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**Enhancing Professional and Technical Excellence:  
Analysis of Contract Management Competency Models**

August 2019

**Dr. Rene G. Rendon, Associate Professor**

Graduate School of Business and Public Policy

**Naval Postgraduate School**

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Prepared for the Naval Postgraduate School, Monterey, CA 93943.



The research presented in this report was supported by the Acquisition Research Program of the Graduate School of Business & Public Policy at the Naval Postgraduate School.

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# Abstract

The DoD's contracting function continues to be challenged by deficiencies in pre-award, award, and post-award contract management processes. The DoD inspector general (DoD IG) has identified Acquisition and Contract Management as one of the top 10 DoD Management Challenges for FY2019. Additionally, the Government Accountability Office (GAO) continues to identify DoD Contract Management as a "high risk" due to the department's challenge in improving the capability of its contract management workforce, specifically ensuring the "workforce has the requisite skills, tools, and training to perform key tasks" (GAO, 2019, p. 228). Both the DoD IG and the GAO identify the need for increased competency in the DoD contracting workforce.

The DoD's response to these contracting deficiencies and workforce capability challenges continues to be an emphasis on contract management training and workforce competency development. However, recent legislative initiatives reflect Congress's concerns about the adequacy of DoD's acquisition workforce training and competency development. The FY2016 National Defense Authorization Act (NDAA) Section 809 required the secretary of defense to establish an independent advisory panel on streamlining acquisition regulations.

The 809 Panel reported that if the DoD is to achieve its acquisition workforce goals, it will need to prepare and develop its workforce differently. The FY2018 National Defense Authorization Act (NDAA) directed the under secretary of defense (USD) for acquisition and sustainment (A&S) to assess the training of the acquisition workforce, specifically, the gaps in business acumen, knowledge of industry operations, and knowledge of industry motivation within the defense acquisition workforce.

Given this background, one must ask: Does the training provided by the DoD truly reflect what is needed by the DoD contracting workforce? The purpose of this research is to conduct an analysis of the DoD contracting competency framework and compare this framework with those of other federal agencies. Additionally, this



research compares the DoD contracting competency model with competency models established by procurement and contracting professional associations. This research builds upon past studies comparing federal government and industry contract management competency frameworks. Based on the analysis and comparisons of the reviewed competency frameworks, recommendations are made to improve the DoD contracting competency framework to help improve professional and technical excellence of the DoD contracting workforce.



## About the Author

**Dr. Rene G. Rendon** is an associate professor of acquisition management at the Naval Postgraduate School in Monterey California where he teaches in the MBA Contract Management program. In addition to teaching at the Naval Postgraduate School, Rene has conducted research on acquisition and contract management for the Department of Defense and has taught acquisition and contract management courses to international military and civilian officials.

Prior to joining NPS, he served for more than twenty years as a contracting officer in the United States Air Force. His Air Force career included assignments as a contracting officer for the Peacekeeper ICBM, Maverick Missile, F-22 Raptor, Space Based Infrared Satellite program, and the Evolved Expendable Launch Vehicle rocket program.

Rene has earned bachelor, master, and doctorate degrees in business administration and has taught contract management courses for the UCLA Government Contracts program. He was also a senior faculty member for the Keller Graduate School of Management where he taught MBA courses in project management and contract management. Rene is a graduate of the U. S. Air Force Squadron Officer School, Air Command and Staff College, Air War College, and the Department of Defense Systems Management College. Rene's publications include Management of Defense Acquisition Projects, U.S. Military Program Management: Lessons Learned & Best Practices, and Contract Management Organizational Assessment Tools. Rene has been published in the Journal of Contract Management, Journal of Public Procurement, Journal of Purchasing and Supply Management, Journal of Public Affairs Education, Project Management Journal, and the Defense Acquisition Research Journal.



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Disclaimer: The views represented in this report are those of the authors and do not reflect the official policy position of the Navy, the Department of Defense, or the federal government.



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## Background

The Department of Defense (DoD) is the federal government's largest contracting agency and obligates approximately \$300 billion in contracts every year (GAO, 2019). The DoD contract management workforce is responsible for managing these millions of contract actions for the procurement of mission-critical supplies and services. Yet given the high dollar contract obligations and the importance of these supplies and services to the nation's defense, the DoD's contracting function continues to be challenged by deficiencies in pre-award, award, and post-award contract management processes (DoD, 2009, 2012, 2013a, 2013b, 2014, 2015, 2017). The DoD inspector general (DoD IG) has identified Acquisition and Contract Management as one of the top 10 DoD Management Challenges for FY2019 (DoD, 2018). Additionally, the Government Accountability Office (GAO) continues to identify DoD Contract Management as a "high risk" due to the department's challenge in improving the capability of its contract management workforce, specifically ensuring the "workforce has the requisite skills, tools, and training to perform key tasks" (GAO, 2019, p. 228). Thus, both the DoD IG and the GAO identify the need for increased competency in the DoD contracting workforce. In response to these deficiencies in contract management processes, and challenges in improving contract management workforce capability, the DoD continues to emphasize contract management training and workforce competency development.

Recent legislative initiatives reflect Congress's concerns about the adequacy of DoD's acquisition workforce training and competency. For example, the FY2016 National Defense Authorization Act (NDAA) Section 809 required the secretary of defense to establish an independent advisory panel on streamlining acquisition regulations. The goals of the Section 809 Panel include streamlining and improving the efficiency and effectiveness of the defense acquisition process and maintaining defense technology advantage, establishing and administering appropriate buyer and seller relationships in the procurement system, improving the functioning of the acquisition system, and ensuring the continuing financial and ethical integrity of defense procurement programs. The Section 809 Panel's interim report to Congress



emphasized the importance of the DoD acquisition workforce in implementing any acquisition reform initiative. The Section 809 Panel also stated that career development also needed to be a focus of the Panel's recommendation. Finally, the Panel stated that if the DoD is to achieve its acquisition workforce goals, it will need to prepare and develop its workforce differently (Scott & Thompson, 2019).

Additionally, the FY2018 National Defense Authorization Act (NDAA) directed the under secretary of defense (USD) for acquisition and sustainment (A&S) to assess the training of the acquisition workforce. Specifically, the FY2018 NDAA Section 843(c) requires the USD(A&S) to assess gaps in business acumen, knowledge of industry operations, and knowledge of industry motivation within the defense acquisition workforce. NDAA Section 843(c) also required the USD(A&S) to determine the effectiveness of training and development resources offered by providers outside of the DoD that are available to the defense acquisition workforce (NDAA, 2017).

Given this background, one must ask: Does the training provided by the DoD truly reflect what is needed by the DoD contracting workforce? The purpose of this research is to conduct an analysis of the DoD contracting competency framework and compare this framework with those of other federal agencies. Additionally, this research also compares the DoD contracting competency model with competency models established by procurement and contracting professional associations such as the National Institute for Government Procurement (NIGP) and the National Contract Management Association (NCMA). This research builds upon past studies comparing federal government and industry contract management competency frameworks (Albano, 2013; Rendon & Winn, 2017). This current research answers the following questions:

- a. How consistent are the contract management competencies established across the federal government agencies?
- b. How do the federal government's contracting competencies compare to the contracting competencies established by procurement and contract management professional associations?



Based on the analysis and comparisons of the reviewed competency frameworks, recommendations are made to improve the DoD contracting competency framework to help improve the professional and technical excellence of the DoD contracting workforce. This paper is organized in six sections. The first section provided the background and research purpose of this paper. The second section provides a theoretical framework for the study of the DoD's contracting workforce competency management. The third section provides a brief discussion of the various contracting competency models across federal agencies and professional associations. The fourth section compares the federal government contracting competencies with those of professional associations involved in procurement and contract management. The fifth section provides a summary of comparison findings. The final section concludes with the implications of the research findings and recommendations for the DoD for improving its contracting workforce competency management.



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# Theoretical Framework

Auditability theory is concerned with those aspects of governance needed by organizations to ensure successful achievement of mission goals and objectives. As organizations focus on governance in processes and practices, the results include an increased emphasis on auditability. This focus on auditability is more about “making things auditable” than it is about conducting an audit or an inspection (Power, 1996, p. 289). Making things auditable is about organizations establishing institutionally acceptable knowledge management systems supporting their organizational processes and practices (Power, 1996, 2007). In past research, auditability theory has been applied to an organization’s contract management processes and practices (Rendon & Rendon, 2015). With contracting now considered an organizational core competency, an organization’s processes and practices impact on mission success has been an emerging research topic in the project management literature. Research findings have reflected the importance of competent personnel for ensuring the success of an organization’s contracts (Frame, 1999); the need for strong processes, practices, and internal controls as a response to the increase in procurement fraud incidents (Rollins & Lanza, 2005); and the importance of ensuring accountability, integrity, and transparency in public sector organizations (Crawford & Helm, 2009). Past research has also identified the importance of process capability and process maturity in an organization’s mission success. Rendon (2015) explored the importance of assessing contract management process maturity in U.S. Navy contracting organizations. Frame (1999) and Kerzner (2001) stressed the importance of capable processes for ensuring project success. The main components of auditability theory—competent personnel, capable processes, and effective internal controls—form the foundation for auditability theory (Rendon & Rendon, 2015, p. 712). Thus, organizations need a competent workforce, capable processes, and effective internal controls to ensure mission success. Individual competence will lead to greater success in performing contract management tasks and activities just as organizational process maturity will

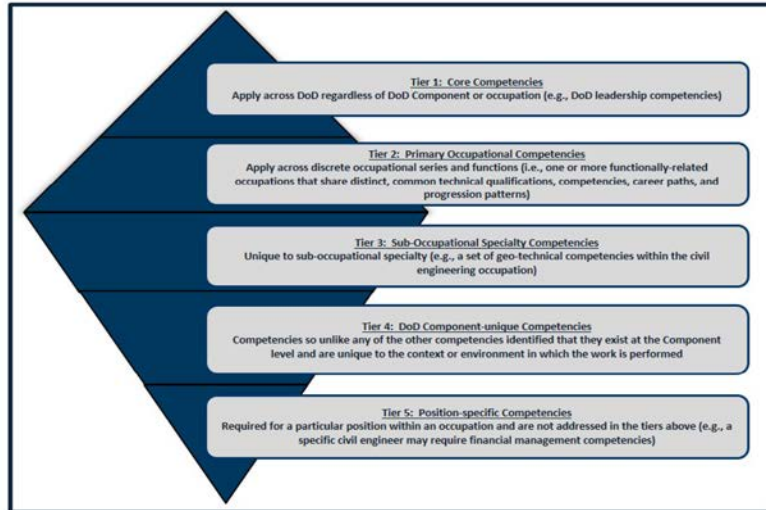


ensure consistent and improved results for the organization (Frame, 1999; Kerzner, 2013; Wysocki, 2004).

