



# EXCERPT FROM THE PROCEEDINGS

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CONTRACT MANAGEMENT

**Services Supply Chain in the Department of  
Defense: Defining and Measuring Success of  
Services Contracts in the U.S. Navy**

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# Preface & Acknowledgements

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Welcome to our Tenth Annual Acquisition Research Symposium! We regret that this year it will be a “paper only” event. The double whammy of sequestration and a continuing resolution, with the attendant restrictions on travel and conferences, created too much uncertainty to properly stage the event. We will miss the dialogue with our acquisition colleagues and the opportunity for all our researchers to present their work. However, we intend to simulate the symposium as best we can, and these *Proceedings* present an opportunity for the papers to be published just as if they had been delivered. In any case, we will have a rich store of papers to draw from for next year’s event scheduled for May 14–15, 2014!

Despite these temporary setbacks, our Acquisition Research Program (ARP) here at the Naval Postgraduate School (NPS) continues at a normal pace. Since the ARP’s founding in 2003, over 1,200 original research reports have been added to the acquisition body of knowledge. We continue to add to that library, located online at [www.acquisitionresearch.net](http://www.acquisitionresearch.net), at a rate of roughly 140 reports per year. This activity has engaged researchers at over 70 universities and other institutions, greatly enhancing the diversity of thought brought to bear on the business activities of the DoD.

We generate this level of activity in three ways. First, we solicit research topics from academia and other institutions through an annual Broad Agency Announcement, sponsored by the USD(AT&L). Second, we issue an annual internal call for proposals to seek NPS faculty research supporting the interests of our program sponsors. Finally, we serve as a “broker” to market specific research topics identified by our sponsors to NPS graduate students. This three-pronged approach provides for a rich and broad diversity of scholarly rigor mixed with a good blend of practitioner experience in the field of acquisition. We are grateful to those of you who have contributed to our research program in the past and encourage your future participation.

Unfortunately, what will be missing this year is the active participation and networking that has been the hallmark of previous symposia. By purposely limiting attendance to 350 people, we encourage just that. This forum remains unique in its effort to bring scholars and practitioners together around acquisition research that is both relevant in application and rigorous in method. It provides the opportunity to interact with many top DoD acquisition officials and acquisition researchers. We encourage dialogue both in the formal panel sessions and in the many opportunities we make available at meals, breaks, and the day-ending socials. Many of our researchers use these occasions to establish new teaming arrangements for future research work. Despite the fact that we will not be gathered together to reap the above-listed benefits, the ARP will endeavor to stimulate this dialogue through various means throughout the year as we interact with our researchers and DoD officials.

Affordability remains a major focus in the DoD acquisition world and will no doubt get even more attention as the sequestration outcomes unfold. It is a central tenet of the DoD’s Better Buying Power initiatives, which continue to evolve as the DoD finds which of them work and which do not. This suggests that research with a focus on affordability will be of great interest to the DoD leadership in the year to come. Whether you’re a practitioner or scholar, we invite you to participate in that research.

We gratefully acknowledge the ongoing support and leadership of our sponsors, whose foresight and vision have assured the continuing success of the ARP:



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# Contract Management

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## **Services Supply Chain in the Department of Defense: Defining and Measuring Success of Services Contracts in the U.S. Navy**

Uday Apte and Rene Rendon  
*Naval Postgraduate School*

## **Make or Buy: A Systematic Approach to Department of Defense Sourcing Decisions for Services (An Interim Report)**

Jesse Ellman, Joachim Hofbauer, David J. Berteau, and Guy Ben-Ari  
*Defense-Industrial Initiatives Group, Center for Strategic and International Studies*



# Services Supply Chain in the Department of Defense: Defining and Measuring Success of Services Contracts in the U.S. Navy

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## Abstract

DoD spending on services has been trending upwards for over a decade and, as of 2011, it accounted for 56% of total contract spending. The increased reliance on services contractors has prompted the GAO to look more closely at the acquisition and contract management process. In this research, we address the following questions: (1) How do different stakeholders define successful services contracts within the Navy? (2) How do different stakeholders measure services contracts within the Navy? and (3) How should Navy services contracts be defined and measured? We conducted a survey of 168 key stakeholders. We discovered that when defining and measuring the success of a service contract, all stakeholders tend to utilize outcome-related factors over process-oriented factors. We believe this is because outcomes tend to drive perceptions of success more than processes and are more easily quantifiable. Metrics used to measure success are typically related to cost, schedule, and performance. Based on these findings, we provide recommendations on establishing better internal control measures, putting in place an operational audit process, and creating a standardized reporting process.

