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**NAVAL
POSTGRADUATE
SCHOOL**

MONTEREY, CALIFORNIA

THESIS

**THE CONTRACT MANAGEMENT BODY OF
KNOWLEDGE: A COMPARISON OF CONTRACTING
COMPETENCIES**

by

Jonathan D. Albano

December 2013

Thesis Advisor:

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**THE CONTRACT MANAGEMENT BODY OF KNOWLEDGE: A
COMPARISON OF CONTRACTING COMPETENCIES**

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Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF BUSINESS ADMINISTRATION

from the

**NAVAL POSTGRADUATE SCHOOL
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ABSTRACT

Contract management is instrumental in supporting the mission of the Department of Defense (DoD) but continues to face significant problems with regard to management and oversight. The skills and training of contracting personnel continues to be a contributing factor to DoD's contracting deficiencies. Additionally, as the DoD and other federal agencies continue to lose experienced contracting personnel due to retirement, the contracting knowledge gap continues to widen.

In response to increasing knowledge deficiencies in contract management, DoD and other federal agencies have put more emphasis on training and certification. Despite this, contract management problems continue to exist. Perhaps the training received by the workforce does not reflect basic contracting competencies and perhaps contracting competencies between the government and industry are inconsistent.

This research conducted a detailed comparative analysis of the contracting competencies established by the DoD, the Federal Acquisition Institute (FAI), and the National Contract Management Association (NCMA). It identified similarities and differences in the models and competencies.

Both NCMA's Contract Management Body of Knowledge (CMBOK) and DoD/FAI's competency models contain categories reflecting two out of three phases of the contract life cycle. The CMBOK contains both Pre-Award and Post-Award categories whereas DoD/FAI's model contains one category titled "Pre-Award and Award." Contracting competencies established by the DoD/FAI compare favorably to those set forth in the CMBOK. Of the 19 technical contracting competencies analyzed, 17 were covered by both DoD/FAI and the CMBOK. The level of detail provided in the CMBOK is much greater than that of DoD/FAI competency model.

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LIST OF ACRONYMS AND ABBREVIATIONS

A&E	Architect & Engineering
ADA	Anti-Deficiency Act
AFPA	Armed Forces Procurement Act
CICA	Competition in Contracting Act
CMBOK	Contract Management Body of Knowledge
CMCAB	Contract Management Certification and Accreditation Board
COR	Contracting Officer's Representative
CPARS	Contractor Performance Assessment Reporting System
DAU	Defense Acquisition University
DAWIA	Defense Acquisition Workforce Improvement Act
DFARS	Defense FAR Supplement
DoD	Department of Defense
FAC-C	Federal Acquisition Certification-Contracting
FAI	Federal Acquisition Institute
FAPIS	Federal Awardee Performance and Integrity System
FAR	Federal Acquisition Regulation
FCPA	Foreign Corrupt Practices Act
FPRA	forward pricing agreement
GAO	Government Accountability Office
IACCM	International Association for Contract and Commercial Management
ISM	Institute for Supply Management
ITAR	International Traffic in Arms Regulations
NCMA	National Contract Management Association
NIGP	National Institute for Government Purchasing
OFPP	Office of Federal Procurement Policy
OPM	Office of Personnel Management
PPIRS	Past Performance Information Retrieval System
PWS	performance work statement
RFI	request for information

RFP	request for proposal
RFQ	request for quote
SME	subject matter expert
SOW	statement of work
TINA	Truth in Negotiations Act
UCC	uniform commercial code
WBS	work breakdown structure

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I. INTRODUCTION

A. BACKGROUND

The Department of Defense (DoD) had an estimated budget of \$671 billion for fiscal year 2012, which included a base budget of \$553 billion and \$118 billion for contingency operations (GAO, 2011). During that year, the DoD incurred contractual obligations of approximately \$360 billion for goods and services (GAO, 2013). Contracting is instrumental to the DoD in acquiring weapons systems, base services, information technology, and consumable items, as well as for conducting contingency operations abroad.

Since the DoD encompasses such a large percentage of the discretionary federal budget, there is a heavy reliance on providing cost savings, best value, and accountability (Amadeo, 2013). With such a large budget to maintain, DoD assumes great responsibility in displaying effective fiscal management, and has often encountered significant problems with regard to contract management and oversight. In 1992, “DoD Contract Management” was placed on the Government Accountability Office’s (GAO) “high risk” list; twenty-one years later, it remains there (GAO, 2013). Additionally, the DoD Inspector General issued 142 reports highlighting deficiencies in 12 key areas relating to contract management processes during FYs 2003–2008 (IG Report, 2009).