A competent workforce requires proper education, training, and experience to perform the tasks of the organization. This is especially true for the U.S. Department of Defense (DoD) acquisition workforce. DoD Directive (DoDD) 5000.01 states that the DoD shall maintain a proficient acquisition, technology, and logistics workforce that is flexible and highly skilled across a range of management, technical, and business disciplines (USD (AT&L), 2003). In addition, this directive requires that the DoD shall establish education, training, and experienced standards for each acquisition position based on the level of complexity of duties carried out in that position (USD (AT&L), 2003). Additionally, DoD Instruction (DoDI) 5000.66, *Defense Acquisition Workforce Education, Training, Experience, and Career Development Program*, establishes policies, assigns responsibilities, and provides procedures for the conduct of the Defense Acquisition Workforce (AWF) Education, Training, Experience, and Career Development Program (Office of the Under Secretary of Defense [Acquisition, Technology, & Logistics; OUSD(AT&L)], 2017). This directive provides a competency management framework as reflected in Figure 1. The DoD Competency Management Framework consists of five tiers and includes technical and non-technical competencies. These tiers categorize and organize competencies within and across occupations and differentiate between mission-based competency requirements (Office of the Under Secretary of Defense [Acquisition, Technology, & Logistics; OUSD(AT&L)], 2017)

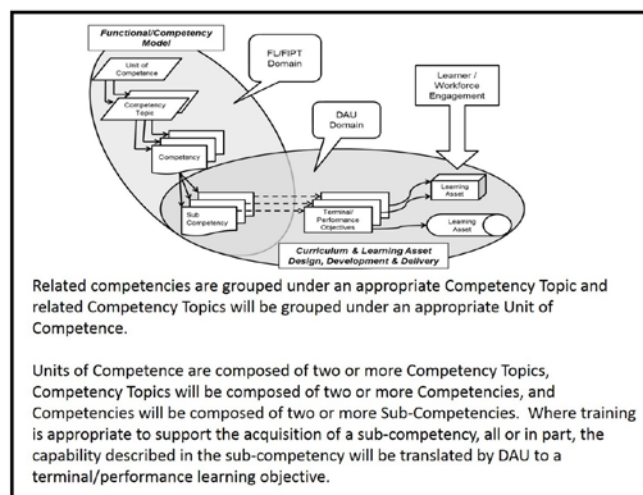






**Figure 1:** DoD Competency Management Framework (OUSD[AT&L], 2017)

Each of the acquisition functional communities will then develop competency models for their specific career fields using the competency model framework as reflected in Figure 2. In the next section, the contract management competency models used by the federal government and models established by procurement and contract management professional associations are discussed.



**Figure 2:** Acquisition Education and Training Competency Model Framework (OUSD[AT&L], 2017)

The next section provides a brief discussion of the various contracting competency models across federal agencies and professional associations.

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# Contracting Competency Models

My research focuses on the two predominant federal government contracting competency models (DoD and FAI) and the two predominant professional association competency models, the National Contract Management Association (NCMA) and the National Institute for Government Procurement (NIGP).

## **a. DoD Contracting Competency Model**

The DoD implemented the DoDI 5000.66 competency model framework for the contracting career field by establishing its contracting competency model. This model is used to assess the DoD contract management workforce competencies, determine competency gaps, and identify opportunities for training and development to close those competency gaps (OUSD[AT&L], 2014). The DoD contracting competency model (hereafter referred to as the DoD model) consists of 11 units of competence (10 technical units and one professional unit) as reflected in Appendix 1. The units of competencies are broken down into 28 technical competencies and 10 professional competencies, which are further broken down into 52 technical elements and 10 professional elements (DoD, 2007). The DoD competency model is shown in Appendix 1. Our discussion of the DoD competency model is taken from Rendon and Winn (2017).

The first unit of the DoD model is Pre-Award and Award. This DoD competency unit contains 11 technical competencies focusing on the first two phases of the contracting life cycle. The first five technical competencies cover the Pre-Award phase of the contracting life cycle. These technical competencies include requirements identification, the use of socio-economic programs, competition, source selection planning, and ending with solicitation of offers. The remaining six technical competencies focus on the award phase of the contracting life cycle. These include responsibility determination, bid evaluations for sealed bidding, proposal evaluations for contracting by negotiation, source selection, contract award, and process protests (DoD, 2007).

The second unit of the DoD model is Develop and/or Negotiate Positions.



This DoD competency unit contains three technical competencies focusing on the contracting officer's position formulation and justification for those positions. The three technical competencies consist of justification of other than full and open competition, terms and conditions, and preparation and negotiation (DoD, 2007).

The third unit of the DoD model is Advanced Cost and/or Price Analysis.

This DoD competency unit contains one technical competency related to advanced cost and/or price analysis (DoD, 2007).

The fourth unit of the DoD model is Contract Administration. This DoD competency unit contains five technical competencies focusing on the post-award phase of the contracting life cycle. The five technical competencies consist of initiation of work, contract performance management, issue changes and modifications, approve payment requests, and close-out contracts (DoD, 2007).

The fifth unit of the DoD model is Addressing Small Business Concerns.

This DoD competency unit contains one technical competency addressing small business concerns. The sixth unit of the DoD model is Negotiate Forward Pricing Rate Agreements & Administer Cost Accounting Standards. This DoD competency unit contains one technical competency related to negotiating FPRAs and administering Cost Accounting Standards. The seventh unit of the DoD model is Contract Termination and contains one technical competency related to contract terminations. The eighth unit of the DoD model is Procurement Policy and contains one technical competency related to procurement analysis (DoD, 2007).

The ninth unit of the DoD model is Other Competencies. This DoD competency unit contains three technical competencies focusing on areas which do not fit in other areas of this competency model. Examples include e-business and automated tools, activity program coordinator for purchase cards, and construction/architect & engineering (A&E) contracting (DoD, 2007).

The 10th unit of the DoD model is Contracting in a Contingency and/or Combat Environment and contains one technical competency related to activities related to contracting in those environments (DoD, 2007).



The 11th and final unit of the DoD model is Professional Competency.

This DoD competency unit contains 10 professional competencies essential for all DoD contracting professionals. The competencies are related to problem solving, customer service, oral communication, written communications, interpersonal skills, decisiveness, technical credibility, flexibility, resilience, and accountability.

#### **b. Federal Acquisition Institute Contracting Competency Model**

The FAI was established in 1976 under the Office of Federal Procurement Policy Act and has been charged with fostering and promoting the development of the civilian agency federal acquisition workforce. The Federal Acquisition Institute Improvement Act of 2011 strengthened the FAI's role to satisfy 12 statutory responsibilities in three broad areas: professional certification training, human capital planning, and acquisition research.

Specifically for the contracting workforce, the FAI developed the Federal Acquisition Certification in Contracting (FAC-C) Program. The FAC-C Program is for contracting professionals working in federal civilian agencies and establishes general education, training, and experience requirements for those contracting professionals. These requirements are based on knowledge, skills, and abilities contracting professionals must have in order to perform their contracting duties (FAI, n.d.). The FAC-C Program was revised to better align it with the DoD's Defense Acquisition Workforce Improvement Act (DAWIA) program. The contracting competencies that are the foundation of the FAC-C certification training are the ones developed by the DoD; thus the FAI and the DoD share the identical contracting competency framework (FAI, n.d.).

#### **c. NCMA Contract Management Competency Model**

The NCMA contract management competency model is established in the Contract Management Body of Knowledge (CMBOK). The CMBOK was first published in 2002 and has evolved extensively to its current version, published in 2017. The CMBOK is based on the Contract Management Standard (CMS), which



was developed through a “voluntary consensus process which included a survey of contract managers, expert drafting, peer review, and formal public comment validation” (NCMA, 2017, p. 20). The purpose of the CMBOK is to “provide a common understanding of the terminology, practices, policies, and processes used in contract management” by both buyers (e.g., government agencies) and sellers (e.g., government contractors) (NCMA, 2017, p. 18). The CMBOK competency framework is structured at a sufficient level to apply to all types of government organizations (e.g., federal, state, municipal), as well as industry organizations from all sectors (e.g., government, defense, medical, information technology). The CMBOK accomplishes this purpose through a competency system, which consists of seven primary competencies (Leadership, Management, Guiding Principles, Pre-Award, Award, Post-Award, and Learn) and 30 process competencies. The CMS is embedded in the CMBOK and expands on the Pre-Award, Award, and Post-Award competencies by including job tasks for both buyers and sellers. The CMS competencies were developed in alignment with the Federal Acquisition Regulation (FAR). Thus, the CMBOK complements the FAR and can be used by government contract managers and government agencies for development of individual competence as well as organizational capability (Rendon & Winn, 2017). The NCMA competency model (CMBOK) is reflected in Appendix 2, and the CMS is reflected in Appendix 3. The CMS-FAR Matrix is shown in Appendix 4.

My discussion of the NCMA competency model is taken from Rendon and Winn (2017). Leadership and Management is discussed first, followed by Learn, and then Guiding Principles. We then discuss the contract management life-cycle phases of Pre-Award, Award, and Post-Award.

Both the Leadership and Management competencies facilitate and fortify the integration of all other contract management competencies. Because organizational success depends on the degree to which employees are motivated to accomplish the organization’s mission, vision, and goals, leadership is a critical competency for contract managers. Contract managers hold pivotal positions within their organizations, “interfacing with internal stakeholders (e.g., program managers, financial managers, engineers, and supply chain managers) as well as external



stakeholders (e.g., contractors, subcontractors, and other government agencies) on all contractual matters” (Rendon & Wilkinson, 2016, p. 54). Thus, the CMBOK Leadership competency includes “competence, character, collaboration, and vision,” which are developed through the Management competency (NCMA, 2017, pp. 24, 36).

The Management competency includes the skills needed for the planning, organizing, directing, and controlling the resources, funds, equipment, and time to accomplish the organization’s goals. Additionally, the Management competency, which includes “business management, financial management, project management, risk management, and supply chain management,” fortifies the technical applications of contract management (NCMA, 2017, pp. 37–38).

The dynamic nature of the contract management function demands that both contract managers and their organizations seek continuous improvement through continuous learning and the development of individual competence as well as organizational capability. The Learn competency focuses on a deliberate decision to learn by “documenting learning goals and pursuing learning opportunities to achieve them” (NCMA, 2017, p. 216). The Learn competency also includes an emphasis on developing individual competency through professional development such as education, training, and professional certification, as well as developing organizational capability through process assessment and improvement (NCMA, 2017).

The heart of the CMBOK competency system and the basis for the Contract Management Standard (CMS) is grounded in the Guiding Principles, Pre-Award, Award, and Post-Award competencies. The Guiding Principles competency includes “Skills and Roles, Contract Principles, Standards of Conduct, Regulatory Compliance, Situational Assessment, and Team Dynamics” (NCMA, 2017, p. 86). The Guiding Principles competency applies in all contract management circumstances and throughout all phases of the contract life cycle, which is discussed in the next section.



The CMBOK competency system is structured around the contract life cycle of Pre-Award, Award, and Post-Award phases. Pre-Award is the first phase of the contract life cycle and includes buyer activities related to defining the requirement, researching the market, planning the acquisition, developing the solicitation, and requesting offers. The seller activities during pre-award include pre-sales activities, developing market strategies, and developing offers. In the CMBOK, the Pre-Award competency includes domains for both the buyer and seller. The buyer domain includes Develop Solicitation, which consists of the Acquisition Planning and Requesting Offers process competencies and related job tasks. The seller domain includes Develop Offer, which consists of the Business Development and Develop Win Strategy process competencies and related job tasks (NCMA, 2017).

