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Rene G. Rendon

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Contract Management Process Maturity: Analysis of Recent Organizational Assessments

Presenter: Dr. Rene G. Rendon is an associate professor at the Naval Postgraduate School where he teaches defense acquisition and contract management courses. Prior to his appointment at the NPS, he served as an acquisition and contracting officer in the Air Force, retiring at the rank of lieutenant colonel. Rendon has earned professional certifications in project management, contract management, and supply management. He has received the National Contract Management Association (NCMA) Outstanding Fellow Award, NCMA Education Award, Charles J. Delaney Memorial Award for Outstanding Article in Contract Management, and the W. Gregor Macfarlan Excellence in Contract Management Research and Writing Award. Rendon's publications include Management of Defense Acquisition Projects, Government Contracting Basics, U. S. Military Program Management: Lessons Learned & Best Practices, and Contract Management Organizational Assessment Tools. He has also published in the *Journal of Public Procurement,* the *Journal of Contract Management*, and the *Project Management Journal*.

Rene G. Rendon, D.B.A
Senior Lecturer
Graduate School of Business and Public Policy
Naval Postgraduate School
Monterey, CA 93945-5197
Tel: 831-656-3464
E-mail: rgrendon@nps.edu

Abstract

This research builds upon the emerging body of knowledge on organizational assessments of contract management processes. Since the development of the Contract Management Maturity Model© in 2003, several DoD, Air Force, Navy, Army, and defense contractor organizations have undergone contract management process assessments as a part of their process-improvement effort. The assessments were conducted using the Contract Management Maturity Model (CMMM) as the initial step in a program of contract management process improvement. The purpose of this research is to use these combined contract management process assessment results to characterize the current state of practice of contract management within the Department of Defense and defense organizations. This extended abstract provides the conceptual framework for the Contract Management Maturity Model (CMMM) and discusses the components of the CMMM. The symposium presentation and resulting research report will summarize the CMMM assessment ratings, analyze the assessment results in terms of contract management process maturity, discuss the implications of these assessment results for process improvement and knowledge management opportunities, and provide insight on consistencies and trends in these assessment results to defense contract management.

Keywords: assessments, contracting, contract management, procurement.

Background

Procurement and contract management have become increasingly important in the commercial industry as well as in the federal government. As organizations continue to focus on core competencies and outsource non-core, yet critical functions, these organizations are

relying on procurement processes as a key to achieving and maintaining a competitive advantage (Quinn, 2005; Patel, 2006). In addition, the federal government continues to increase its level of public spending for goods and services. The Department of Defense obligations on contracts have more than doubled between fiscal years 2001 and 2008—to over $387 billion, with over $200 billion just for services (GAO, 2009, February).

The extent and amount of federal procurement spending demands that these procurement processes be well managed (Thai, 2004). However, recent Government Accountability Office (GAO) reports reflect that this is not the case. The GAO has listed contract management as a "high risk" area for the federal government since 1990 and continues to identify it as high risk (GAO, 2007a, January). Within the federal government, the procurement and contracting function has been elevated to an organizational core competency (Kelman, 2001) and is receiving extensive emphasis in the areas of education, training, and the development of workforce competence models (Newell, 2007; GAO, 2007b, January).

In addition to a focus on increasing individual procurement competency, organizations are now focusing on increasing procurement process competence through the use of organizational process maturity models. 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).

The background and conceptual framework of procurement process maturity and, specifically, the Contract Management Maturity Model, will first be presented. The assessment sites will then be profiled, followed by the analysis of the assessment findings and implications for process improvement and knowledge management opportunities. Finally, a brief discussion on consistent trends in the practice of contract management throughout the federal government will be presented.