Capabilities, skills and training of the acquisition workforce continue to be identified as contributing factors in why DoD’s contract management is still being assessed as high risk. Initially, to address this recurring issue, the Defense Acquisition Workforce Improvement Act (DAWIA) was established by the federal government in 1990 (GAO, 1993). DAWIA’s mission was to create a competent acquisition workforce by providing specialized acquisition training leading to certification and DoD career paths. Defense Acquisition University (DAU) was established as the mechanism by which to provide the required acquisition training. A combination of training, experience, and education is required to achieve one of three levels of contracting certification under DAWIA. Federal agencies, requiring the same formal training and certification as the

DoD, established the Federal Acquisition Institute (FAI) in 1976. FAI's purpose is to provide training and certification opportunities to the civilian acquisition workforce outside the DoD (FAI, 2013). As the DoD and other federal agencies continue to lose experienced acquisition personnel due to retirement, the contracting knowledge gap will continue to widen. Aside from training and certification requirements, acquisition personnel are encouraged to join professional contracting associations to supplement professional development. One such association is the National Contract Management Association (NCMA).

The NCMA is a professional contracting association made up of contracting professionals in both government and private industry (NCMA, 2011). NCMA is dedicated to providing training and education to contracting professionals striving for professional credentials, by offering recognizable contracting certifications for both government and industry (NCMA, 2011). The NCMA has strict experience, education, and examination requirements for certification. The Contract Management Body of Knowledge (CMBOK) is NCMA's primary reference on contract management knowledge and practices, and is utilized in the development of certification programs (NCMA, 2011).

The DoD and other federal agencies have put an additional emphasis on both training and certification. Despite this emphasis, contract management problems continue to persist in both the DoD and other federal agencies. As the level of acquisition training continues to increase, so does the number of contract management deficiencies (Rendon, 2013). Given this environment, one must ask: does the training received by today's acquisition professionals truly reflect what is required and needed of them in the workplace? Perhaps, acquisition training received by the workforce does not reflect basic contracting competencies? It is also possible that these contracting competencies are not consistent within the government (DoD and FAI), and between the government and industry (DoD, FAI, and NCMA).

B. PURPOSE OF RESEARCH

The purpose of this research is to conduct a detailed and independent analysis of the contracting competencies established by the DoD and the FAI. Research will also be conducted by reviewing the CMBOK set forth by NCMA.

Contracting competencies established by both the DoD and FAI will be analyzed and compared in order to identify similarities and differences. Additionally, once DoD and FAI contracting competencies are compared, they will then be compared against the CMBOK established by the NCMA.

C. RESEARCH QUESTIONS

This thesis will answer the following questions:

- How consistent are contract management competencies established by both the DoD and FAI?
- How do both the DoD and FAI's contracting competencies compare to the contracting competencies in the NCMA CMBOK?
- What improvements can be made to increase consistency between DoD and FAI contracting competencies, as well as between DoD/FAI and NCMA's CMBOK?

D. METHODOLOGY

The methodology for this research will consist of two components: A literature review and a comparative analysis.

The first component, the literature review, will present an overview of contract management. This overview will highlight the six phases of contract management from the buyer's perspective, and will briefly cover the phases from the seller's perspective. The literature review will include an in-depth review of NCMA's CMBOK. Additionally, the contracting competencies of both the DoD and the FAI will be reviewed and discussed.

The second component of the methodology will be a comparative analysis. This analysis will compare and contrast the similarities and differences between DoD and FAI contracting competencies, as well as comparing both to the NCMA CMBOK.

E. BENEFITS AND LIMITATIONS

Benefits associated with this research will include a thorough understanding of DoD and FAI contracting competencies. An additional benefit will be an insight into how DoD and FAI contracting competencies compare with each other, and with the NCMA's CMBOOK. Additionally, areas of improvement may be identified based on these insights by comparing and contrasting both DoD and FAI contracting competencies with each other and with the NCMA's CMBOOK.

One limitation associated with this research is that only contracting competencies from three organizations (DoD, FAI, and NCMA) are being analyzed, two of which are part of the federal government. Additionally, this research focuses on a literature review and comparative analysis; there will be no surveys taken or interviews conducted. The opinions and recommendations of acquisition personnel associated with DoD, FAI, and NCMA will not be included in this research.