Award is the second phase of the contract life cycle and includes activities jointly performed by both the buyer and the seller. In the CMBOK, the Award competency includes the domain Form Contract with activities related to cost or price analysis, negotiations, source selection, and managing legal conformity and related job tasks (NCMA, 2017).

Post-Award is the final phase of the contract life cycle and includes activities related to administering and closing the contract. The Post-Award competency includes two domains: Perform Contract and Close Contract. These domains include activities performed by both buyers and sellers. Perform Contract is focused on tracking and documenting contract performance and includes activities related to administering the contract, ensuring quality, managing subcontracts, and managing changes and related job tasks. Close Contract consists of the contract closeout competency and is focused on verifying that contract requirements have been satisfied, disputes have been resolved, final payments have been processed, and all other contract closeout-related job tasks have been completed (NCMA, 2017).

As previously stated, the purpose of the CMBOK is to provide a “common understanding of the terminology, practices, policies, and processes used in contract management” by both buyers (e.g., government agencies) and sellers (e.g., government contractors; NCMA, 2017, p. 18). For this reason, the CMBOK





competency framework is structured at a high level to apply to all types of government organizations (e.g., federal, state, municipal), as well as industry organizations from all sectors (government, defense, medical, information technology, etc.). However, this is not to say that the CMBOK competency structure does not align well with government contract management policies or regulations. The CMBOK competencies were developed to align with the Federal Acquisition Regulation (FAR) as reflected in the CMS-FAR Matrix shown in Appendix 4 (NCMA, 2017). Thus, the CMBOK competencies complement the FAR and can be used by government contract managers and government agencies for development of individual competence as well as organizational capability.

#### **d. NIGP Competency Model**

The National Institute for Government Procurement (NIGP) has adopted the competence model established by the Universal Public Procurement Certification Council (UPPCC). The UPPCC is an independent entity formed to govern and administer the universal procurement certification programs, specifically the Certified Public Procurement Officer (CPPO) and Certified Professional Public Buyer (CPPB) certifications (UPPCC, 2019). The CPPO and CPPB programs have been adopted by various public procurement professional associations such as NIGP, The Institute for Public Procurement, National Association of State Procurement Officers (NASPO), California Association of Public Procurement Officials (CAPPO), and the Florida Association of Public Procurement Officials (FAPPO). The UPPCC has established a body of knowledge (BOK) that governs the skills and competencies needed for the public procurement profession. The BOK was developed as a result of a job task analysis, which provided assurance that UPPCC certified professionals possess an essential common body of knowledge that is objectively assessed and validated by the profession (UPPCC, 2019).

The current UPPCC BOK consists of 87 total knowledge statements common to both CPPO and CPPB certifications. Although the CPPO and CPPB competencies are similar, they do differ in how the knowledge is used in terms of the performance of tasks and the skill level needed. The UPPCC developed a BOK for



each certification. Both BOKs consist of the following six areas: Procurement Administration, Sourcing, Negotiation Process, Contract Administration, Supply Management, and Strategic Procurement Planning. The areas consist of 87 common knowledge statements and associated job tasks/responsibilities. The CPPO BOK contains 68 related job tasks/responsibilities, and the CPPB BOK contains 61 related job tasks/responsibilities. Appendix 5 reflects the UPPCC competence model for the CPPO certification (UPPCC, 2019).

Now that we have discussed the DoD competency model (which is identical to the FAI competency model), the NCMA CMBOK, and the UPPCC body of knowledge, we present a comparative analysis of these competency models to identify any similarities and differences among the models. Because the DoD and FAI use the same competency model, the analysis focuses on the DoD, NCMA and the UPPCC competency models.



# Comparative Analysis of Contracting Competency Models

The comparative analysis of the contracting competency models focuses on three major areas: structure of competency model, scope of competencies, and supporting documentation.

- a. Structure of Competency Model. The three competency models differ in terms of how they are structured. In this analysis, structure refers to how the competencies are constructed, aligned, and related to each other.**

The DoD/FAI competency model's structure (see Appendix 1) reflects a mix of contract life-cycle phases (Pre-Award and Award, Develop and/or Negotiate Positions, Contract Administration, and Contract Termination), specific procurement areas (Small Business-Socioeconomic Programs, Contracting in a Contingent and/or Combat Environment), and a collection of general competency areas (Other Competencies, Professional Competency). Each unit of competence (11 total) is broken down into individual competencies (38 total), which are then broken down into elements (62 total). Other than this hierarchical relationship between units, competencies, and elements, there is no logical relationship among the competence units. For example, the DoD/FAI model combines both Pre-Award and Award contract life-cycle phases into one competency and divides the Post-Award life-cycle phase into two separate competency units of contract administration and contract terminations. As reflected in Appendix 1, the units of competence are not structured in any logical arrangement other than just a listing of units of competence.

The NCMA CMBOK (see Appendix 2 and Appendix 3) reflects both an extensive hierarchical structure and a process flow structure. Hierarchically, each primary competency is broken down into process competencies, which are then broken down into job tasks and sub-tasks. The Guiding Principles competencies are overarching the contract life-cycle phases of Pre-Award, Award, and Post-Award phases. Additionally, each contract life-cycle phase has its own competency structure. For example, Pre-Award is broken down into Develop Solicitation, which is



then broken down into Acquisition Planning and Request Offers. Acquisition Planning can be broken down to five job tasks (Shape Internal Customer Requirements, Conduct Market Research, Perform Risk Analysis, Formulate Contract Strategy, and Finalize Acquisition Plan. These job tasks can also be broken down into sub-tasks. In addition to the Guiding Principles competency, there are supporting competencies such as Leadership and Management. The Management competencies are broken down into the contract management supporting disciplines, which include business management, financial management, project management, risk management, and supply chain management.

The UPPCC model (see Appendix 5) is similar in structure to the DoD/FAI model. The UPPCC model reflects a general grouping of procurement functions and activities (Procurement Administration, Supply Management, Strategic Procurement Planning), with some semblance of contract life-cycle phases (Sourcing, Negotiation Process, Contract Administration). Each of the six domains consist of a list of knowledge statements and a list of associated tasks/responsibilities. Other than this hierarchical relationship between domains, knowledge statements, and tasks/responsibilities, there is no logical relationship among the domains. As reflected in Appendix 4, the domains are not structured in any logical arrangement other than just a listing of categories with knowledge statements and tasks/responsibilities.

**b. Scope of Competency Models. The three competency frameworks differ in terms of the scope of the frameworks. In this analysis, *scope* refers to the topical coverage of the competencies in the competency model.**

The DoD/FAI competency model's scope is focused predominantly on Federal Acquisition Regulation (FAR)–governed contracting tasks and activities. Additionally, the DoD/FAI model consists of FAR-based contracting competencies specific to the buying organization's tasks and activities. Furthermore, the DoD/FAI model includes other competencies such as using E-business and automated tools and activity program coordinator for the government purchase card. Finally, the model does include a Professional Competency unit that includes generic



competencies such as problem solving, customer service, oral communication, written communication, and other professional skills.

The NCMA CMBOK model is much broader and expanded than the DoD/FAI or the UPPCC competency models. For example, the NCMA CMBOK has a much more broadened focus than just contract management competencies. The CMBOK includes supporting competencies, such as business management, financial management, project management, risk management, and supply chain management, as well as a leadership competency. Additionally, the CMBOK's Learn competency focuses on both individual learning (individual competencies) and organizational learning (organizational capability). Finally, and most importantly, the NCMA CMBOK framework expands the contracting life cycle to include both the buyer and seller's competencies, processes, and job tasks. Each contract life-cycle phase includes domains for both the buyer and seller. For example, the Pre-Award phase includes the buyer primary competency of Develop Solicitation, which consists of process competencies of Acquisition Planning and Request Offers. The Pre-Award phase also includes the seller primary competency of Develop Offer, which consists of process competencies of Business Development and Develop Win Strategy. Both buyer and seller process competencies are further broken down to buyer job tasks, seller job tasks, and joint job tasks. Thus, the CMBOK framework includes both buyer and seller domains for each phase of the contract life cycle.

The UPPCC body of knowledge model is similar in scope to the DoD/FAI model in that it is focused primarily on government procurement and contracting, specifically from the buyer perspective. Furthermore, the UPPCC includes a domain on Supply Management, with knowledge pertaining to inventory management, asset management, and supply chain management and related tasks and responsibilities. Finally, the UPPCC includes a Strategic Procurement Planning domain, knowledge pertaining to analytical, research, forecasting techniques, as well as strategic planning and cost/benefit analysis, and related tasks and responsibilities.

- c. Supporting Documentation. The three competency models differ in terms of the amount and type of supporting documentation. In this analysis, supporting documentation refers to the availability of**



**supplemental information and guidance that supports the contracting competency models.**

The DoD/FAI competency model is presented in spreadsheet format that consists of separate columns for Units of Competence, Competencies, and Elements. Supplemental information or other supporting documentation related to the DoD/FAI model and its competencies could not be found on DoD or FAI websites.

The NCMA CMBOK model is much more supported by documentation compared to the DoD/FAI and UPPCC frameworks. The NCMA Contract Management Standard (CMS), which is the foundation of the CMBOK, provides the primary competencies for the guiding principles and the life-cycle phases, as well as the process competencies and job tasks for both buyer and seller domains of each contract life-cycle phase. In addition, the CMBOK document itself provides supporting documentation for the remaining primary and process competencies of Leadership, Management, and Learn, as well as a section on abbreviations, acronyms, and lexicon.

The UPPCC body of knowledge is presented as a four-page document, which provides an introduction and background to the documents, and then lists the domain, knowledge statements, and associate tasks and responsibilities. Supplemental information or other supporting documentation related to the UPPCC bodies of knowledge model and its domains could not be found on the UPPCC website.



## Summary of Comparison Findings

From a summary perspective, the DoD/FAI and UPPCC competency models are similar in terms of structure, scope, and supporting documentation. Both models focus only on government procurement and contract management at the exclusion of any supporting related disciplines. Additionally, both models consist only of contracting competencies from the buyer's perspective. Furthermore, the arrangement of competencies does not include the complete contract life-cycle phases in sequence and with sufficient visibility and granularity for each life-cycle phase. The DoD/FAI model combines both Pre-Award and Award contract life-cycle phases into one competency and divides the Post-Award life-cycle phase into two separate competency units of contract administration and contract terminations. The UPPCC model reflects a general grouping of procurement functions and activities with some semblance of contract life-cycle phases. Finally, both the DoD/FAI and UPPCC competency frameworks have minimal supporting documentation.