Conceptual Framework

A review of the procurement literature finds an established body of knowledge focused on the transformation of the procurement function from a tactical to a strategic perspective. Beginning with Henderson's (1975) prediction of the purchasing revolution in 1964, to Kraljic's work emphasizing the need for a strategic supply management perspective (1983) and Reck and Long's research on developing the purchasing function to be a competitive weapon (1988), the literature reflects the use of various organizational models for the development of the procurement function. These development models reflect the transition of procurement from a tactical to a strategic or integrative function. This discussion summarizes the most significant models used to measure the development of an organization's procurement function.

Reck and Long's (1988) model describes a four-stage development of the procurement function from passive, to independent, to supportive, and finally, integrative. Leenders and Blenkhorn (1988) model describes the three degrees of the procurement function's contribution to organizational objectives. Bhote's (1989) model reflects four stages of procurement development ranging from confrontation, arms' length, goal congruence, and finally, full partnership. Freeman and Cavinato (1990) present a four-stage procurement development model described as buying, purchasing, procurement, and supply. Burt, Dobler, and Starling (2003) present a four-stage progression to world-class supply management. This progression includes clerical, mechanical, proactive, and finally, world-class.

It should be noted that these procurement development models are based on the development of the procurement *function*—specifically, the procurement function's orientation and support of organizational strategy and objectives. As noted in the literature, some organizations' procurement functions reflect more of a tactical purchasing perspective, while other organizations' procurement functions reflect a more strategic perspective. The development models found in the literature reflect the stage of development of the organization's procurement function. These development models are not focused on the *capability* of the procurement processes or the *strength and maturity* of the procurement processes within the organization, but on the procurement function's orientation and support of organizational strategy and objectives. An organization's procurement function can be in the early stages of development from tactical to strategic, yet its procurement process may reflect a high level of maturity. On the other hand, an organization's procurement function may be at the later stages of development toward strategic procurement, but may have weak or immature procurement processes. Thus, these procurement developmental models reflect the transformation of the organization's procurement function, whereas capability maturity models are used to assess an organization's processes to determine the degree of capability or maturity of those processes. The next section will discuss the maturity model concept.

Capability maturity models have been used by many organizations to assess the level of capability and maturity of their most critical processes. In these maturity models, process capability is defined as "the inherent ability of a process to produce planned results" (Ahern, Clouse & Turner, 2001), and maturity is defined as "a measure of effectiveness in any specific process" (Dinsmore, 1998). Most maturity models are built on a series of maturity levels—each maturity level reflective of the level of competence for that process. As the organization gains process competence, it moves up the maturity scale. As maturity increases, so does capability and predictability, while risk decreases. Some of the more established capability maturity models include the Software Engineering Institute (SEI) Capability Maturity Model (SEI CMM) and the Project Management Maturity Model (PMMM). These will be discussed next.

In 1986, the Software Engineering Institute (SEI), with assistance from the MITRE Corporation, began developing a process maturity framework intended to assist organizations in improving their software engineering process. The fully developed Capability Maturity Model (CMM) and associated questionnaire was released in 1993 (Ahern et al., 2001). The SEI CMM has become the most influential quality management system in the United States software industry (Persse, 2001). The CMM is based on five maturity levels—Level 1- Initial, Level 2 - Repeatable, Level 3 - Defined, Level 4 - Managed, and Level 5 - Optimizing (Persse, 2001; Ahern et al., 2001).

The application of capability maturity models to the project management field has been the topic of recent field research—both within academia as well as project management training and consulting companies (Bolles, 2002; Crawford, 2001; Foti, 2002, Kerzner, 2001; Ibbs & Kwak, 2000; Jugdev & Thomas, 2002; Helms, 2002). This recent field research extends the theory of the Software Engineering Institute's CMM model and applies this framework to the project management discipline. There are several project management maturity models currently in use today. Kerzner's Project Management Maturity Model (PMMM), similar to the SEI CMM and the other project management maturity models, is comprised of five levels, with each level representing a different degree of organizational maturity in project management. The PMMM is based on five maturity levels—Level 1- Common Language, Level 2 - Common Processes, Level 3 - Singular Methodology, Level 4 - Benchmarking, and Level 5 - Continuous Improvement (Kerzner, 2001). The SEI CMM and Kerzner's PMMM maturity models are excellent examples of how the concept of capability maturity models have been applied to the

software management and project management processes. The literature shows that maturity models are effective methods for assessing and improving organizational competence and maturity. The next section will discuss the application of the maturity model concept to contract management.