## Introduction

The service sector represents the largest and the fastest growing segment of the economies of the U.S. and other developed countries. This growth of services in the overall economy is also mirrored by the growth of services acquisition in the DoD. For example, the DoD obligations on contracts have more than doubled between fiscal years 2001 and 2008 to over \$387 billion, with over \$200 billion spent just for services in 2008 (GAO, 2009). In conjunction with this increase in defense procurement is the reduction of the defense acquisition workforce. The size of the federal workforce decreased from 2.25 million in 1990 to 1.78 million in 2000 (GAO, 2002). The combination of the increasing defense procurement workload and the decreasing size of the government workforce, along with the complexities of an arcane and convoluted government contracting process, have created the perfect storm—an environment in which complying with government contracting policies and adopting contract management best practices has not always been feasible (Rendon, 2010). Between 2001 and 2009, the GAO issued 16 reports related to trends, challenges, and deficiencies in defense contracting. During this same time frame, the DoD Inspector



General (DoDIG) issued 142 reports on deficiencies in the DoD acquisition and contract administration processes. These reports have identified poor contract planning, contract administration, and contractor oversight as just some of the critically deficient areas in DoD contract management. Because of these deficiencies, the GAO has identified contract management as a “high risk” area for the federal government since 1990 and continues to identify it as high risk (GAO, 2013).

As the DoD’s services acquisition continues to increase in scope and dollars, the agency must give greater attention to proper acquisition planning, adequate requirements definition, sufficient price evaluation, and proper contractor oversight (GAO, 2002). In fact, as stressed in a recent memorandum for acquisition professionals by the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L], 2010), improving the efficiency of the acquisition of products and services is of utmost importance to the DoD. In some ways, the issues affecting services acquisition are similar to those affecting the acquisition of physical supplies and weapon systems. However, the unique characteristics of services and the increasing importance of services acquisition offer a significant opportunity for conducting research in the management of services acquisition in the DoD.

### **Research Questions**

This research project undertakes a focused, in-depth study of the services acquisition so as to understand how success of service acquisition contracts is being defined and measured in the Navy. The contract management process is performed with inputs from the different functional areas, such as program management, contracting, financial, logistics, and quality assurance. Each of these project team members represents different stakeholders and are therefore likely to have different goals and objectives. Hence, the first research question we investigated was as follows: How do different stakeholders define successful services contracts within the Navy? To develop a clear understanding of current services acquisition practices, we also investigated the second research question: How do different stakeholders measure services contracts within the Navy? Investigating the previous two questions helped us develop recommendations regarding the third and final research question: How should the service contract’s success be measured? The next section provides a literature review of some of the management theories informing service supply chain management, as well as some of our previous research on DoD services acquisition.

### **Literature Foundation**

The academic research in the management of services acquisition is founded on several economic and management theories, including agency theory (Eisenhardt, 1989), transaction cost economics (Williamson, 1979), contractual theory (Luo, 2002), service operations and supply management (Fitzsimmons & Fitzsimmons, 2006), and stakeholder theory (Freeman, 1984; Cleland, 1986; El-Gohary, Osman, & El-Diraby, 2006). We refer the reader to our earlier technical report (Apte & Rendon, 2013) for a survey of prior academic research, and we also provide a summary of research projects carried out by the authors in the area of services supply chain.

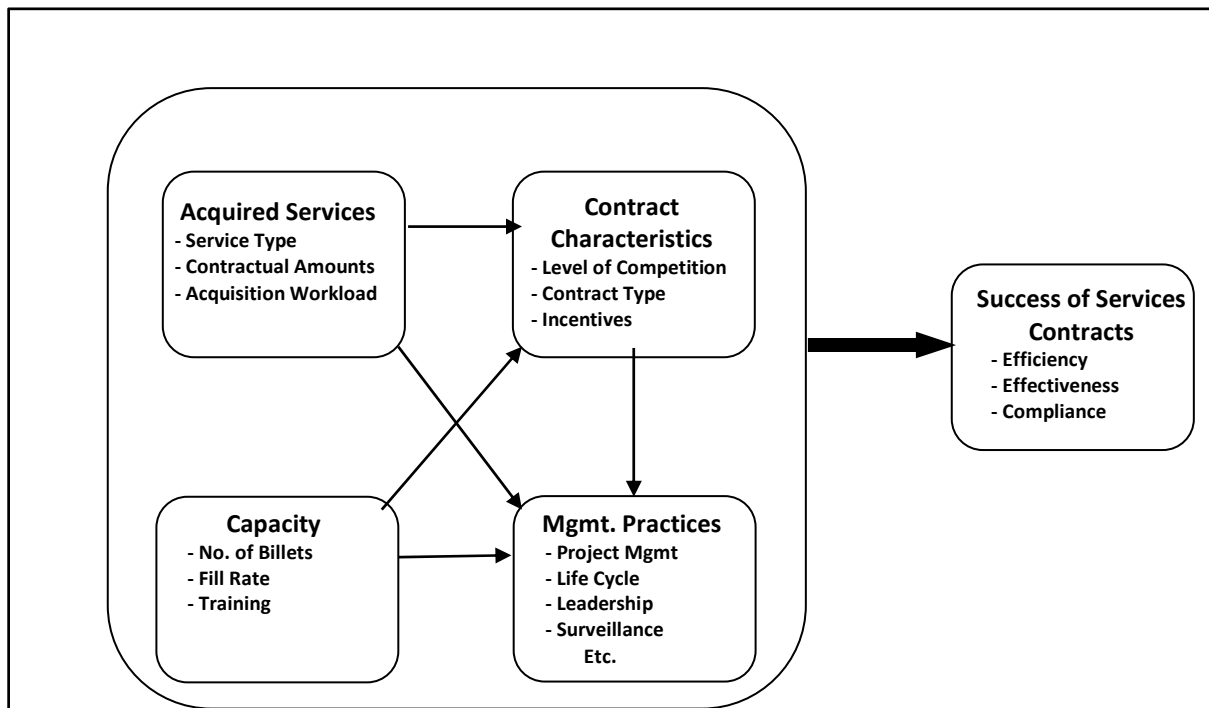
We have addressed the need for research in this increasingly important area of services acquisition by undertaking six sponsored research projects over the past six years. The first two research projects (Apte, Ferrer, Lewis, & Rendon, 2006; Apte & Rendon, 2007) were exploratory in nature, aimed at understanding the types of services being acquired, the associated rates of growth in services acquisition, and the major challenges and opportunities present in the service supply chain.