The NCMA CMBOK competency model is different from the other models in some significant ways. In terms of structure, the CMBOK uses more of a concise life-cycle approach with separate competencies for each major contracting life-cycle phase, thus providing much more granularity and visibility on pre-award, award, and post-award job tasks and activities. Furthermore, while all reviewed models break down the competencies into lower-level competencies, the CMBOK provides greater granularity and visibility by breaking down each of these life-cycle phases into more detailed domains such as acquisition planning and requesting offers (pre-award), conduct negotiations and source selection (award), and administer contracts and contract close out (post-award). Additionally, we conclude that the most significant difference between the reviewed models is that the CMBOK includes competencies related to both buyer and seller perspectives of contract management. Since contract management is about the pre-award, award, and post award activities performed by both the buyer and seller, it is only appropriate that the CMBOK address the competencies, domains, and job tasks performed by both the buyer and seller. Furthermore, the CMBOK is more broadly structured and includes



competencies for supporting disciplines such as business management, project management, financial management, risk management, and supply chain management.

Finally, the CMBOK also includes a Learn competency that focuses on continuous learning at the individual level (competence) and at the organizational level (capability). Our top-level review of the other models does not identify competencies related to organizational capability process capability.

Figure 3 summarizes the results of the comparative analysis showing the major differences between the DoD/FAI, NCMA, and the UPPCC models. These differences may have important implications on contract management workforce professional development, which is discussed in the next section.

Characteristic	DoD/FAI Model	NCMA CMBOK Model	UPPCC BOK Model
Structure (Construction, Alignment, Relationship)	Combines pre-award and award contract life cycle phases Divides post-award phase Includes specific procurement areas and a collection of professional competency areas Minimal hierarchical relationship (competence, competencies, elements)	Separate competencies for each contract life cycle phase Includes competencies for guiding principles, leadership, m Extensive hierarchical relationship (primary competency, domain, process competency, job tasks, sub-tasks)	Some semblance of contract life cycle phases Includes specific procurement areas Minimal hierarchical relationship (domain, knowledge statement, task/responsibilities)
Scope (Topical Coverage)	Federal/DoD contracting tasks and activities Specific to buyer's contracting process, tasks, activities Includes other contracting competencies (e-procurement, purchase card, professional skills) and professional skills	Govt/Industry contracting tasks and activities Bother buyer and seller contracting process, tasks, activities Includes supporting competencies in business, finance, risk, project, and supply chain management	Federal/State/Local contracting tasks and activities Specific to buyer's contracting process, tasks, activities Includes other contracting competencies (procurement admin, supply mgt, strategic procurement planning)
Supporting Documentation (Availability of Supplemental Information)	Three page documents in spreadsheet format with separate columns for competence, competencies, and elements.	Management Standard. The CMBOK includes a discussion of the CM framework and a discussion of each competency. The CMBOK also contains a glossary and supporting appendices.	Four page document providing an introduction and background and a list of domains, knowledge statements, and associated tasks and responsibilities.

**Figure 3: DoD Competency Management Framework (OUSD[AT&L], 2017)**





## Implications and Recommendations

The DoD IG continues to identify deficiencies in DoD contract management with past audit reports identifying material internal control weaknesses in contract management processes and procedures. Additionally, the GAO continues to list DoD Contract Management as a high-risk area due to the department's challenges in increasing its contract management workforce capacity to negotiate, manage, and oversee contracts, and to ensure that the workforce has the requisite skills and tools to perform their contract management tasks. Furthermore, past research on DoD contract management organizational process capability has identified that post-award contract management processes (e.g., contract administration and contract closeout) are less capable and less mature than the pre-award and award processes (Rendon, 2015). The results of the comparative analysis showing the major differences between the DoD/FAI, NCMA, and UPPCC competency models may provide some insight on how to address these reported contract management deficiencies.

Compared to reviewed competency models, the NCMA CMBOK competency framework may provide a better approach for developing the DoD contracting workforce. Using a more concise and detailed contract life cycle and providing greater emphasis and granularity in each of the contract management phases and tasks (pre-award, award, and post-award) may help develop and fortify the DoD's contract management policies, processes, and practices. Providing greater emphasis on each of the contract life-cycle phases, and organizing competencies using a hierarchical structure that aligns each competency with processes, job tasks, and sub-tasks would support the development of a professional contracting career path that aligns contracting technical competencies and key work experiences. The recent NDAA for FY2016, Advisory Panel on Streamlining and Codifying Acquisition Regulations (Section 809 Panel) recommended that the DoD create career paths for the contracting functional area that would include such technical competencies and key work experiences.



Expanding the DoD contracting workforce's knowledge to include industry's side of contract management (e.g., industry operations and processes) as reflected in the NCMA CMBOK will help in developing technical and professional skills that can transfer across government and industry, as well as improve communication and collaboration between government and industry. Including the industry side of contracting would also result in strengthening systems thinking within the contract management workforce. Systems thinking "examines the relationship between essential parts of an organization or a problem, and determines how to manage those relationships to get better outcomes" (Carlson, 2017, np.). The DoD contracting competency model may be resulting in linear thinking among the contract management workforce, with contract managers believing that contracting problems have "direct causes and that you can optimize the whole by optimizing each of the parts" (Carlson, 2017). Contract managers using systems thinking will know that contract management "problems can have hidden, indirect causes" and it is the "relationships among the parts that matter the most" (Carlson, 2017). Adopting the NCMA CMBOK for the DoD may provide the DoD contract management workforce with a stronger foundational understanding of not only the complete contract life cycle (pre-award, award, post-award), but also with an understanding of the different perspectives in contractual relationships (e.g., buyer, seller, subcontractors, suppliers, etc.). Using systems thinking, contract managers will be able to "see the gaps where complications or opportunities can arise" within the acquisition process and understand how their contract management strategy decisions may impact contractors and subcontractors (Carlson, 2017). Including the seller competencies for the DoD contract management workforce may also strengthen "communication, collaboration, problem-solving, and adaptability" skills (Carlson, 2017). The Section 809 Panel recommended that the DoD revise its contracting professional development programs (e.g., professional certifications) to emphasize skills that are transferable across government and industry and focused on defined set of qualifications connected to contracting positions.

Additionally, there may be value in broadening the DoD's contracting competency model to include other contract management–related disciplines such



as business management, financial management, project management, risk management, and supply chain management, as reflected in the NCMA CMBOK. The inclusion of other contract management–related disciplines may enhance the DoD’s contracting workforce critical thinking, problem-solving, and analytical skills, bringing increased efficiency to its contract management processes. The Section 809 Panel recommended that the DoD revise its contracting professional development programs (e.g., professional certifications) to emphasize sufficient domain knowledge, emphasize professional skills, and provide a broad perspective to interact effectively with industry. A greater understanding of contract management–related disciplines as well as understanding both government and industry sides of the contract management relationship will help develop “T-shaped” acquisition professionals who have both “depth of knowledge in a particular expertise as well as have the ability to work and communicate across disciplines” (Carlson, 2017). T-shaped acquisition professionals will be capable of introducing innovation and process change into the DoD’s contract management processes. If the DoD would adopt the NCMA CMBOK, it would achieve a desired recommendation from the Section 809 Panel that both the DoD and industry would adopt a common body of knowledge, which would also enhance communication and collaboration between government and industry.

Finally, if the DoD emphasized a continuous learning competency at both the individual competence level and also at the organizational capability level, as reflected in the NCMA CMBOK, the DoD may increase its contract management process capability and strengthen its internal controls in contract management processes and procedures. Thus, increasing individual competence, process capability, and internal controls will help in improving auditability in DoD acquisition.



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## Conclusion

The DoD IG and the GAO continue to identify the need for increased competency in the DoD contracting workforce. The recent Section 809 Panel emphasized the importance of contracting workforce professional development and stated that if the DoD is to achieve its acquisition workforce goals, it will need to prepare and develop its workforce differently. The recent FY2018 NDAA emphasized the need for business acumen, knowledge of industry operations, and knowledge of industry motivation within the defense acquisition workforce. The CMBOK was developed to integrate and standardize common contract management job tasks across the government and industry (NCMA, 2017). When both buyers and sellers understand and interpret contract management terminology, practices, policies, and processes consistently, contract management workforce competence and organizational capability increases, and successful contract management is more likely to be achieved (NCMA, 2017; Rendon & Winn, 2017). Perhaps the DoD should leverage the CMBOK competency model as it continues to emphasize contract management training and continues to develop workforce competencies.



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# Appendix 1: DoD Contracting Competency Model

11 Units of Competence: 10 Technical Units and 1 Professional Unit	28 Technical Competencies 10 Professional Competencies	52 Technical Elements, 10 Professional Elements
Pre-Award and Award	Determination of How Best to Satisfy Requirements for the Mission Area	1. Provide proactive business advice on requirements documentation based on analysis of requirements and performance-based approaches to find the best solution to satisfy mission requirements. 2. Conduct market research using relevant resources prior to solicitation to understand the industry environment and determine availability of sources of supply and/or services. 3. Perform acquisition planning by considering all available sources and methods of procurement to satisfy mission needs while appropriately allocating risk.
	Consider Socio-economic Requirements	4. Consider socio-economic requirements including small business, labor, environmental, foreign, and other socio-economic requirements to provide maximum practicable contracting and subcontracting opportunities.
	Promote Competition	5. Conduct pre-solicitation industry conferences and analyze responses to draft solicitation terms and conditions to promote full and open competition. 6. Identify and facilitate joint ventures and partnering on solicitations and subcontracting opportunities to increase competition and/or small business participation.
	Source Selection Planning	7. Document a source selection plan that is consistent with public law, regulations, policy, and other guidelines.
	Solicitation of Offers	8. Conduct pre-bid or pre-proposal conference to inform offerors of the requirements of the acquisition. 9. Publicize proposed procurements to promote competition. 10. Issue a written solicitation consistent with the requirements documents, acquisition plan and source selection plan, that includes the appropriate provisions and clauses tailored to the requirement. 11. Issue amendments or cancel solicitations when such actions are in the best interest of the Government and conform to law and regulations. 12. Respond to preaward inquiries by taking the appropriate action according to FAR/DFARS (and applicable supplements) to resolve questions.
	Responsibility Determination	13. Determine contractor responsibility by assessing past performance and financial stability to ensure that the contractor will be able to satisfy Government requirements.
	Bid Evaluation (Sealed Bidding)	14. Evaluate the sealed bids in a transparent manner to preserve the integrity of the competitive process. 15. Perform price analysis to determine whether the lowest evaluated bid is reasonable and provides the best value to the Government.
	Proposal Evaluation (Contracting by Negotiation)	16. Evaluate proposals and quotes against evaluation criteria and request technical and pricing support, if needed, to identify offers that are acceptable or can be made acceptable.
	Source Selection	17. Decide whether to hold discussions based on results of the evaluation.
	Contract Award	18. Establish the competitive range to determine which of the offers will not be considered for the award.
	Contract Award	19. Select the awardee who in the Government's estimation, provides the best value.
	Contract Award	20. Award contract/ Issue task or delivery orders after ensuring fund availability and obtaining reviews and approvals.
	Contract Award	21. Conducting pre/post award debriefings for all unsuccessful offerors when requested to ensure appropriate disclosure of information.
	Process Protests	22. Process protests to determine whether to withhold award or stop performance pending outcome of the protest.