Contract Management Maturity Model

The maturity model concept was first applied to organizational contract management processes by Rendon in 2003 with the development of the Contract Management Maturity Model (Rendon, 2003). With the increase in importance of the procurement function and the procurement function's transformation from a tactical to strategic perspective as reflected in the procurement literature, the Contract Management Maturity Model (CMMM) was developed to assess the capability and maturity of an organization's contract management processes (Rendon, 2003). "Contract management," as used in the model, is defined as the "art and science of managing a contractual agreement throughout the contracting process" (Garrett & Rendon, 2005, p. 270). "Maturity," as defined in the model, refers to organizational capabilities that can consistently produce successful business results for buyers and sellers of products, services, and integrated solutions (2005). Thus, contract management refers to the buyer's (procurement) process as well as the seller's (business development and sales) process. The structure of the CMMM is based on six contract management key process areas and five levels of process maturity. The next section will discuss these components of the Contract Management Maturity Model.

CMMM Key Process Areas

The CMMM provides the organization with a detailed roadmap for improving the capability of its contract management processes. The model reflects the six contract management key process areas as well as key practice activities within each process area.

1. Procurement Planning: The process of identifying which organizational needs can be best met by procuring products or services outside the organization. This process involves determining whether to procure, how to procure, what to procure, how much to procure, and when to procure. Procurement planning activities include conducting stakeholder analysis, conducting outsourcing analysis, determining requirements and developing related documents, conducting market research, selecting the procurement method, and selecting the contract and incentive type.

2. Solicitation Planning: The process of preparing the documents needed to support the solicitation. This process involves documenting program requirements and identifying potential sources. Solicitation planning activities include developing solicitation documents such as RFPs (Request for Proposal) or IFBs (Invitation for Bid), developing contract terms and conditions, and developing proposal evaluation criteria.

3. Solicitation: The process of obtaining information (bids or proposals) from prospective sellers on how project needs can be met. Solicitation activities include advertising procurement opportunities, conducting industry and pre-proposal conferences, and amending solicitation documents as required.

4. Source Selection: The process of receiving bids or proposals and applying evaluation criteria to select a provider. Source-selection activities include evaluating proposals, negotiating contract terms and conditions, and selecting the contractor.

5. Contract Administration: The process of ensuring that each party's performance meets contractual requirements. Contract administration activities include conducting a post-award conference, monitoring the contractor's performance, and managing contract changes.

6. Contract Closeout: The process of verifying that all administrative matters are concluded on a contract that is otherwise physically complete. This involves completing and settling the contract, including resolving any open items. Contract closeout activities include verifying and documenting contract completion and compliance with requirements, making final payment, disposing of buyer-furnished property and equipment, documenting lessons learned and best practices, and collecting contractor past-performance information.

Each of these contract management key process areas includes various key practice activities supporting the specific process. The current state of practice of contract management includes various best practices in performing these key practice activities. How an organization performs the key process areas and the extent to which the key practices incorporate best practices will determine the organization's contract management process maturity level. The CMMM consist of five levels of maturity which are discussed next.

CMMM Maturity Levels

The CMMM consists of five levels of maturity applied to the six key process areas previously discussed. The five maturity levels reflected in the model allow an organization to assess its level of capability for each of the six key process areas of the procurement process. The six key process areas and related practice activities allow the organization to focus on specific areas and activities involved in procurement. The five levels of maturity range from an "ad hoc" level (Level 1), to a "basic," disciplined process capability (Level 2), to a fully "structured," established, and institutionalized process capability (Level 3), to a level characterized by processes "integrated" with other organizational processes resulting in synergistic, enterprise-wide benefits (Level 4), and finally, to a level in which "optimized" processes focus on continuous improvement and adoption of lessons learned and best practices (Level 5). The following is a brief description of each maturity level.