The next two research projects were survey-based empirical studies aimed at developing a high-level understanding of how services acquisition is currently being managed at a wide range of Army, Navy, and Air Force installations (Apte, Apte, & Rendon, 2008; Apte, Apte, & Rendon, 2009). The analysis of survey data indicated that the current state of services acquisition management suffers from several deficiencies, including deficit billet and manning levels (which are further aggravated by insufficient training and the inexperience of acquisition personnel) and the lack of strong project-team and life-cycle approaches. Our research (Apte, Apte, & Rendon, 2010) also analyzed and compared the results of the primary data collected in two previous empirical studies involving Army, Navy, and Air Force contracting organizations so as to develop a more thorough and comprehensive understanding of how services acquisition is being managed within individual military Services.

As a result of these research projects dealing with the service supply chain in the DoD, we have developed a comprehensive, high-level understanding of services acquisition in the DoD, have identified several specific deficiencies, and have proposed a number of concrete recommendations for performance improvement.

Based on the foundation of the previously mentioned management theories, conclusions of the GAO and DoDIG reports (Seifert & Ermoshkin, 2010), and findings of our own sponsored research projects on the topic, we believe that the success of service acquisition contracts is significantly influenced by four broadly defined factors: (1) the type and quantity of services being outsourced and the associated amount of acquisition-related workload; (2) the characteristics of contracts being awarded; (3) the capacity available to carry out the contracting, project management, and surveillance work; and (4) various management practices, such as use of project team or life-cycle approaches and so forth. A conceptual model indicating the interrelationship among these factors is shown in Figure 1.



**Figure 1. Drivers of Acquisition Practices and Success of Service Contracts**



As shown in the conceptual diagram of Figure 1, the contract characteristics are affected by the type of service being acquired, while the management practices being used are influenced by the services being acquired, the contract characteristics, and, more importantly, the capacity available to perform the acquisition work. The success of services contracts, in turn, is affected by the previously mentioned four drivers. Underlying Figure 1 is the fundamental question motivating our in-depth research: What drives the success of services contracts? This fundamental question is, of course, critically important, and yet it is also not one that can be answered easily or quickly. We believe that, generally, in the case of questions related to complex systems, it is preferable to break down the overall system in smaller parts, gain an understanding of the functioning of each part, and then put all the pieces together to better understand the overall system and answer the fundamental question. That is what we plan to do in this research by addressing three research questions: (1) understand how the success of services contracts is being defined by different stakeholders, (2) identify how the success of services contracts is currently being measured, and (3) develop specific recommendations on how the success of services contracts should be measured. We address our research methodology in the next section.

### **Research Methodology**

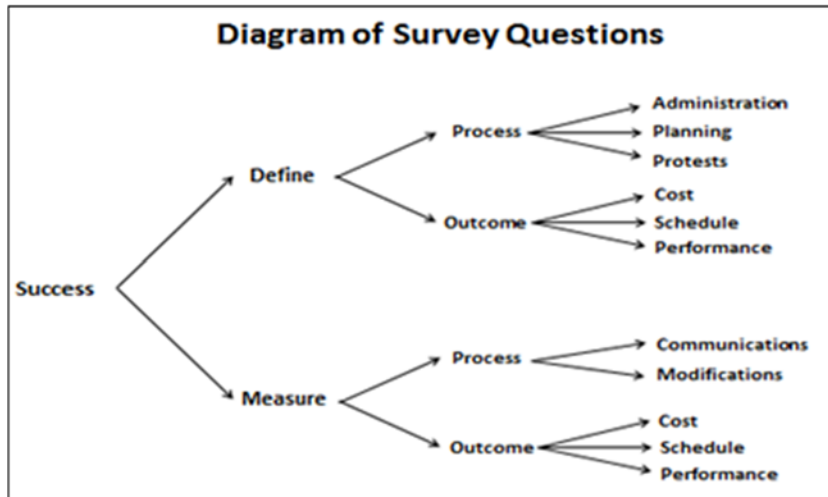
With the assistance of our MBA thesis students (Hagan, Spede, & Sutton, 2012), we developed and deployed a data collection survey instrument to collect empirical data for answering our research questions. The survey was deployed to the various stakeholders at the participating commands. We then analyzed the data using descriptive statistics to provide recommendations and conclusions.