Develop and/or Negotiate Positions	Justification of Other than Full and Open	23. Justify the need to negotiate or award the contract without full and open competition or, in a multiple award scenario, without providing for fair opportunity based on business strategies and market research.
	Terms and Conditions	24. Determine terms and conditions, including special contract requirements applicable to the acquisition, that are appropriate for the acquisition to comply with laws and regulations (e.g. method of financing, Government property, intellectual property, OCI, specialty metals).
	Preparation and Negotiation	25. Prepare for negotiations / discussions / awards by reviewing audit and technical reports, performing cost and/or price analysis (or reviewing price analysts reports), and developing pre-negotiation position to include identifying potential trade-offs. 26. Negotiate terms and conditions (including price) based on the pre-negotiation objective and give-and-take with the offeror to establish a fair and reasonable price.
Advanced Cost and/or Price Analysis	Advanced Cost and/or Price Analysis	27. Evaluate the reasonableness of the contractor's proposed cost/price for use in preparing for complex negotiations.
		28. Develop positions on pricing-related-contract terms and conditions to aid in developing the Government's position.
		29. Supports special cost, price, and finance efforts by researching, analyzing and providing recommended positions that are in the best interests of the Government.
		30. Evaluate award fee/incentive fee plans and arrangements for adherence to policy and guidance.
Contract Administration	Initiation of Work	31. Conduct post-award orientations to address customer concerns and contractor's responsibilities for performance of the contract. 32. Plan for contract administration regarding delegating administrative functions; designating, training and managing CORs; and formally establishing all contract administration responsibilities.
	Contract Performance Management	33. Administer contract by monitoring contracting officer representatives feedback, contractor performance, and enforcing contractor compliance with contract requirements.
		34. Ensure past performance evaluation is initiated to ensure documentation of performance including contracting officer input.
		35. Analyze, negotiate, and prepare claims file in order to issue final decisions.
	Issue Changes and Modifications	36. Resolve contract performance problems by gathering facts, determining remedies, and initiate remedial actions in order to find and provide a solution. 37. Analyze the need for contract modifications and negotiate and issue contract modifications, as required.
	Approve Payment Requests	38. Approve contractor request for payments to include final vouchers under cost reimbursement contracts, progress payments, performance-based payments, or commercial financing.
Close-out Contracts	39. Close-out contracts following proper procedure to ensure property disposition, final payments, and documents/clearances have been received.	
Small Business/Socio-Economic Programs	Addressing Small Business Concerns	40. Assist small business concerns in understanding how to do business with the government, identifying contracting opportunities, and responding to small business inquiries regarding payment delays or problems.
		41. Serve as a small business specialist and assist the Small Business Administration's assigned representative in conducting annual reviews of small business share, evaluation of contractors' subcontracting performance, and planning to maximize the use of small businesses.
		42. As a small business specialist provide recommendations on acquisition documents as to whether a particular acquisition should be set aside for one of the Small Business programs.



<b>Negotiate FPRA's &amp; Administer Cost Accounting Standards</b>	Negotiate Forward Pricing Rates Agreements & Administer Cost	43. Negotiate forward pricing rate agreements (FPRA's) for billing purposes and administer cost accounting standards to ensure contractor's compliance.
<b>Contract Termination</b>	Contract Termination	44. Terminate contracts using applicable FAR (and supplemental) requirements if it is in the best interest in the government (either termination for convenience or cause/default).
<b>Procurement Policy</b>	Procurement Analysis	45. Provide analysis to advise on procurement matters including contract documentation, legislation issues, and congressional inquiries impacting contracting matters.
		46. Develops procurement policy and changes in procedures through analysis of major procurements for statutory and regulatory compliance and a macro-analysis of contracting matters.
		47. Advise on high-level legislation & policy matters to recommend &/or lead change in the procurement process.
		48. Perform oversight & audits to review contract files, compile lessons learned, & ensure consistent policy application.
<b>Other Competencies</b>	E-Business and Automated Tools	49. Use e-business systems and automated tools to promote standardization, efficiency, and transparency.
	Activity Program Coordinator for Purchase Card	50. Performs oversight and execution for the Purchase Card Program.
	Construction/Architect & Engineering (A&E)	51. Develops acquisition strategies, issues notices/solicitations, conducts negotiations, selects sources, awards/administers contracts for construction & A&E in accordance w/reqts & procedures associated w/construction & A&E outlined in the FAR & supplemental policy & procedures (w/particular attention to FAR Part 36).
<b>Contracting in a Contingent and/or Combat Environment</b>	Contracting in a Contingent and/or Combat Environment	52. Apply contracting expertise during deployments, contingency operations, or responses to natural disasters
<b>Professional Competency</b>	Problem Solving	1. Problem Solving - Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
	Customer Service	2. Customer Service - Anticipates and meets the needs of both internal and external customers. Delivers high-quality products and services; is committed to continuous improvement.
	Oral Communication	3. Oral Communication - Makes clear/convincing oral presentations. Listens effectively; clarifies info as needed.
	Written Communication	4. Written Communication - Writes in a clear, concise, organized, & convincing manner for the intended audience.
	Interpersonal Skills	5. Interpersonal Skills - Treats others with courtesy, sensitivity, and respect. Considers and responds appropriately to the needs and feelings of different situations
	Decisiveness	6. Decisiveness - Makes well-informed, effective, and timely decisions, even when data are limited or solutions produce unpleasant consequences; perceives the impact and implications of decisions.
	Technical Credibility	7. Technical Credibility - Understands and appropriately applies principles, procedures, requirements, regulations, and policies related to specialized expertise
	Flexibility	8. Flexibility - Is open to change and new information; rapidly adapts to new information, changing conditions, or unexpected obstacles.
	Resilience	9. Resilience - Deals effectively with pressure; remains optimistic and persistent, even under adversity. Recovers quickly from setbacks.
	Accountability	10. Accountability - Holds self and others accountable for measurable high-quality, timely, and cost-effective results. Determines objectives, sets priorities, and delegates work. Accepts responsibility for mistakes. Complies with established control systems and rules.



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## Appendix 2: NCMA CMBOK Competency Model (NCMA, 2017). Used by permission.

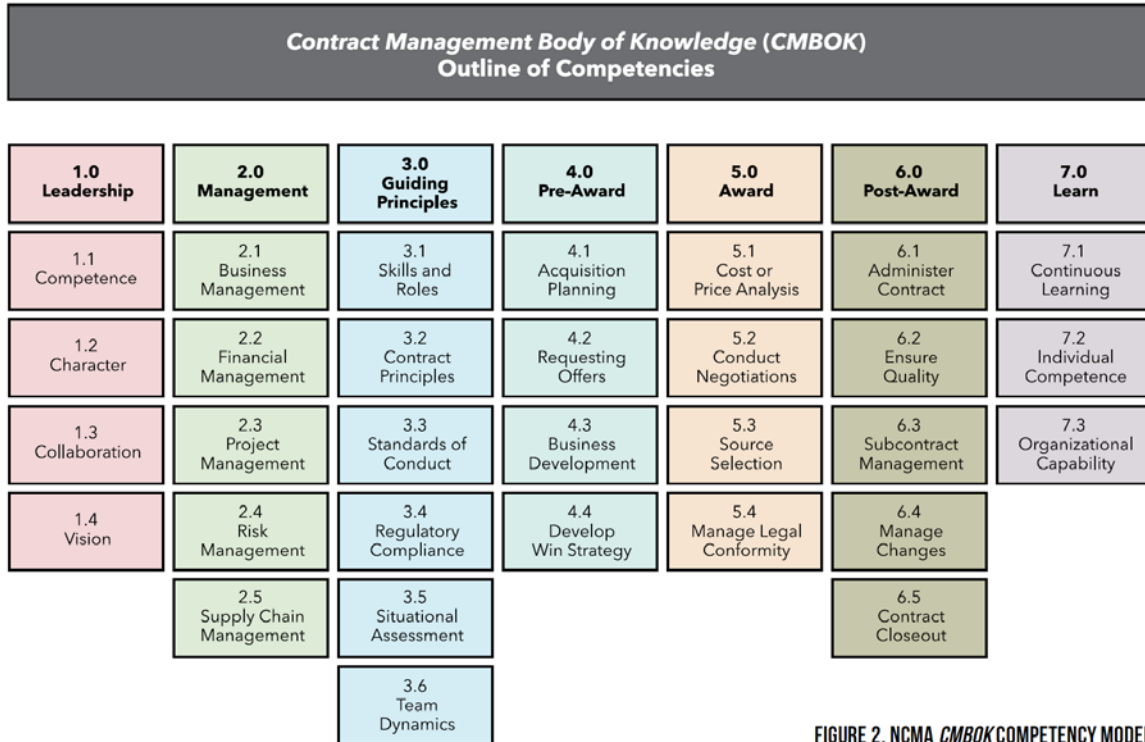


FIGURE 2. NCMA CMBOK COMPETENCY MODEL



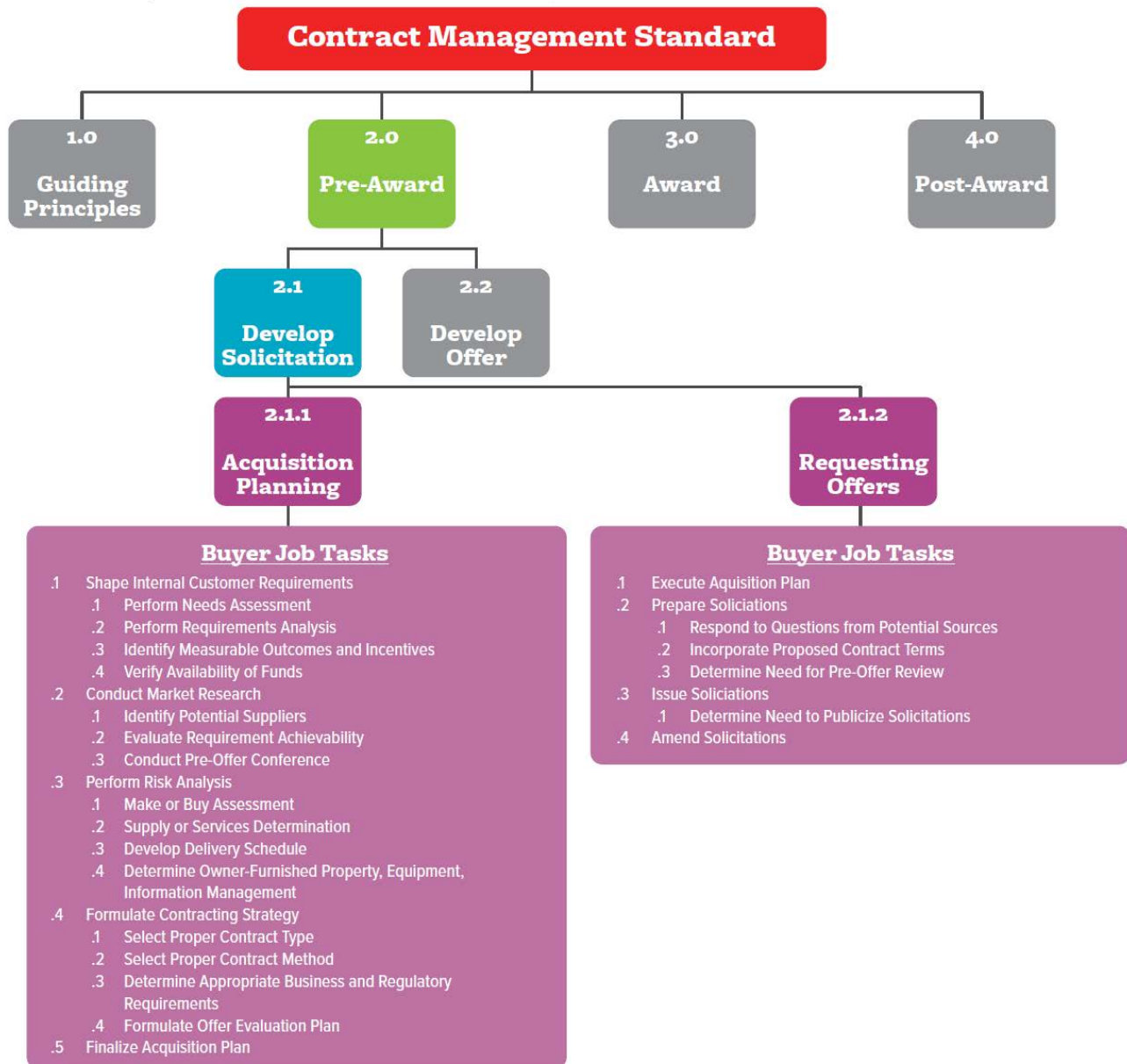
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# Appendix 3: NCMA Contract Management Standard (CMS) (NCMA, 2016). Used by permission.