F. ORGANIZATION OF REPORT

This report consists of five chapters. The first chapter will include background information, purpose of research, research questions, methodology, benefits and limitations, organization of report, and summary. The second chapter will contain a literature review providing an overview on contract management. Chapter II will also include a discussion on agency theory and the NCMA's CMBOOK. Chapter III will provide a discussion of both DoD and FAI's contracting competencies. Chapter IV will contain a comparative analysis among DoD and FAI contracting competencies, as well as NCMA's CMBOOK. This chapter will also present findings and recommendations on how to make contracting competencies complete and consistent across government agencies, as well as in private industry. Chapter V will present a summary and conclusion, and areas for further research.

G. SUMMARY

This chapter provided an overview of the research to be conducted by providing a brief background of contract management. It also stated the purpose of the research, research questions to be answered, and the methodology by which the research will be conducted. Additionally, Chapter I discussed benefits and limitations associated with this research, as well as how the report will be organized. The next chapter will provide a literature review discussing the six phases of contract management and the NCMA's CMBOOK.

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II. LITERATURE REVIEW

A. INTRODUCTION

Chapter II provides an overview of contract management as a business function. It also describes how agency theory attempts to explain the principal/agent relationship between the buyer and the seller. In addition, it gives an overview of the six phases of contract management and the professional associations that seek to promote it. A majority of this chapter will then analyze and discuss the NCMA CMBOK.

B. CONTRACTING AS A BUSINESS FUNCTION

The importance purchasing plays within an organization has been often overshadowed by other key functional areas such as finance, marketing, and operations management. In the past, purchasing was generally thought of as a component of either production or operations. In fact, purchasing remains one of the six basic functions common to all types of businesses, and is responsible for the expenditure of over half of an organization's resources (Lee & Dobler, 1971). Generally speaking, every dollar that can be saved in purchasing will generate an additional dollar in profit (Lee & Dobler, 1971). It is, perhaps, no wonder why commercial managers value the importance of purchasing and are incorporating it more into their strategic planning.

Purchasing, once considered a tactical function, is becoming more strategic in nature as organizations start to integrate purchasing activities into their supply chain management functions (Kraljic, 1983). A successful organization will evaluate their buying and bargaining power and incorporate it into their long-range planning (Kraljic, 1983). In fact, many executives see strategic value in purchasing, and are evaluating their procurement and supply chain management policies in an effort to deliver higher returns for their companies (KPMG, 2012). As purchasing becomes increasingly more important in both government and commercial organizations, so too do the relationships that exist to facilitate purchasing.

In government contracting, the purchaser is the government and the seller is the contractor. Government and contractor relationships may best be analyzed by utilizing an economic concept known as agency theory (Rendon, 2011a).

C. AGENCY THEORY

Agency theory seeks to explain relationships between principals and agents and the exchange of information, and risks, associated with those relationships (Eisenhardt, 1989). Utilizing agency theory may be useful in understanding the dynamics of contractual relationships that exist between a principal (government) and an agent (contractor). Each party in the buyer and seller relationship has varying goals and objectives that differ from the other. The government's buying objectives may include quality, source, timing, and price. The government is also concerned with complying with statutory requirements and adhering to public policy. On the other hand, contractors are more concerned about profit, market share, growth, and cash flow (Rendon, 2011a).

Information exchange is an important aspect of the buyer/seller relationship. Each party's unwillingness to share pertinent information may lead to uncertainty and set the foundation for a potentially risky relationship (Rendon, 2011a). Agency theory focuses on mechanisms necessary in exchanging information between the buyer and seller. One such mechanism leads to a process on how contracts are planned, structured, negotiated, administered, and closed. The next section will discuss the contract management process (Rendon, 2011a).

D. THE CONTRACT MANAGEMENT PROCESS

The contract management process consists of six different phases from both the buyer and the seller perspective (Garrett, 2010). This research will focus on the buyer (government) perspective. The six contract management phases from the buyer's perspective are procurement planning, solicitation planning, solicitation, source selection, contract administration, and contract closeout or termination.