Level 1 – Ad Hoc: The organization at this initial level of process maturity acknowledges that contract management processes exist and that these processes are accepted and practiced throughout various industries and within the public and private sectors. In addition, the organization's management understands the benefit and value of using contract management processes. Although there are no organization-wide, established, basic contract management processes, some established contract management processes do exist and are used within the organization; however, these established processes are applied only on an ad hoc and sporadic basis to various contracts. There is no rhyme or reason as to which contracts these processes are applied. Furthermore, there is informal documentation of contract management processes existing within the organization, but this documentation is used only on an ad hoc and sporadic basis on various contracts. Finally, organizational managers and contract management personnel are not held accountable for adhering to, or complying with, any basic contract management processes or standards.

Level 2 – Basic: Organizations at this level of maturity have established some basic contract management processes and standards within the organization, but these processes are required only on selected complex, critical, or high-visibility contracts—such as contracts meeting certain dollar thresholds or contracts with certain customers. Some formal documentation has been developed for these established contract management processes and standards. Furthermore, the organization does not consider these contract management processes or standards established or institutionalized throughout the entire organization. Finally, at this maturity level, there is no organizational policy requiring the consistent use of these contract management processes and standards on other than the required contracts.

Level 3 – Structured: At this level of maturity, contract management processes and standards are fully established, institutionalized, and mandated throughout the entire organization. Formal documentation has been developed for these contract management processes and standards, and some processes may even be automated. Furthermore, since these contract management processes are mandated, the organization allows the tailoring of processes and documents in consideration for the unique aspects of each contract, such as contracting strategy, contract type, terms and conditions, dollar value, and type of requirement (product or service). Finally, senior organizational management is involved in providing guidance, direction, and even approval of key contracting strategy, decisions, related contract terms and conditions, and contract management documents.

Level 4 – Integrated: Organizations at this level of maturity have contract management processes that are fully integrated with other organizational core processes, such as financial management, schedule management, performance management, and systems engineering. In addition to representatives from other organizational functional offices, the contract's end-user customer is also an integral member of the buying or selling contracts team. Finally, the organization's management periodically uses metrics to measure various aspects of the contract management process and to make contract- related decisions.

Level 5 – Optimized: The fifth and highest level of maturity reflects an organization whose management systematically uses performance metrics to measure the quality and evaluate the efficiency and effectiveness of the contract management processes. At this level, continuous process improvement efforts are also implemented to improve the contract management processes. Furthermore, the organization has established lessons learned and best practices programs to improve contract management processes, standards, and documentation. Finally, contract management process streamlining initiatives are implemented by the organization as part of its continuous process-improvement program.

It should be noted that the CMMM uses a purposeful survey designed to acquire data on organizational contract management processes. The CMMM survey is only administered to fully qualified contracting officers and supervisors, as opposed to lower-level and inexperienced contract specialists. The assessment results are used to provide a qualitative assessment of organizational contract management process maturity and not an assessment of an individual's knowledge of contract management. Additional information on the CMMM key process areas, key process activities, and maturity levels are provided in Garrett and Rendon (2005).

The CMMM is limited as an assessment tool simply by the fact that it is based on qualitative survey data. Thus, it is only as effective as the responses to the survey questions. The CMMM should be used as an initial tool in assessing an organization's contract management processes. The CMMM results should be validated with follow-up assessments, including personal interviews based on the initial CMMM assessment results, audits of

procurement files, and reviews of procurement process documentation. Additionally, comparison of CMMM results with other procurement metrics—such as procurement administrative lead time, small business awards, and number of protested contract awards—will also provide additional back-up to the CMMM assessment. It should also be noted that the CMMM assessments do not constitute a quantitative analysis nor do they provide any determination of statistical significance in the assessment results.