**FIGURE 8.** Competencies and Tasks for the *Develop Solicitation* Domain



**FIGURE 9.** Competencies and Tasks for the *Develop Offer* Domain

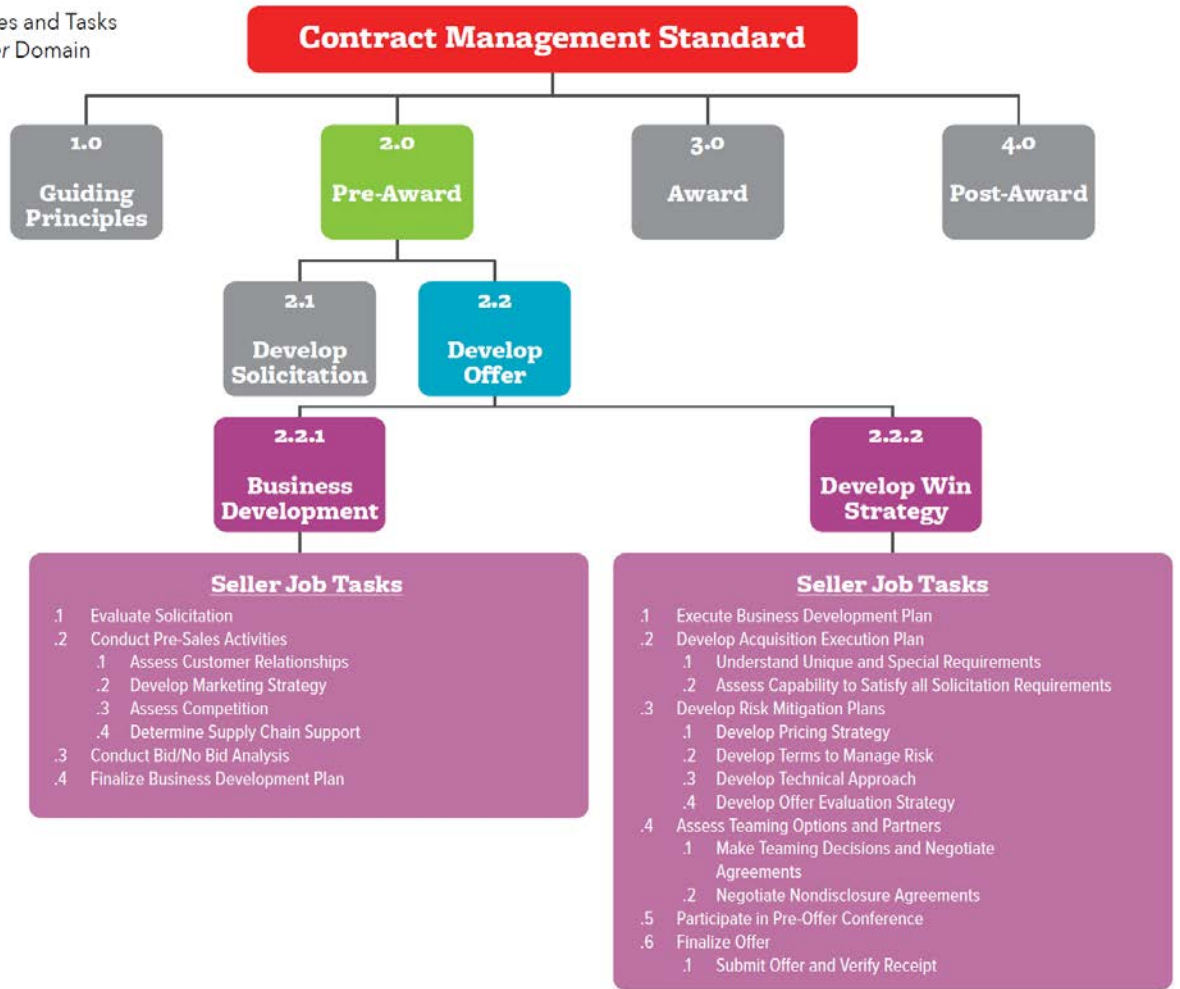


FIGURE 10. Competencies and Tasks for the Form Contract Domain

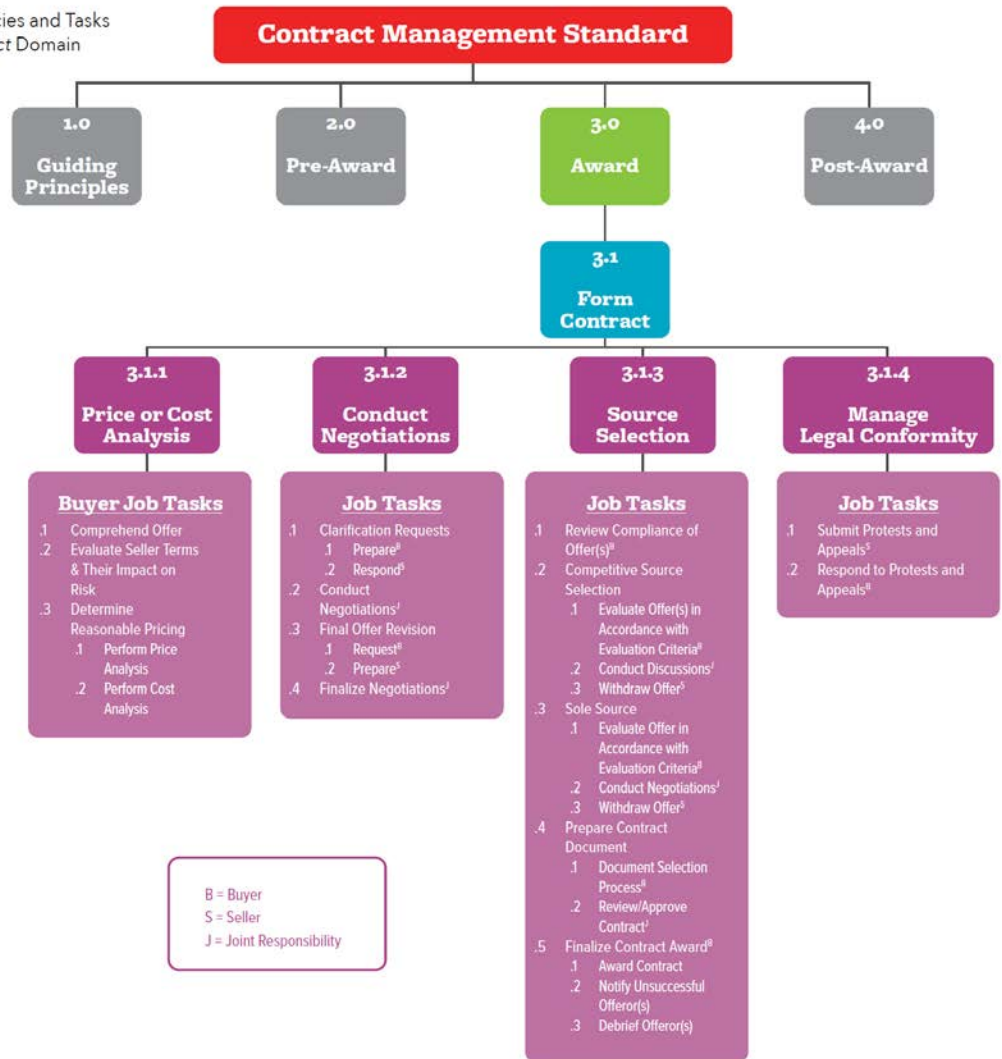
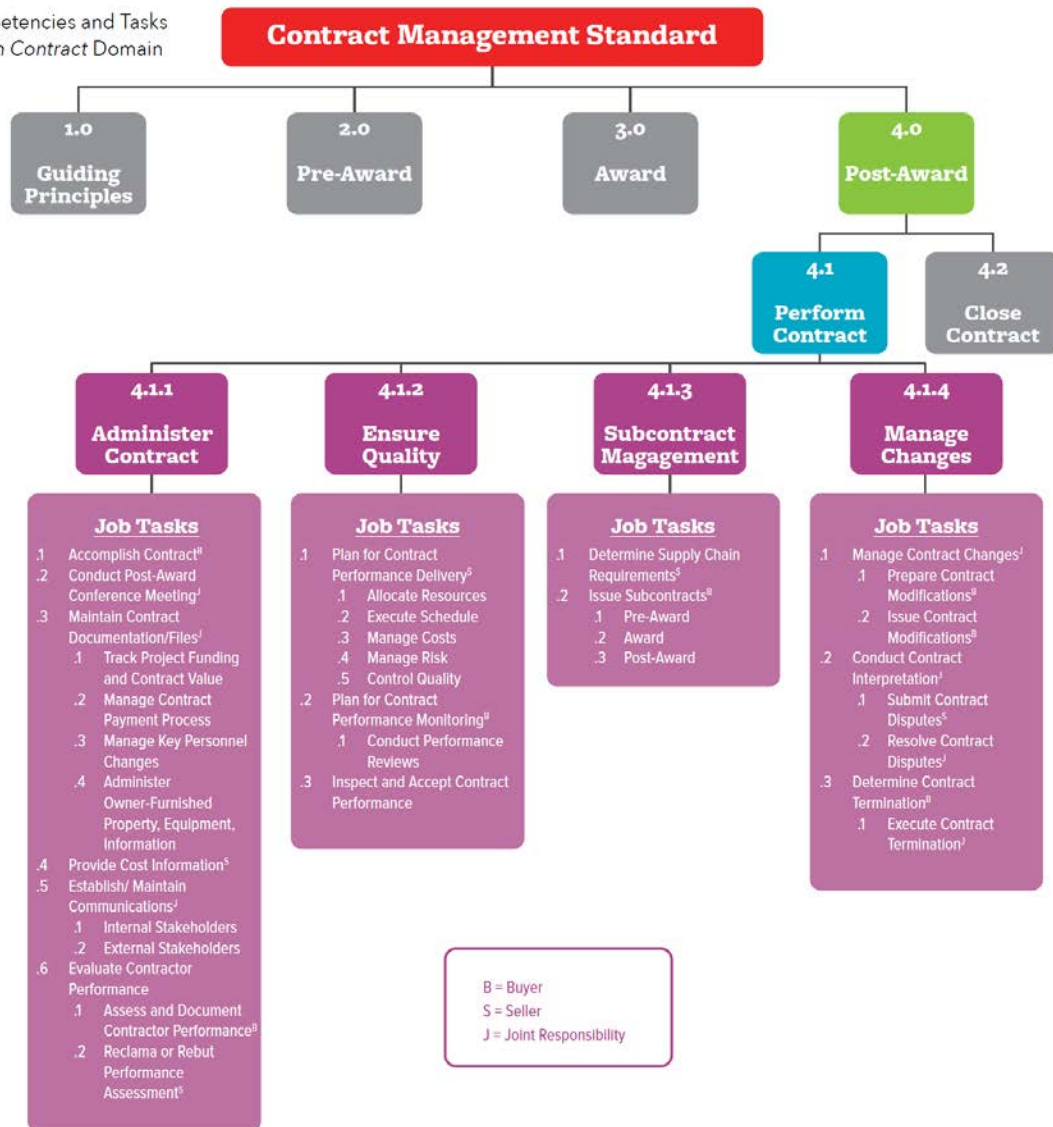