1. Procurement Planning

Procurement planning is the process of determining which goods or services to procure and from what source. Additionally, procurement planning involves making decisions on how much to procure, how to procure it, and when to do so. Determining and defining goods or services may require generating product descriptions and conducting market research to see what is available outside the organization. This may require make-or-buy and risk analysis. Selecting a contract type, as well as developing preliminary requirements documents such as the statement of work (SOW) and performance work statement (PWS), may be done as part of this planning phase if the organization plans to procure goods or services outside the organization. Once an organization decides to outsource a requirement, it then must prepare the required documents needed for solicitation (Garrett, 2010; Rendon, 2011a).

2. Solicitation Planning

Solicitation planning is the process of clearly defining a requirement, identifying potential procurement sources, and preparing the necessary documents needed for the solicitation. It is imperative that an organization understands its own requirements in order to effectively communicate those needs outside the organization. Determining the procurement method and contract type is also conducted during this phase. Additional areas of concern include establishing proposal evaluation criteria, developing terms and conditions, and creating the actual solicitation documents (request for quotation [RFQ] or request for proposal [RFP]). Once an organization has identified its requirement and procurement strategy, it is ready to put the requirement out for solicitation (Garrett, 2010; Rendon, 2011a).

3. Solicitation

Solicitation involves the information exchange between buyers and sellers where the buyer communicates its requirements (via advertisement) and the seller submits a proposal on how they can fulfill it. Buyers use solicitations to request information such as bids, quotes, and proposals from potential sellers. The purpose of the solicitation is to clearly communicate the buyer's need to all potential sellers. Communication may

involve conducting pre-proposal conferences in order to further clarify requirements. Once the buyer has identified an adequate number of potential sellers, it is time to select the seller via the source selection process (Garrett, 2010; Rendon, 2011a).

4. Source Selection

Source selection is the process of selecting a supplier to fulfill organizational requirements. This process involves applying pre-established evaluation criteria to proposals submitted by potential suppliers. Source selection is more than just evaluating proposals, as it may require additional information exchange and negotiating with the potential supplier concerning terms, schedule, and cost. The final and most important component of source selection is awarding the contract. After the contract has been awarded, it must then be administered (Rendon, 2011a).

5. Contract Administration

Contract administration is the process of monitoring contractor performance while ensuring compliance with terms and conditions set forth in the contract statement of work (SOW). Additional elements of contract administration include negotiating change requests, managing payment schedules, and conducting performance analysis. Sometimes, it may be necessary to hold a pre-performance conference in order to clarify any last-minute expectations. Contract administration is continuously conducted until the contract is closed out or terminated (Garrett, 2010; Rendon, 2011a).

6. Contract Closeout/Termination

Contract closeout/termination is the final phase of the contract management process. If a contractor has successfully and satisfactorily completed all the performance elements and all administrative issues have been settled, a contract can be closed out and verified complete. Elements of contract closeout may include processing final payments, completing closeout checklists, and documenting the contractor's performance. There are two additional ways in which a contract may end. A contract can be terminated for convenience by the government or terminated for default because of lack of performance

by the contractor. All contracts eventually must be closed out (Garrett, 2010; Rendon, 2011a).

Although, for the purpose of this research, only the six phases of contract management from the buyer perspective will be discussed, there are six phases that represent contract management from the seller's perspective. The first four phases for the seller are presales activity, bid/no-bid decision making, bid or proposal preparation, and contract negotiation and formation. Phases five and six, contract administration and contract closeout or termination, contain similar elements for both the buyer and seller. Presales activity entails identifying potential customers and determining their needs. It includes conducting market research and identifying potential competition. Bid/no-bid decision making involves evaluating buyer solicitations and assessing capabilities and risks associated with bidding on the contract. Bid or proposal preparation is when potential sellers develop offers in response to buyer solicitations. Contract negotiation and formation involves negotiating the terms and conditions of the contract. This is the phase in which the buyer and seller agree on expectations and clarify requirements. This is an important and integral phase for both the buyer and seller (Garret, 2010).

The six phases of contract management from the buyer and seller perspective present the overarching framework for the contract management process. Depending on the complexity of a requirement and whether the contract is government or commercial, the contracting process may contain all or a portion of the elements listed in each of the six phases. For government contracting, a set of statutes and regulations known as the Federal Acquisition Regulation (FAR) sets forth policies and procedures for the acquisition process. The FAR contains 53 distinct parts, corresponding to different acquisition areas. Many of the parts in the FAR correspond directly to elements in the six phases of contract management. For example, under the procurement planning phase, FAR Parts 5 and 10 correspond to market research. Additionally, acquisition planning can be found in FAR Part 7 (FAR, 2013).