We developed and deployed a web-based survey using the SurveyMonkey website. The survey instrument included both demographic questions and core questions related to defining and measuring successful services contracts. The core questions were designed to establish the importance of different factors when defining and measuring the success of services contracts. These core questions were related to the contracting process, as well as to different outcomes such as cost, schedule, and performance (Hagan et al., 2012).

In terms of defining successful contracts, the core questions asked participants to rank various definitions relating to the four metrics (process, cost, schedule, and performance) in order of most important (1) to least important (5). We also asked participants to rate definition statements relating to process, cost, schedule, and performance. These questions use a Likert scale asking level of agreement, importance, and amount of time devoted by the participants. The Likert scale had a range of 1 to 5, with 1 representing a negative response and 5 representing a positive response (Hagan et al., 2012).

In terms of measuring successful contracts, the core questions asked participants to rank various measurements relating to the four metrics in order of most important (1) to least important (5). The last question in the section asks participants to rate on a Likert scale how often the organization conducts certain actions that pertain to the measurement of success concerning process, schedule, cost, and performance. Figure 2 reflects our survey question approach (Hagan et al., 2012).





**Figure 2. Diagram of Survey Questions**

The survey was deployed to the major stakeholders (PMs, COs, and CORs) at the following major contracting commands: Fleet Logistics Center (FLC) Philadelphia, FLC Jacksonville, FLC Norfolk, FLC Puget Sound, FLC San Diego, Naval Sea Systems Command (NAVSEA), Military Sealift Command (MSC), and Space and Naval Warfare Systems Command (SPAWAR; Hagan et al., 2012).

### Survey Results and Analysis

In this section, we present the results of the survey and discuss its major findings. As mentioned previously, the primary objective of this research is to empirically examine how the success of a service contract is being defined and measured by different stakeholders. We designed a survey containing 19 questions and distributed them to the major stakeholders in the services acquisition process to receive their responses. The survey was deployed at the eight Navy installations identified previously. We distributed the survey to a total of 843 respondents responsible for various acquisition-related functions. Specifically, we surveyed the following stakeholders: program manager/project officer, contract officer/contract specialist, contracting officer representative, requirements manager, financial manager, contractor, and customer. The survey questions included both Likert-type as well as ranking-type questions. The Likert-type questions were used to assess favorable or unfavorable responses, while the ranking-type questions were used to assess the most important responses. When we examine the ranking questions in this section, the term "most important" refers to the number of factors that received the highest rankings of 1 or 2. We believe that this is the best way to capture and succinctly represent the participants' responses. For example, a COR may feel that the outcome-related factors are extremely important and, therefore, should be given the highest ranking of 1 every time. However, the COR may also believe that the process-related factors are very important, too, and hence may assign the next highest rank of 2 to those factors. Hence, we believe that the percent of respondents giving a rank of 1 or 2 to a factor is the most effective way to capture and represent the importance of that factor while analyzing the data on ranking of factors.

The survey response rates we experienced for different categories of stakeholders are shown in Table 1. Unfortunately, we received only a small number of responses from requirements managers, financial managers, contractors, and customers. Hence, their responses are not incorporated in this report for analysis purposes. These respondents are combined under the "other" category in Table 1.



**Table 1. Survey Response Rate**

STAKEHOLDER	# SURVEYS DEPLOYED	# SURVEYS ANSWERED	RESPONSE RATE
PROGRAM MANAGER/PROJECT OFFICER	94	15	16%
CONTRACTING OFFICER REPRESENTATIVE	104	27	26%
CONTRACTING OFFICER/ CONTRACT SPECIALIST	280	126	45%
AGGREGATE DATA (PM, COR, PCO)	478	168	35%
OTHER	365	10	2.7%
TOTAL	843	178	21%

We present the survey results and analysis in three sub-sections: the first sub-section presents the aggregate data, the second sub-section presents the stakeholder-level data, and the third sub-section presents the service-type data.

***Survey Results: Aggregate Survey Data***

***Defining the Success of a Service Contract***

In taking a high-level view of our survey findings, we did not differentiate between functional roles, DAWIA levels of certification, type of service being acquired, contract type, or the organization. However, we did separate our findings under the broad categories of process and outcome. Outcome results included the questions associated with cost, schedule, and performance. As shown in Table 1, collectively, there were 168 responses from PMs, CORs, or PCOs. The Likert scale responses were assigned a value of 1 through 5, with the higher value representing a more favorable response to a statement. A summary of aggregate data about defining and measuring the success of a service contract is presented in Tables 2 and 3 of Appendix A. We examined the mean of responses to each set of Likert scale-type questions. We found that when defining the success of a services contract, outcomes are considered slightly more important than processes. The overall mean of responses related to outcomes was 4.08, while process responses resulted in a mean of 3.97. Our findings are displayed graphically in Figure 3.