The remaining sections of this report will profile the organizations that were assessed using the CMMM, summarize the assessment ratings, analyze the assessment results in terms of contract management process maturity, discuss the implications of these assessment results for process-improvement and knowledge-management opportunities, and provide insight on consistencies and trends in these assessment results to defense contract management.

Editor's Note: This is the extended abstract of this research. The complete research report will be available at www.acquisitionresearch.org

List of References

Ahern, D.M., Clouse, A., & Turner, R. (2001). *CMMI, distilled.* Boston: Addison-Wesley.

Bhote, K.R. (1989). *Strategic supply management: A blueprint for revitalizing the manufacturer-supplier partnership.* New York: AMACOM.

Bolles, D. (2002). *Building project management centers of excellence.* New York: AMACOM.

Burt, D.N., Dobler, D.W., & Starling, S.L. (2003). *World class supply management: The key to supply chain management*. New York: McGraw-Hill Irwin.

Clark, T.B. (2007, August 15). Procurement accounts. *Government Executive*, p. 6.

Crawford, J.K. (2001). *Project management maturity model: Providing a proven path to project management excellence.* New York: Marcel Dekker.

Crosby, P.B. (1979). *Quality is free*. New York: McGraw-Hill.

Curtis, B., Hefley, W.E., & Miller, S.A. (2001). *People capability maturity model*. Boston: Addison-Wesley.

Deming, W.E. (1986). *Out of the crisis*. Cambridge, MA: MIT Center for Advanced Engineering.

DoD. (2003). *The defense acquisition system* (DoD Directive 5000.1). Washington, DC: Author. Retrieved September 1, 2007, from http://www.acq.osd.mil/ie/bei/pm/reflibrary/dodd/d50001p.pdf

DoD. (2007). *USD (AT&L), AT&L human capital strategic plan.* (Ver. 3.0). Washington, DC: Author.

DoD Inspector General (DoD IG). (2007, December). *FY 2006 DoD purchases made through the U.S. Department of Veterans Affairs* (D-2008-036). Washington, DC: Author.

Dinsmore, P.C. (1998). *Winning in business with enterprise project management*. New York: AMACOM.

Foti, R. (2002, September). Maturity, noun, 21st century. Synonym: Survival. *PM Network*, 39-43.

Frame, D.L. (1999). *Project management competence: Building key skills for individuals, teams, and organizations*. San Francisco: Jossey-Bass.

Freeman, V.T., & Cavinato, J.L. (1990, January). Fitting purchasing to the strategic firm: Frameworks, processes, and values. *Journal of purchasing and materials management*, *26*(1), 6-10.

GAO. (2001, April). *Best practices: DoD teaming practices not achieving potential results* (GAO-01-510). Washington, DC: Author.

GAO. (2002, July). *Acquisition workforce: Agencies need to better define and track the training of their employees* (GAO 02-737). Washington, DC: Author.

GAO. (2005, March). *Contract management: Opportunities to improve surveillance on Department of Defense service contracts* (GAO-05-274). Washington, DC: Author.

GAO. (2006a, September). *DoD acquisitions: Contracting for better outcomes* (GAO-06-800T). Washington, DC: Author.

GAO. (2006b, September). *Highlights of a GAO forum: Federal acquisition challenges and opportunities in the 21st Century* (GAO-07-45SP). Washington, DC: Author .

GAO. (2007a, January). *High risk series: An update* (GAO-07-310). Washington, DC: Author

GAO. (2007b, January). *Defense acquisitions: Improved management and oversight needed to better control DoD's acquisition of services* (GAO-07-832T). Washington, DC: Author.

GAO. (2007a, July). *Federal acquisitions and contracting: Systemic challenges need attention* (GAO-07-1098T). Washington, DC: Author.

GAO. (2007b, July). *Federal contracting: Use of contractor performance information* (GAO-07-1111T). Washington, DC: Author).