Several parts of the FAR cover multiple phases of contract management. FAR Parts 12, 13, 14, and 15 correspond to numerous elements under solicitation planning. These elements include determining procurement method, evaluation strategy, and

solicitation document development. Under source selection, evaluating proposals, applying evaluation criteria, and negotiating terms and conditions are also discussed in FAR Parts 12, 13, 14, and 15. As previously illustrated, FAR topics can generally be found to correspond to all six phases of contract management (FAR, 2013). Appendix A reflects the six phases of contract management and their related FAR sections (Rendon, 2011a).

Even though the FAR provides statutory requirements and acquisition guidance for federal agencies, numerous FAR-related topics may also be relevant to commercial contracting. As the role of acquisition becomes increasingly more important in both governmental and commercial organizations, the field of contract management has become more professionalized. The next section will discuss professional associations pertaining to contract management.

E. PROFESSIONAL CONTRACT MANAGEMENT ASSOCIATIONS

Several professional associations exist to promote the professional development of acquisition personnel in fields such as contracting, and program and supply chain management. Providing education, training and certification in contracting-related fields is an important goal of many of these organizations. Perhaps the most widely recognized professional contracting association is NCMA. NCMA was founded in 1959 and is the world's largest contract management professional association, with over 22,000 members (NCMA, 2013). NCMA offers networking, education, training, and professional certification opportunities to its members (NCMA, 2013).

Another professional association is the International Association for Contract and Commercial Management (IACCM). IACCM is a world-wide organization focusing on commercial contracting in global markets, and also offers training and professional certification in commercial contract management (IACCM, 2013). IACCM is perhaps one of the largest professional organizations, with a membership that includes contract managers, attorneys, and supply chain specialists from over 155 countries (IACCM, 2013).

One final professional organization is the Institute for Supply Management (ISM). Founded in 1915, ISM is a non-profit association serving supply chain management professionals in over 80 countries. ISM promotes research, education, and information dissemination to supply management professionals. Additionally, ISM offers professional certifications in both supply management and purchasing (ISM, 2013).

Although there are many professional associations dedicated to the professional development of acquisition and contracting professionals, the NCMA is the only organization that has actually created a contracting “body of knowledge.” In the contracting profession, NCMA is considered to be the standard for defining the body of knowledge in contract management. The next section will discuss bodies of knowledge and then focus on NCMA’s CMBOK (NCMA, 2011).

F. CONTRACT MANAGEMENT BODY OF KNOWLEDGE

A distinguishing feature of any profession is the unique knowledge base justifying the claim to special expertise (Pavalko, 1988; Morris, Crawford, Hodgson, Shepherd & Thomas, 2006). Contract management, sometimes called the “language of defense acquisition,” definitely requires special expertise (Rendon & Snider, 2008, p. 160). Some may even say that government contracting possesses an esoteric body of knowledge (Zemansky & Gordon, 1981). Ultimately, the purpose of a profession’s body of knowledge is to establish and promote competency, an important trait of professionalism (Morris, et al., 2006; Couture & Schooner, 2013). Additionally, some professions recognized that their respective bodies of knowledge must balance technical depth with sufficient breadth to make connections with other disciplines, and that the identified competencies reflect both cognitive rigor and practical relevance (Kilduff, 2008).

Specific to the NCMA CMBOK, NCMA uses the CMBOK as an “organizing rubric” to identify and manage contract management knowledge in its professional development programs and certification credentialing exams (Couture & Schooner, 2013, p. 41). Employers (both government and industry) may use the CMBOK for workforce management (e.g., job descriptions, performance standards, recruitment efforts) and

educators may use the CMBOK for curricula development and assurance of learning initiatives (Couture & Schooner, 2013; Rendon, 2011b).

NCMA's Contract Management Body of Knowledge (CMBOK) may best be described as the "sum of knowledge" essential to the contract management profession. As the contracting profession has evolved, the CMBOK has endured numerous revisions over the past 15 years. In 2001, a CMBOK committee was appointed by the Contract Management Certification and Accreditation Board (CMCAB) to periodically update the CMBOK. The second edition of the CMBOK was the first to include terms and concepts for both federal and commercial contracting. The second edition also established a framework modeled after a work breakdown structure (WBS) that initially outlined the "contracting competencies." In 2006, the CMBOK was reorganized into chapters discussing the competencies previously outlined in the original WBS. As this research is being conducted, a fourth edition of the CMBOK is scheduled to be released in late 2013 (NCMA, 2011).