We then separated our findings further within the broad category of outcomes into the narrower categories of cost, schedule, and performance. Performance-related questions resulted in the highest mean of 4.29, while cost-related questions produced a mean of 4.03, and schedule-related questions produced a mean of 3.93.

One hundred and sixty-eight respondents were asked to rank different factors related to defining the success of a service contract. These questions also dealt with different aspects of processes and outcomes. Of the 168 respondents, 40% felt that process-related factors were the most important. Sixty percent felt that outcome-related factors were the most important. The distribution of highest ranked responses is displayed in Figure 4.

Breaking down the outcome-related factors further, 15% of respondents felt that cost-related factors were the most important, 19% felt that schedule-related factors were most important, and 26% felt that performance-related factors were most important.



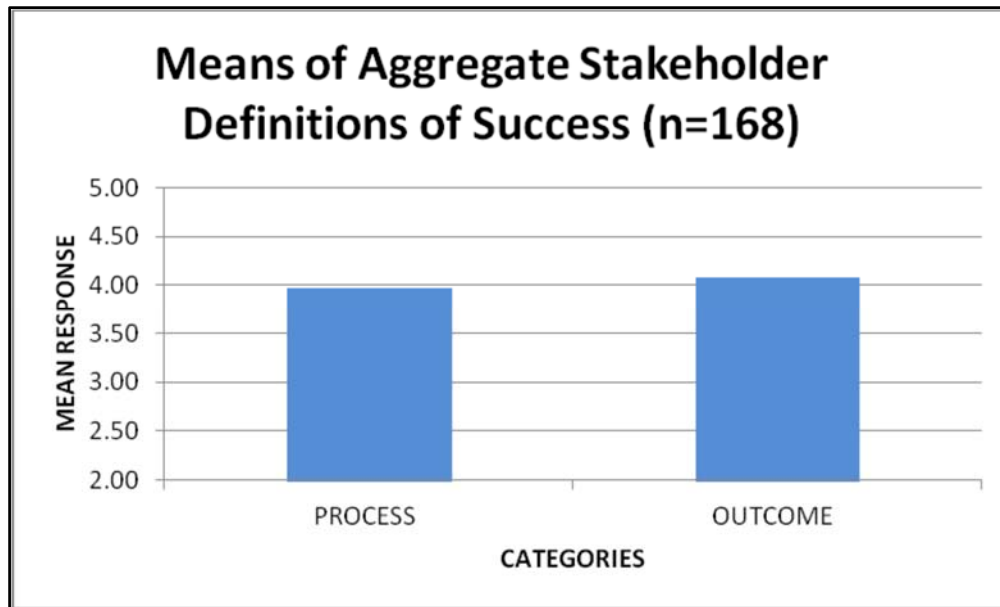


Figure 3. Means of Aggregate Stakeholder Definitions of Success



Figure 4. Aggregate Stakeholder Ranking of Definitions of Success

***Measuring the Success of a Service Contract***

Our survey also requested that participants rate on the Likert scale the various degrees of importance, and the extent to which they agreed or disagreed with, various factors when considering how they measure the success of a service contract. Again, these factors related to either processes or outcomes. The overall Likert scale mean with relation to processes was 2.48, and the outcomes displayed an overall mean of 3.71. Clearly outcomes are deemed more important by our participants as a whole. Our findings are displayed graphically in Figure 5.



If we look at the distinct factors within outcome of cost, schedule, and performance, the overall Likert means were 3.96, 3.84, and 3.30, respectively.

One hundred and sixty-eight respondents were asked to rank different factors related to measuring the success of a service contract. Of the 168 respondents, 46% felt that process-related factors were the most important. Fifty-four percent felt that outcome-related factors were the most important. The distribution of highest ranked responses is displayed in Figure 6.

Breaking down the outcome-related factors further, 19% of respondents felt that cost-related factors were the most important, 12% felt that schedule-related factors were most important, and 23% felt that performance-related factors were most important.