GAO. (2009, February). *Defense management: Actions needed to overcome long-standing challenges with weapon systems acquisition and service contract management* (GAO-09-362T). Washington, DC: Author.

Garrett, G.A., & Rendon, R.G. (2005). *Contract management organizational assessment tools.* McLean, VA: National Contract Management Association.

Helms, J.H. (2002). *How project management best practices can make a bottom-line difference*. Retrieved April 1, 2009, from http://www.eProjectExperts.com.

Henderson, B.D. (1975, Summer). The coming revolution in purchasing. *Journal of Purchasing and Materials Management, 11*(2), 44. (Reprint from *Purchasing Magazine*, April 20, 1964.)

Ibbs, C.W., & Kwak, Y.H., (2000, March). Assessing project management maturity. *Project Management Journal, 31*(1), 32-43.

Jugdev, K., & Thomas, J. (2002, December). Project management maturity models: The silver bullets of competitive advantage? *Project Management Journal, 33*(4), 4-14.

Juran, J.M. (1988). *Juran on planning for quality*. New York: MacMillan.

Kelman, S. (2001). Contracting at the core. *Government Executive*, July 30, 2001. Retrieved January 4, 2008, from http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0701/073001ff.htm

Kerzner, H. (2001). *Strategic planning for project management: Using a project management maturity model.* New York: John Wiley & Sons.

Kraljic, P. (1983, September-October). Purchasing must become supply management. *Harvard Business Review, 61,* 109-117.

Leenders, M.R., & Blenkhorn, D.L. (1988). *Reverse marketing: The new buyer-supplier relationship*. New York: The Free Press.

Newell, E. (2007, October 23). Report: Contracting workforce needs more training. *Government Executive*. Retrieved January 4, 2008, from http://www.govexec.com/mailbagDetails.cfm?aid=38356.

Nordin, A., & Burton, B. (2007, December). Analysis of the Oklahoma City Air Logistics Center's (ALC) contract management processes (Master's Thesis). Monterey, CA: Naval Postgraduate School. Retrieved February 1, 2008, from http://www.acquisitionresearch.org/_files/FY2007/NPS-LM-07-118.pdf

Patel, V. (2006, April 1). Contract management: The new competitive edge. *Supply Chain Management Review*. Retrieved January 4, 2008, from http://www.scmr.com/article/CA6329864.html

Persse, J.R. (2001) *Implementing the capability maturity model.* Hoboken, NJ: John Wiley and Sons.

Project Management Institute (PMI). (2004). *An executive guide to OPM3: Transform strategy into results.* Newtown Square, PA: Author.

Quinn, F.J. (2005, December 1). The power of procurement. *Supply Chain Management Review*. Retrieved January 4, 2008, from http://www.scmr.com/article/CA6306054.html.

Reck, R.F., & Long, B.G. (1988, Fall). Purchasing: a competitive weapon. *Journal of Purchasing and Materials Management, 24*(3)*,* 2-8.

Rendon, R.G. (2003). *A systematic approach to assessing organizational contract management maturity*. Unpublished doctoral dissertation, School of Business, Argosy University, Orange

County California.

Sheehan, B.H., Moats, S.D., & VanAssche, D. J. (2008, January). *Analysis of the contracting processes and ethical culture at Ogden Air Logistics Center, Hill AFB UT* (Master's Thesis). Monterey, CA: Naval Postgraduate School. Retrieved February 1, 2008, from http://www.acquisitionresearch.org/_files/FY2007/NPS-CM-07-120.pdf

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

USAF. (2007). *Airman: The book.* (Special Issue, Vol. LI). Washington, DC: Air Force News Agency, Secretary of the Air Force Office of Public Affairs.

Yueng, A.K., Ulrich, D.O., Nason, S.W., & von Glinow, M.A. (1999). *Organizational learning capability*. New York: Oxford University Press.

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