." *Academy of Management Review, 14* (1): 57-74.

Federal Acquisition Regulation (FAR). (2010, January). Washington DC: US Government Printing Office.

Federal Procurement Data System (FPDS). (2010). [On-line]. Available at www.fpds.gov/. [Retrieved January 7, 2010]

Frame, D. L. (1999). *Project Management Competence: Building Key Skills for Individuals, Teams, and Organizations*. San Francisco: Jossey-Bass.

Garrett, G. A., & Rendon, R. G. (2005). *Contract Management Organizational Assessment Tools.* McLean, VA: National Contract Management Association.

Gottschalk, P., & Solli-Saether, H. (2005). "Critical Success Factors from IT Outsourcing Theories: An Empirical Study." *Industrial Management & Data Systems, 105* (6): 658-702.

Government Accountability Office (GAO). (2005, March). *Contract Management: Opportunities to Improve Surveillance on Department of Defense Service Contracts* (GAO-05-274). Washington, DC: Author.

Government Accountability Office (GAO). (2007, January). *Defense Acquisitions: Improved Management and Oversight Needed to Better Control DoD's Acquisition of Services* (GAO-07-832T). Washington, DC: Author.

Government Accountability Office (GAO). (2009, January). *High-Risk Series: An Update* (GAO-09-271). Washington, DC: Author.

Government Accountability Office (GAO). (2009, March). *Department of Defense: Additional Actions and Data Are Needed to Effectively Manage and Oversee DOD's Acquisition Workforce* (GAO-09-342). Washington, DC: Author.

Hughes, M. W. (1986). "Why Projects Fail: The Effects of Ignoring the Obvious." *Industrial Engineering*, *18*: 14-18.

Jeffers, D. T. (2009). *Contract Specialist Turnover Rate and Contract Management Maturity in the National Capital Region Contracting Center: An Analysis*. MSCM Joint Applied Project, Naval Postgraduate School, Monterey, CA.

Kerzner, H. (2001). *Strategic Planning for Project Management: Using A Project Management Maturity Model*. New York: John Wiley & Sons.

Lee, L., & Dobler, D. W. (1971). *Purchasing and Materials Management: Text and Cases*. New York: McGraw-Hill.

McMillan, J. H., & Schumacher, S. (2001). *Research in Education: A Conceptual Introduction*. New York: Addison-Wesley, Longman.

Moe. T. M. (1984). "The New Economics of Organization". *American Journal of Political Science*, 28, (4): 739-777.

Monczka, R. M., Petersen, K. J., Handfield, R. B., & Ragatz, G. L. (1998). "Success Factors in Strategic Supplier Alliances: The Buying Company's Perspective." *Decisions Sciences*, *29* (3): 553-577.

Morris, P. W., & Hough, G. H. (1987). *The Anatomy of Major Projects*. New York: John Wiley & Sons

National Contract Management Association (NCMA). (2006). *Annotated Guide to the Contract Management Body of Knowledge (CMBOK)*. Ashburn, VA: Author.

Neely, R. M. (2009). *Analysis of the Department of Defense Education Activity (DODEA) Using the Contract Management Maturity Model (CMMM)*. MSCM Joint Applied Project, Naval Postgraduate School, Monterey, CA.

Newell, E. (2007). *Report: Contracting Workforce Needs More Training*. Government Executive. [On-line]. Available at www.govexec.com/mailbagDetails.cfm?aid=38356. [Retrieved January 4, 2008]

Office of the Inspector General (OIG). (2009, April 22). *Summary of DoD Office of Inspector General Audits of Acquisition and Contract Administration* (DoD IG Report No. D-2009-071). Washington, DC: US Department of Defense.

Pinto, J. K., & Slevin, D. P. (1989). "Critical Success Factors in R&D Projects." *Research Technology Management, 32* (1): 31-35.

Project Management Institute (PMI). (2008). *A Guide to the Project Management Body of Knowledge (PMBOK Guide).* Newtown Square, PA: Author.

Puma, K. P., & Sherr, B. A. (2009). *Assessing Contract Management Maturity: U.S. Army Joint Munitions and Lethality Contracting Center, Army Contracting Command, Picatinny Arsenal*. MSCM Joint Applied Project, Naval Postgraduate School, Monterey, CA.

Rendon, R. G. (2003). *A Systematic Approach to Assessing Organizational Contract Management Maturity*. Unpublished doctoral dissertation, School of Business, Argosy University, Orange County, CA.

Rendon, R. G. (2008). "Procurement Process Maturity: Key to Performance Measurement." *Journal of Public Procurement, 8* (2): 200-214.

Rendon, R. G. (2009a). "Contract Changes Management." In G. A. Garrett (Ed.), *Contract Administration: Tools, Techniques and Best Practices* (pp. 69-87). Riverwoods, IL: CCH.

Rendon, R. G. (2009b). *Contract Management Process Maturity: Empirical Analysis of Organizational Assessments* (Technical Report NPS-CM-09-124). Acquisition Research Program, Naval Postgraduate School, Monterey, CA.

Rendon, R. G., & Snider, K. F. (Eds.). (2008). *Management of Defense Acquisition Projects.* Reston, VA: American Institute of Aeronautics and Astronautics.

Rockart, J. F. (1979). "Chief Executives Define Their Own Data Needs." *Harvard Business Review*, *57* (2): 81-93.

Rubin, I. M., & Seeling, W. (1967). "Experience as a Factor in the Selection and Performance of Project Managers." *IEEE Trans Eng Management*, *14* (3): 131-134.

Schultz, R. L., Slevin, D. P., & Pinto, J. K. (1987). "Strategy and Tactics in a Process Model of Project Implementation." *Interfaces*, *17* (3): 34-46.

Thai, K. (2004). *Introduction to Public Procurement*. Herndon, VA: National Institute of Governmental Purchasing.

Trent, R. J., & Monczka, R. M. (1994). "Effective Cross-Functional Sourcing Teams: Critical Success Factors." *International Journal of Purchasing and Materials Management*, *30* (4): 3-11.

United States Transportation Command (USTRANSCOM). (2009). *USTRANSCOM Organization*. [On-line]. Available at www.transcom.mil/organization2.cfm. [Retrieved August 26, 2009]