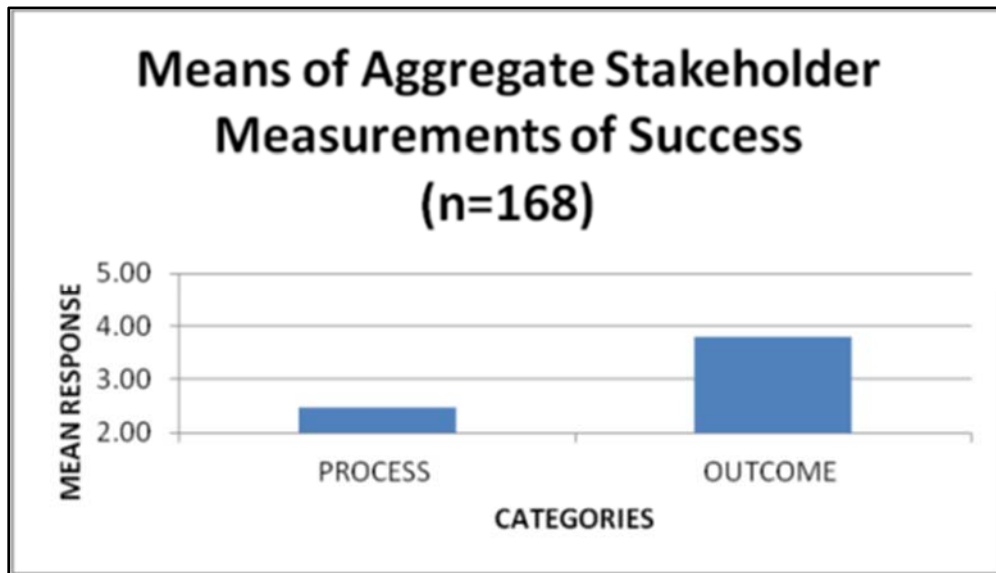


Figure 5. Means of Aggregate Stakeholder Measurements of Success



Figure 6. Aggregate Stakeholder Ranking of Measurements of Success



### ***Analysis of Aggregate Survey Data***

The findings from the analysis of aggregate survey data show that when asked to respond on a Likert scale, different stakeholders find all aspects of processes and outcomes important when defining the success of a service contract. The means of the responses we collected are very close, and it does not seem that, as a whole, our population favors process or outcome when defining success. Perhaps this is due to the nature of Likert scale questions. When asked if something such as cost overruns, major milestones, or a lack of protests is important, all stakeholders will invariably say yes. That is why the overall mean of all responses, for both outcomes and processes, is fairly high at 4.03. When forced to rank, the responses differ and outcome-related responses received a high rank of 1 or 2 60% of the time. This is because outcomes such as keeping on schedule and budget adherence are easy to understand and define. Process-related factors such as administration and communication are relatively harder to quantify.

The findings also demonstrate that when measuring the success of a service contract, all stakeholders tend to focus on outcomes and do not take into consideration the processes; this was true for both Likert-scale responses and ranking responses. This is very evident in the Likert-scale responses, where none of the process-related factors showed a mean of 3 or more. When forced to rank the different factors with respect to measuring success, the results were similar to defining success, with 56% of “most important” responses falling under the outcomes category.

In general our findings from the “other” category mirrored our aggregate results. Although there were only 10 responses, all felt that outcomes were the most important factor when defining and measuring the success of a service contract. We found that our stakeholders in this category rated and ranked processes extremely low in both defining and measuring the success of a service contract. This is because these stakeholders are not terribly burdened by administration and other process-related factors, so they feel that these factors are not important. For example, a contractor or end user does not necessarily conduct market research or choose the appropriate contract type. However, they are very concerned with staying within cost, keeping up with schedule, and maintaining a high level of performance.

### ***Survey Results: Stakeholder-Level Data***

As a starting point in examining how different stakeholders define and measure the success of a service contract, we performed a statistical analysis of the data to determine whether there were significant differences between the ratings on the Likert scale across the major stakeholders. We first performed an *F*-test for sample variances to determine the appropriate *t*-test to perform. In all instances, we found that there was an equal variance among stakeholders. The only statistically significant difference was between the CORs and COs/specialists when measuring success. This could be due to the fact that CORs view communication and other processes as key factors when measuring the success of a service contract. The COR is also likely to view a protest as a serious issue when measuring success because it results in a delay of execution and CORs cannot perform their duties. Otherwise, there was no statistically significant difference between any other of the stakeholders on the Likert scale. We discuss in the next section the results of the analysis of stakeholder-level data.

### ***Analysis of Stakeholder-Level Data***

Consistent with the abovementioned results of statistical analysis, we found that PMs, CORs, COs, and contract specialists all agree that outcome is slightly more important than processes based on participants’ ratings of separate factors on a Likert scale. Each