The CMBOK is broken down into five broad knowledge areas, known as foundational competencies (Appendix B). These five foundational competencies are Pre-Award, Acquisition Planning/Strategy, Post-Award, Specialized Knowledge Areas, and Business. Each of the five foundational competencies contains subject matter competencies, which are specific knowledge areas managers need to master in order to effectively perform their job. Examples of subject matter competencies include contracting methods, contract financing, and standards of conduct. The following analysis will provide a detailed discussion of the subject matter competencies found under the first three foundational competencies: Pre-Award, Acquisition Planning/Strategy, and Post-Award. A general discussion will be provided for both the Specialized Knowledge Areas and Business competencies (NCMA, 2011). The following detailed analysis on NCMA's contracting competencies is based on how the competencies are titled, presented, and discussed in Chapter 3 of the CMBOK and reflected in Appendix E.

1. Pre-Award (1.0)

Laws and Regulations (1.1) play an important role in contract management because contracts are legal and binding documents whose terms and condition are legally enforceable. Sources of law and guidance covered include the uniform commercial code (UCC), Federal Acquisition Regulation (FAR) and international contracting and case law (NCMA, 2011).

The CMBOK discusses in detail the “law of agency” in the context of principal-agent relationships, as well as the four types of authority (actual, express, implied, and apparent). Contract modifications, performance, implied warranties, and repudiation are also covered under this section. Statutes and Regulations covered under this competency include the Anti-Deficiency Act, Armed Services Procurement Act, and Competition in Contracting Act. The role of the FAR is covered with mention of the Defense FAR Supplement (DFARS). Finally, laws related to international contracting are covered, to include the Foreign Corrupt Practices Act (FCPA) and the International Traffic in Arms Regulations (ITAR). Anti-boycott regulations and foreign laws and customs are also briefly mentioned (NCMA, 2011).

Contract Principles (1.2) are also known as fundamentals of acquisition. The CMBOK utilizes the defense acquisition management framework as the basis for discussion. The defense model contains the following phases: need development, concept development, preliminary design, and detailed design; as well as production, deployment, and operations (NCMA, 2011).

Standards of Conduct (1.3) discuss the guidelines contracting professionals should follow in order to perform their job ethically and within the confines of legal policy. This competency discusses standards of conduct and ethics for both government and commercial organizations. Ethical issues such as conflict of interest, behavior toward competitors, privacy of information, and gift giving and receiving are also covered under this competency (NCMA, 2011).

Socioeconomic Programs (1.4) are mandated by the government in an effort to help small businesses. FAR 19 is highlighted as providing the maximum possible

contracting opportunities to the multitude of small businesses that exist. Small business programs and policies relating to the federal government are briefly discussed. The CMBOK briefly discusses small business set-asides. A good overview is provided for many types of small businesses, to include veteran-owned small businesses, small disadvantaged businesses, HUB Zones, and woman-owned small businesses. Labor Laws are mentioned in this section, as they relate to the Davis-Bacon and Walsh-Healy Public Contracts Act. Additionally, workplace and environmental considerations are also covered under this competency. Some examples include energy conservation, hazardous materials, and ozone-depleting substances (NCMA, 2011).

Contract Structures (1.5) has to do with identifying specific contract types and pricing arrangements used in carrying out contracts. Both types of contracts, fixed price and cost reimbursable, are covered in detail under this section of the CMBOK. Firm fixed-price, firm fixed-price (level of effort) and fixed-price (economic adjustment) type contracts are also explained. For cost-reimbursement contracts, cost contracts, cost-sharing contracts and cost-plus-fixed-fee contracts are discussed. This competency also discusses time and material contracts as well as cost, performance, and delivery incentives. Incentive and award-fee contracts pertaining to fixed-price and cost-plus contracts are also detailed. Finally, this competency touches on basic ordering agreements, letter contracts, and Indefinite Delivery/Indefinite Quantity contracts (NCMA, 2011).