FIGURE 11. Competencies and Tasks for the Perform Contract Domain



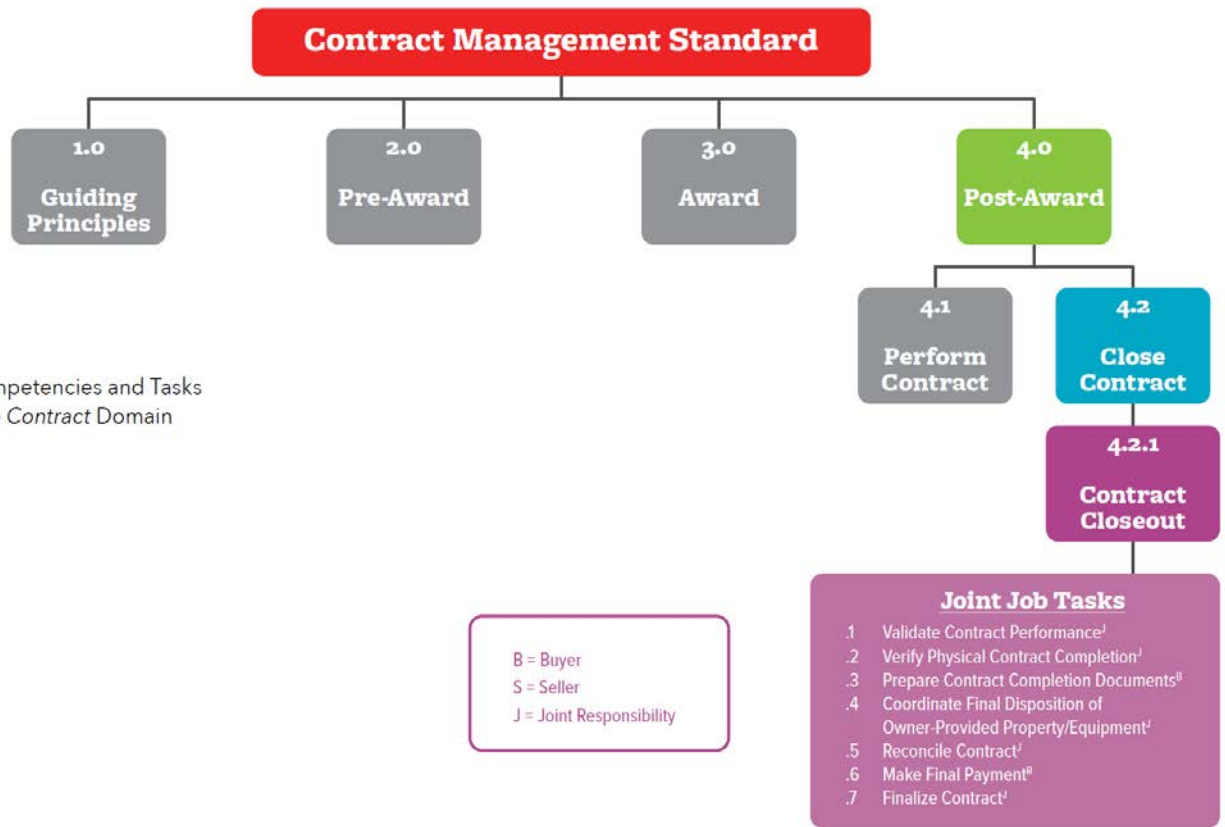


FIGURE 12. Competencies and Tasks for the Close Contract Domain

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Appendix 4: NCMA Contract Management Standard–FAR Matrix (Rendon & Winn, 2017). Used by permission.

**The CMS-FAR Matrix**

The following matrix cross-references the competencies of the *Contract Management Standard (CMS)* with the *Federal Acquisition Regulation (FAR)*

CMS COMPETENCY	JOB TASK	FAR PART
<b>1.0 Guiding Principles</b>		
1.1 Skills and Roles	Career Development, Contracting Authority, and Responsibility	1
1.2 Contract Principles	Statement of Guiding Principles for the FAR	1
1.3 Standards of Conduct	Improper Business Practices and Personal Conflicts of Interest	3
	Contractor Responsibility Standards	9
1.4 Regulatory Compliance	Application of Labor Laws to Government Acquisitions	22
	Environment, Energy and Water Efficiency, Renewable Energy Technology, Occupational Safety, and Drug-Free Workplace	23
	Protection of Privacy and Freedom of Information	24
	Manage Patents, Data, Copyrights, Bonds, Insurance, and Taxes	27, 28, 29
1.5 Situational Assessment	Special Contracting Methods	17
	Emergency Contracting	18
	Foreign Acquisition	25
	Major Systems Acquisition	34
	R&D Contracting	35
	Construction and A-E	36
	Service Contracting	37
	Federal Supply Schedule Contracting	38
	Acquisition of Information Technology	39
	Acquisition of Utility Services	41
1.6 Team Dynamics	Extraordinary Contractual Actions and the Safety Act	50
	Acquisition Team	1
	Definitions of Words and Terms	2
	Document Lessons Learned/Best Practices	4
<b>2.0 Pre-Award</b>		
<b>2.1 Develop Solicitation</b>		
2.1.1 Acquisition Planning	Perform Acquisition Planning	2, 7
	Shape Internal Customer Requirements	11
	Conduct Market Research	5, 10
	Identify Potential Suppliers	6, 8, 19, 26
	Evaluate Requirement Achievability	6
	Conduct Pre-Offer Conferences	10, 15
	Select Proper Contract Type	12, 13, 14, 15, 16
	Select Proper Contract Method	12, 13, 14, 15
	Determine Appropriate Business and Regulatory Requirements	12, 13, 14, 15
	Formulate Offer Evaluation Plan	12, 13, 14, 15



2.1.2 Requesting Offers	Prepare Solicitations	12, 13, 14, 15
	Determine Need to Publicize Solicitations	5
	Issue Solicitations	12, 13, 14, 15
	Amend Solicitations	12, 13, 14, 15
<b>2.2 Develop Offer</b>		
2.2.1 Business Development	Evaluate Solicitation	2
	Conduct Pre-Sales Activities	3, 5
	Conduct Bid/No Bid Analysis	6, 9
	Finalize Business Development Plan	7, 12, 13, 14, 15
2.2.2 Develop Win Strategy	Execute Business Development Plan	12, 13, 14, 15
	Develop Acquisition Execution Plan	45, 46
	Develop Risk Mitigation Plans	32, 42, 49
	Assess Teaming Options and Partners	9, 19, 44, 51
	Participate in Pre-Offer Conference	5
	Finalize Offer	4, 53
<b>3.0 Award</b>		
<b>3.1 Form Contract</b>		
3.1.1 Price or Cost Analysis	Comprehend Offer	12, 13, 14, 15
	Evaluate Seller Terms & Their Impact on Risk	12, 13, 14, 15
	Determine Reasonable Pricing	30, 31
3.1.2 Conduct Negotiations	Clarification Requests	12, 13, 14, 15
	Conduct Negotiations	12, 13, 14, 15
	Final Offer Revision	12, 13, 14, 15
	Finalize Negotiations	12, 13, 14, 15
3.1.3 Select Source	Review Compliance of Offer(s)	12, 13, 14, 15
	Evaluate Offer(s) is Accordance with Evaluation Criteria	12, 13, 14, 15
	Prepare Contract Document	12, 13, 14, 15
	Finalize Contract Award	12, 13, 14, 15
3.1.4 Manage Legal Conformity	Submit Protests and Appeals	33
	Respond to Protests and Appeals	33
<b>4.0 Post-Award</b>		
<b>4.1 Perform Contract</b>		
4.1.1 Administer Contract	Conduct Post-Award Conference Meeting	42
	Maintain Contract Documentation/Files	4
	Manage Contract Payment Process	30, 31, 32
	Administer Owner-Furnished Property, Equipment, Information	45
	Establish/Maintain Communications	1
	Evaluate Contractor Performance	42, 47, 48





4.1.2 Ensure Quality	Plan for Contract Performance Delivery	46
	Plan for Contract Performance Monitoring	46
	Inspect and Accept Contract Performance	46
4.1.3 Subcontract Management	Determine Supply Chain Requirements	9, 19, 44
	Issue Subcontracts	9, 44
4.1.4 Manage Changes	Manage Contract Changes	43
	Conduct Contract Interpretation	2, 33
	Determine Contract Termination	49
<b>4.2 Close Contract</b>		
4.2.1 Contract Closeout	Validate Contract Performance	42
	Verify Physical Contract Completion	42
	Prepare Contract Completion Documents	4
	Coordinate Final Disposition of Owner-Provided Property/ Equipment	45
	Reconcile Contract	4
	Make Final Payment	4, 31, 32
	Finalize Contract	4, 12, 13, 14, 15, 42, 52



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# Appendix 5: UPPCC Body of Knowledge (UPPCC, 2019). Used by permission



## 2013 BODY OF KNOWLEDGE: CPPO

Periodically the UPPCC commissions a Job Analysis study to ensure that the certification exams are aligned with the skills, knowledge and abilities needed for successful job performance in the public procurement profession. The Body of Knowledge is the end result of the Job Analysis Study. A Job Analysis consists of several activities: the development of a survey tool, survey dissemination, compilation of survey results, and finally, the development of the Body of Knowledge.

The **Body of Knowledge for the CPPO** Certification was based on input from over 2,500 active public procurement professionals and consists of 78 total job tasks/responsibilities and 87 total knowledge statements representing common skills, knowledge and abilities that are essential to competent performance of **management level and above positions** within the public procurement profession.