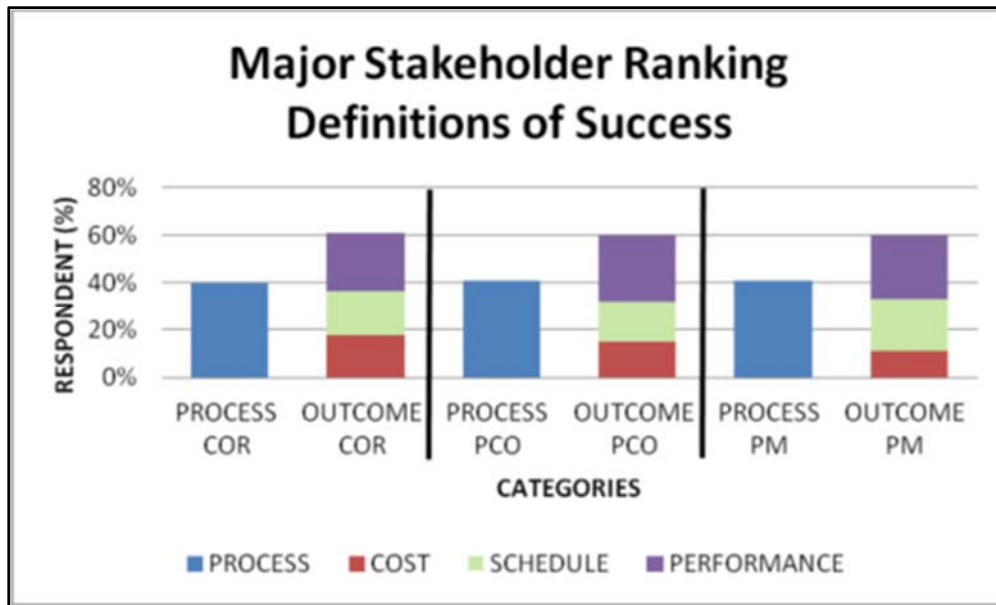
functional role rated outcome slightly over 4.00, while rating processes just below 4.00. The mean of the functional roles combined was 3.94 for processes, and 4.11 for outcomes. Within outcome, performance-related factors received the highest average rating, while schedule-related factors received the lowest average rating. All functional roles showed an upward trend from schedule, to cost, to performance. A comparison of our Likert scale findings for defining success across functional roles is displayed graphically in Figure 7.

When stakeholders were asked to rank different factors concerning their definition of success, we found that there was clear agreement that outcomes are more important than processes. There was, however, some disagreement within the outcome factors of cost, schedule, and performance. CORs felt that cost was the most important factor, while PMs, COs, and specialists placed performance at the top of their rankings. Examined collectively, the major stakeholders provided 168 responses when ranking their definition of the success of a service contract. Sixty percent of respondents felt that outcome-related factors were most important, while 40% felt that process-related factors were the most important when defining success. The distribution of highest ranked responses is displayed in Figure 8.



Figure 7. Definitions of Success Across Major Stakeholders





**Figure 8. Major Stakeholder Ranking of Definitions of Success**

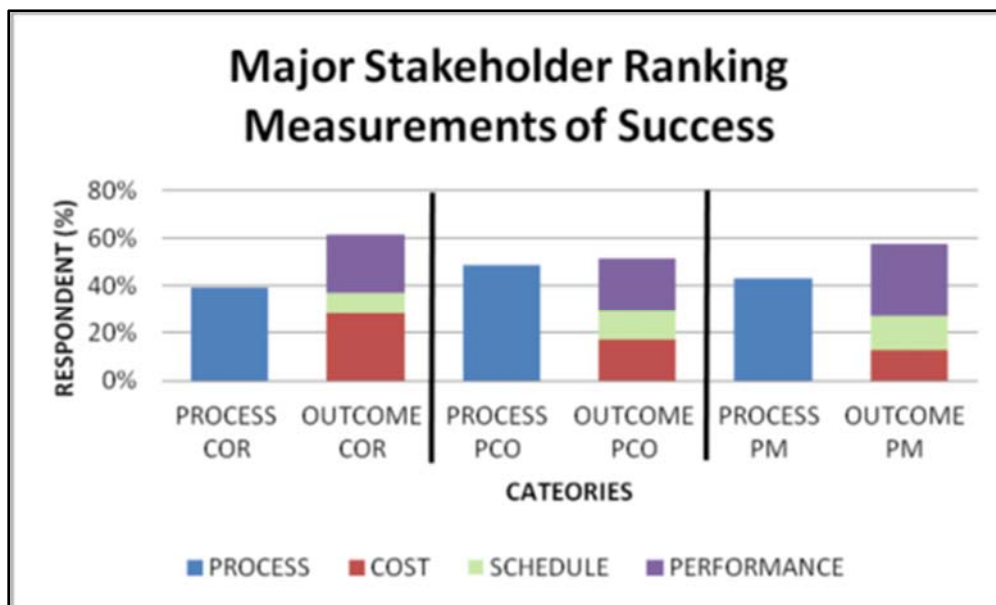
According to the survey data, stakeholders also tend to measure success in almost the same way. When asked to rate different factors on the Likert scale related to stakeholders' measures of success, all respondents agreed that outcomes far outweigh processes. When looking at the mean across stakeholders, processes received a rating of 2.56, while outcomes received a rating of 3.78. Within outcome-related factors, stakeholders showed an upward trend from performance, to schedule, to cost. A comparison of our findings for defining success on the Likert scale across functional roles is displayed graphically in Figure 9.

Our ranking data shows that, again, major stakeholders prefer outcome-related factors when measuring the success of service contracts. When examined in aggregate, the major stakeholders provided 168 responses to our ranking questions. Of these responses, 43% of respondents felt process factors were most important, while 57% were in favor of factors related to outcomes. The distribution of highest ranked responses is displayed in Figure 10.