Contracting Methods (1.6) are the means by which customer requirements are solicited to potential offerors. This competency focuses on providing definitions to a number of contracting methods. Sealed bidding and two-step sealed bidding are discussed in detail, as is contract negotiation. Electronic commerce is mentioned as FedBizOpps is highlighted. Additionally, definitions and differences between a request for quotation (RFQ), request for proposal (RFP), and request for information (RFI) are examined in this section. Additional topics include sales contracts, performance-based contracts, and gap fillers (NCMA, 2011).

Contract Financing (1.7) is the process of obtaining the necessary funding to finance the contract. Elements of contract financing include payment methods, advanced

payments, progress payments, and contract funding. This competency discusses both commercial and governmental contract financing. Commercial contract financing includes obtaining loans or advance funding, as well as arranging payment progress schedules that include advanced payments, interim payments, and delivery payments. For government contract financing, FAR Part 32 outlines the order of preference a contracting officer should refer to when a contractor requests financing. FAR Part 32 also provides guidance on both progress payments and advance payments (NCMA, 2011).

Intellectual Property (1.8) represents a type of property that is not material in nature. Examples of intellectual property include copyrights, trademarks, patents and trade secrets. This competency merely defines each type of intellectual property. This section does not discuss too much about contracting, except to mention that intellectual property may be a potential element of a contract (NCMA, 2011).

2. Acquisition Planning/Strategy (2.0)

Acquisition Planning (2.1) is the process by which acquisition professionals generate a plan to fulfill a buyer's need in a timely manner and at a reasonable cost. Acquisition planning should involve a variety of individuals, to include contracting officers, budget experts, legal counsel, and the customer. The CMBOK focuses on market research as the key component of acquisition planning. Internal market research focuses on understanding how one's own organization operates, while external market research occurs once a customer's requirement has been identified (NCMA, 2011).

Acquisition Methodology (2.2) discusses process elements used to prepare solicitations. This competency focuses on six elements of requirements preparation: statement of work (SOW), contract type and method, terms and conditions, evaluation procedures, preparing and submitting proposals, and other considerations. The SOW is discussed in great detail, explaining the three basic types: Design SOWs, Performance SOWs, and Functional SOWs. Regardless of the type of SOW used, each contains common elements such as objective, scope, and description of work required. The contract type is briefly mentioned and is merely reinforced as an important part of the solicitation package. Terms and conditions are mentioned as an important way to help

clearly define the requirement between the buyer and seller. Evaluation factors and procedures used by the buyer should be clearly defined and listed in the solicitation. Instructions relating to the preparation and submitting of proposals is the last part of the solicitation package. Other considerations discuss publicizing for both government and commercial organizations (NCMA, 2011).

Proposal Preparation (2.3) is a process in which potential sellers evaluate solicitations and either offer a quote or submit a proposal. The CMBOK covers this competency from the seller's perspective. The seller must first review the evaluation factors and then make a bid or no-bid decision. If a seller plans to submit a proposal, it must be clearly and concisely written, well organized, and supported with credible statements (NCMA, 2011).

Negotiation (2.4) is the process in which the two parties (buyer and seller) seek to reach an agreement. The CMBOK gives a very detailed overview of the negotiation process. It covers negotiations from both the buyer and seller perspective. Key negotiation elements covered are preparation, negotiation teams, objectives, guidelines, and strategies and tactics (NCMA 2011).

Source Selection (2.5) is the process of selecting the seller that will win the contract. This is perhaps the most detailed subject matter competency in the CMBOK. This competency covers all the activities in the evaluation process. Source selection and evaluation plan elements are covered in detail. A significant part of this section discusses evaluation criteria to include price, technical, management, and past performance. Additionally, evaluation techniques are covered and include compliance matrix, independent evaluation, numeric scale, color, and adjectival scale. This section also includes awarding and preparing the contract, as well as preparing the contract file. This competency concludes the award practices unique to federal contracting (such as pre-award and post-award notifications), as well as pre-award and post-award debriefings (NCMA, 2011).

Protests (2.6) is the last subject matter competency covered under Acquisition Planning/Strategy. This section discusses common protest issues for both pre-award and

post-award. Typical pre-award protest issues include restrictive requirements, ambiguous or erroneous evaluation criteria, or exclusion from the competitive range. Typical post-award issues may include unfair evaluation criteria, failure to evaluate as advertised, and unreasonable best value analysis (NCMA, 2011).

3. Post Award (3.0)

Contract Administration (3.1) is the first subject matter competency covered under Post Award. The CMBOK provides a broad definition of contract administration and explains that it is a responsibility of both the buyer and the seller. Contract administration is a function of the size and complexity of the contract. Specific elements of contract administration are not covered in this section of the CMBOK (NCMA, 2011).