Effective for the May 2014 testing window, the CPPO certification examination will cover all six domain areas listed below. The percentage of the exam that will come from each of the six domain areas is indicated by the percentage listed to the far right of each content domain heading. For example, 25% of the CPPO Exam will cover items from Domain I, while 5% of the exam will cover items from Domain V.

### **I. PROCUREMENT ADMINISTRATION 25%**

#### **Knowledge of:**

- A. common procurement performance measurement criteria (e.g. cycle time, inventory turns, customer satisfaction, number of disputes)
- B. automated procurement systems (e.g., electronic requisitioning)
- C. solicitation and contract file contents
- D. cooperative procurement programs
- E. value analysis (e.g., cost-reduction, cost avoidance, total cost of ownership)
- F. procurement audit and review processes
- G. purpose for department audits and reviews
- H. e-procurement programs
- I. supplier diversity programs (e.g., small, disadvantaged, minority-owned, women-owned, socio-economic business programs)
- J. sustainable procurement initiatives
- K. procurement policies and procedures (e.g., approvals, delegated level of signature authority)
- L. budgeting methods (e.g., performance based, zero based, line item)
- M. impact of budget cycle (e.g., lead times, receipt of goods, payment of goods)
- N. operational forms and templates (e.g., checklists, purchase orders, Request for Proposals boilerplate)
- O. procurement card programs
- P. process improvement programs (e.g., benchmarks, customer surveys)
- Q. standardization programs (e.g., materials, procedures, specifications)
- R. procurement trends
- S. procurement information resources (e.g., NIGP, Responsible Purchasing Network)
- T. professional values (e.g., ethics, guiding principles)
- U. outreach methods for internal and external stakeholders (e.g., tradeshow, training, networking, social media)
- V. team dynamics
- W. personnel management

#### **Associated Tasks/Responsibilities:**

- 1. design and maintain operational forms and templates (e.g., checklists, requisitions, solicitation boilerplate)
- 2. implement an automated procurement system (e.g., integrate business processes, interfaces)
- 3. administer a procurement card program (e.g., training, promoting, auditing, policies and procedures for use, implementation)
- 4. administer an e-procurement (conducting all or some procurement functions over the internet) program (e.g., training, promoting, auditing, policies and procedures for use, implementation)
- 5. implement a standardization process (e.g., materials, procedures, specifications)
- 6. implement operating work policies, guidelines, and procedures for the control of the department's work flow (e.g., training manuals, Code of Ethics, Standard Operating Procedures [SOP], process improvement)
- 7. interpret policies and procedures (e.g., apply policy situationally, respond to questions about policies and regulations)
- 8. establish cooperative procurement programs with other public agencies/private organizations



9. implement a sustainable procurement program (e.g., buy-recycled programs, green initiatives)
10. audit the procurement process (e.g., ratification process, confirming orders, identifying illegal purchases, unauthorized commitment)
11. prepare operating budget
12. manage purchasing department personnel (e.g., evaluate, counsel, discipline, coach)
13. train purchasing department personnel
14. promote purchasing department to Administration and other key stakeholders
15. originate and maintain procurement files
16. develop and maintain job descriptions and duties for procurement staff/team

## **II. SOURCING**

**20%**

### ***Knowledge of:***

- A. product specifications, descriptions, and prices (e.g., order history)
- B. scope of work for service contracts
- C. benchmarking techniques and processes
- D. procurement methods and techniques (e.g., request for proposal [RFP], invitation for bid [IFB], best value)
- E. supply and demand concepts
- F. total cost of ownership concepts
- G. make, lease, or buy concepts
- H. market research resources
- I. roles and responsibilities in the procurement process
- J. special considerations for supplies (e.g., controlled goods, hazardous materials, material and inventory management, re-use and recycling)
- K. requisition approval process (e.g., funds availability, appropriate authorizations)
- L. laws, regulations, and ordinances
- M. specification requirements (e.g., completeness, accuracy)
- N. specification types (e.g., design, performance)
- O. contract types (e.g., blanket order, term contracts, incentive)
- P. contract terms and conditions
- Q. small dollar purchases (e.g., telephone quotes, fax quotes, e-mail, procurement cards)
- R. competitive sealed bids and proposals
- S. competitive negotiations
- T. supplier preference programs (e.g., local, small business, minority-owned, woman-owned)
- U. noncompetitive procurement (e.g., sole-source, single source)
- V. emergency procurement
- W. cooperative procurement (e.g., joint solicitation, piggyback)
- X. professional services procurement (e.g., architect and engineering, legal, physician, accounting, insurance)
- Y. construction procurement
- Z. pre-solicitation conferences
- AA. solicitation process (e.g., issuing solicitation, addenda, solicitation openings)
- AB. offer evaluation (e.g., responsiveness, responsibility, price analysis, cost analysis)
- AC. sources of services and/or supplies
- AD. methods of payment
- AE. payment types (e.g., progress, advance, retainage, incentive)
- AF. fair and open competition concepts
- AG. protest processes and procedures
- AH. hearing processes and procedures
- AI. debrief processes and procedures
- AJ. supplier requirements (e.g., space, delivery, industry standards)
- AK. contract document preparation
- AL. award recommendation process
- AM. contract approval process (e.g., legal, risk management, health and safety)

### ***Associated Tasks/Responsibilities:***

1. utilize an internal automated procurement system
2. utilize an e-procurement system
3. ensure compliance with supplier diversity policy (e.g., minority, women, small business, socio-economic, disadvantaged)
4. ensure compliance with sustainable procurement programs (e.g., buy-recycled programs, green initiatives)
5. review procurement requests for compliance with established laws, policies, and procedures (e.g., bid

*2013 Body of Knowledge: CPPO – Page 2 of 4*



- thresholds, small business programs, completeness of specifications, available funds, appropriate approvals)
6. conduct market research to ascertain the use/availability of commercial items and services
  7. make recommendations to requester regarding make, lease or buy decisions
  8. obtain historical information for decision making (e.g., forecast estimated demand, sourcing, procurement method)
  9. analyze economic conditions affecting specific procurements
  10. identify sources of services and/or supplies
  11. select method of procurement (e.g., small purchases, procurement card, competitive sealed bids, competitive proposals, cooperative purchasing)
  12. develop solicitation document (e.g., product specifications/scope of services, terms/conditions, performance period)
  13. review solicitation document (e.g., consistent language, no conflicting requirements)
  14. select contract type (e.g., blanket order, term contracts)
  15. solicit competitive quotes
  16. solicit competitive sealed bids/tenders
  17. solicit competitive sealed proposals
  18. ensure a transparent solicitation process that provides for open and fair competition
  19. identify evaluation methodology/criteria and select team
  20. conduct pre-bid or pre-proposal conferences
  21. prepare and issue addenda
  22. analyze and evaluate solicitation responses (e.g., responsiveness, responsibility)
  23. prepare and make recommendation for award
  24. respond to protests and inquiries (e.g., procedure, process, hearings)
  25. select payment methods and options
  26. review supplier samples and/or demonstrations with the buying organization management and/or customer departments
  27. prepare and execute contractual documents (e.g., contract, award letter, acceptance agreement, purchase order)
  28. conduct post-award respondent debriefing
  29. mitigate risk through development of terms and conditions

### **III. NEGOTIATION PROCESS**

**10%**

#### ***Knowledge of:***

- A. negotiation strategies and techniques (e.g., conflict resolution)
- B. problem-solving and decision-making techniques and processes
- C. negotiation process and documentation requirements

#### ***Associated Tasks/Responsibilities:***

1. select negotiation team members and assign roles
2. prepare negotiations strategies (e.g., market research and availability, goals, outcomes, tactics, positions)
3. conduct negotiations (e.g., pricing, terms, renewals)
4. document negotiation process and results

### **IV. CONTRACT ADMINISTRATION**

**20%**

#### ***Knowledge of:***

- A. techniques to ensure supplier compliance to specifications (e.g., receipt inspection, site visits, item sampling/testing)
- B. techniques to evaluate supplier performance
- C. elements of a contract
- D. contract management (e.g., performance, ongoing risk)
- E. contract performance deficiencies, disputes, and resolutions (e.g., notice to cure, liquidated damages)
- F. contract modifications (e.g., change orders, amendments, escalation)
- G. contract termination (e.g., default, convenience, non-appropriation)
- H. contract renewal process
- I. contract close-out (e.g., substantial completion, service transition, lien waivers)

#### ***Associated Tasks/Responsibilities:***

1. conduct a post-award start-up conference
2. evaluate contractor/supplier performance (e.g., quality control)
3. monitor contractor/supplier compliance (e.g., insurance requirements, licensing requirements, prevailing wage)



4. modify contracts
5. remediate contractor/supplier non-compliance (e.g., cure notice, show cause notice)
6. resolve contract disputes
7. terminate contracts (e.g., default, convenience, non-appropriations)
8. conduct contract closeout activities

#### **V. SUPPLY MANAGEMENT**

**5%**

##### ***Knowledge of:***

- A. ordering process (e.g., route, expedite, follow-up)
- B. inventory management techniques and principles (e.g., Just In Time, min/max levels, Last In First Out, First In First Out)
- C. disposition of obsolete and surplus equipment and materials
- D. asset management
- E. supply chain management

##### ***Associated Tasks/Responsibilities:***

1. follow-up and expedite orders
2. resolve delivery and receiving problems
3. maintain inventory (e.g., safety stock, stocking levels)
4. design internal distribution channels
5. account for assets (e.g., fixed, capital, consumable, tagging and tracking)
6. establish warehouse shipping and receiving processes (e.g., acceptance, rejection)
7. select method of disposal for obsolete and surplus equipment and materials
8. dispose of obsolete and surplus equipment and materials
9. facilitate movement of goods (e.g., transportation logistics, delivery locations, clearing Customs)

#### **VI. STRATEGIC PROCUREMENT PLANNING**

**20%**

##### ***Knowledge of:***

- A. analytical techniques (e.g., Pareto analysis)
- B. research techniques
- C. forecasting techniques and strategies
- D. procurement strategies based on forecast data, market factors, and economic trends
- E. strategic planning
- F. cost/benefit analyses on future acquisitions
- G. contingency/continuity of operations plan (e.g., disaster preparedness)
- H. succession planning

##### ***Associated Tasks/Responsibilities:***

1. establish the mission statement, vision, and operating values of the procurement department
2. uphold and promote the mission, vision, and values of the procurement department (e.g., ethics, diversity, professionalism, accountability)
3. conduct value analysis (e.g., cost-reduction, cost avoidance, total cost of ownership)
4. implement goals, objectives, and measurement criteria for procurement department
5. monitor professional and legislative trends and laws (e.g., rules, regulations, executive orders)
6. conduct business analyses (e.g., outsourcing, privatization, partnering)
7. analyze economic trends and conditions that affect procurement
8. conduct cost/benefit analyses on future acquisitions
9. implement a process improvement plan (e.g., stakeholder satisfaction, remediation)
10. plan and implement procurement strategies and objectives based on forecast data, market factors, economic trends, and customer needs (e.g., strategic sourcing, staffing)
11. formulate a procurement contingency/continuity of operations plan (e.g., disaster preparedness, supply chain)
12. develop staff succession plan







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