**Figure 9. Measurement of Success Across Major Stakeholders**



**Figure 10. Major Stakeholder Ranking of Measurements of Success**

The Likert scale responses for definitions of success were, again, relatively high, and this was due to the reason explained earlier. It is interesting that in both defining and measuring success, CORs ranked cost highest out of the three stakeholders.

Another interesting result is that COs tended to place nearly equal importance on process and outcomes when forced to rank factors concerning measuring success. This is probably due to the administrative nature of the COs' role. For example, their functional role has to deal with modifications, COR reports, and exercising options. The other functional roles of PMs and CORs are not overly concerned with processes and are focused on the requirement and outcomes. The data reflect this fact.



It is interesting to note that every demographic consistently rated processes significantly higher on the Likert scale when defining success versus measuring success. We feel that this is because stakeholders view measures as a tangible entity associated with post-award functions. Measures such as cost, schedule, and performance are fairly straightforward inasmuch as a goal is either met or not. Processes such as communication flow and overall management are more obscure and subjective. The stakeholders rated processes higher for defining success because they are closely associated with mainly pre-award functions. Processes such as choosing the correct contract type and appropriately evaluating the proposal are crucial for success. Because these are pre-award activities, it is easier to define success rather than measure it.

## **Summary, Conclusions, and Recommendations**

### **Summary**

The DoD's obligations on contracts have more than doubled between fiscal years 2001 and 2008 to over \$387 billion, with over \$200 billion spent just for services in 2008 (GAO, 2009). In conjunction with this increase in defense procurement is the reduction of the defense acquisition workforce. The combination of the increasing defense procurement workload and the decreasing size of the government workforce, along with the complexities of an arcane and convoluted government contracting process, have created the perfect storm—an environment in which complying with government contracting policies and adopting contract management best practices has not always been feasible (Rendon, 2010). The contract management process is performed with inputs from the different functional areas, using a cross-functional team or integrated project team (IPT) structure. Each of these project team members represents the stakeholders, and their different goals and objectives. The first research question we investigated was as follows: How do different stakeholders *define* successful services contracts within the Navy? To develop a clear understanding of current services acquisition practices, we also investigated a second research question: How do different stakeholders *measure* services contracts within the Navy? Investigating the above two questions helped us develop recommendations regarding the third and final research question: How should the service contract's success be measured?

### **Conclusions**

On the aggregate level, our research indicated that, when defining a successful service contract, stakeholders considered outcomes (in the order of performance, cost, and schedule) slightly more important than processes. Stakeholders also ranked outcome-related factors as most important. On the aggregate, our research indicated that, when measuring a successful service contract, stakeholders considered outcomes (in the order of cost, schedule, and performance) more important than processes. Stakeholders also ranked outcome-related factors as most important.

On the stakeholder level, our research indicated that, when defining a successful service contract, PMs, CORs, and COs considered outcomes (in the order of performance, cost, and schedule) slightly more important than processes. PMs, CORs, and COs also ranked outcome-related factors as most important. On the stakeholder level, our research indicated that, when measuring a successful service contract, PMs, CORs, and COs considered outcomes (in the order of performance, schedule, and cost) more important than processes. PMs, CORs, and COs also ranked outcome-related factors as most important.

### **Recommendations**

Our research findings have several implications for the Navy, as well as the DoD. All stakeholders surveyed identified and ranked outcome-related factors as more important



than process-related factors, in both defining and measuring the success of service contracts. This may be because outcome-related factors (cost, schedule, and performance) are more easily defined and measured using available metrics, compared to contracting processes, which are more difficult to define, and many agencies have no available metrics. However, as discussed in the earlier sections of this paper, many of the contracting deficiencies identified by the GAO and DoDIG are related to contracting processes, such as conducting market research, determining item commerciality, selecting contract type, negotiating fair and reasonable prices, and monitoring contractors through surveillance. Thus, our first recommendation is that the U.S. Navy develop and implement process-related metrics to define and measure critical contracting processes, such as conducting market research, determining item commerciality, selecting contract type, negotiating fair and reasonable prices, and monitoring contractors.

Our literature review identified that acquisition stakeholders (PMs, CORs, and COs) have different procurement goals and objectives, and these goals and objectives may in fact conflict with each other. Our second recommendation is that the U.S. Navy should establish internal controls to ensure the contracting processes are being followed and that the different stakeholders place sufficient importance on the value of these contracting processes.

Finally, as previous research has determined that contracts are only as successful as the processes used to plan, award, and administer these contracts, our final recommendation is for the U.S. Navy to implement a program for continuously assessing its contracting process capability and using the assessment results to improve its organizational contract management process capability. Once the U.S. Navy, as well as the DoD, implement contracting process-related metrics to define and measure services contracts, internal controls to ensure contracting process compliance, and periodical assessments of organizational contracting process capability, the importance of process-related factors in defining and measuring the success of service contracts will increase among stakeholders and thus start addressing some of the contracting deficiencies identified by the GAO and the DoDIG.

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