Contract Performance/Quality Assurance (3.2) begins by discussing the importance of effective communication. Post-award kick-off meetings and the associated communication elements are covered in detail. Periodic status review meetings, written status reports, observation, and documentation are all discussed with regard to quality assurance (NCMA, 2011).

Subcontract Administration (3.3) discusses the relationships between the buyer and subcontractor, as well as between the seller and subcontractor. Issues concerning the use of subcontractors in government contracting are discussed and include approval, relationships, and communication. Additionally, benefits associated with including subcontractors in meetings held by the buyer are also discussed in detail (NCMA, 2011).

Contract Changes and Modifications (3.4) focus on changes that may occur over the course of the contract. Three types of changes are discussed in detail: directed changes, constructive changes, and cardinal changes. The importance of communication between the buyer and seller resulting from a contract change, as well as identifying personnel who are authorized to make changes, is highlighted. Providing written concurrence is also discussed (NCMA, 2011).

Property Administration (3.5) focuses on the buyer providing property to the contractor or subcontractor in order to realize cost savings. Post-award administration of

buyer-provided or furnished property is generally managed by a trained specialist in the buyer's organization. There are four general concepts relating to property that are discussed in detail: ownership, accountability, competitive advantage, and property administration (NCMA, 2011).

Transportation (3.6) considerations are discussed with regard to contracts involving the movement of goods that may be heavy, fragile, subject to spoilage, and/or difficult to transport. This competency outlines four common transportation considerations: required receipt dates, mode of transportation, transportation-related services, and responsibility for transportation charges (NCMA, 2011).

Disputes (3.7) are disagreements between buyers and sellers. The CMBOK discusses dispute resolution methods for both the buyer and seller. The three formal dispute resolution methods discussed are informal collaboration, negotiation, and alternative dispute resolution. Alternative dispute resolution is covered in detail, and provides explanations on five different techniques: interest-based negotiation, mediation, mini-trial, nonbinding arbitration, and binding arbitration. Resolution through legal means is also discussed, along with monetary damages and equitable remedies (NCMA, 2011).

Organizational Conflict of Interest (3.8) focuses on buyers identifying potential conflicts of interest early in the acquisition process. The CMBOK discusses elements of various types of conflict of interest mitigation plans. These elements include disclosure of relevant information, firewalls, confidentiality agreements, separation of personnel, divestiture of a company, removal of conflict, and work-switch (NCMA, 2011).

Contract Closeout (3.9) focuses on completing numerous procedural and administrative tasks in order to close out the contract. Examples of required tasks include verifying goods and services have been received, returning buyer furnished property, and de-obligating excess funds that may remain on the contract (NCMA, 2011).

Contract Termination (3.10) discusses the premature ending of a contract. This section discusses both termination for default and termination for convenience in detail.

Termination by mutual consent and no-cost cancellations are also discussed (NCMA, 2011).

4. Specialized Knowledge Areas (4.0)

Specialized Knowledge Areas discusses competencies associated with the various specialties within contract management. Some specialties may be exclusive to government contracting, while others may be found only in commercial contracting. Some contracting specialties may be applicable to both government and commercial contracting. The CMBOK identifies eleven contracting specialty areas. They are:

- 4.1 Research and Development
- 4.2 Architect-Engineer Services and Construction
- 4.3 Information Technology
- 4.4 Major Systems
- 4.5 Service Contracts
- 4.6 International Contracting
- 4.7 State and Local Government
- 4.8 Supply Chain
- 4.9 Performance-Based Acquisition
- 4.10 Government Property
- 4.11 Other Specialized Areas (NCMA, 2011)

5. Business (5.0)

The following is a list of general business competencies that are discussed in detail in the CMBOK:

- 5.1 Management
- 5.2 Marketing
- 5.3 Operations Management
- 5.4 Financial Analysis
- 5.5 Accounting
- 5.6 Economics
- 5.7 Information Science or Information Technology
- 5.8 Leadership Skills (NCMA, 2011)

When comparing the CMBOK's competency outline (Appendix B) against the detailed competency discussions provided in the CMBOK Chapter 3 (Appendix E), several discrepancies were discovered. The first discrepancy was discovered under foundational competency Pre-Award (1.0). In the competency outline, subject matter competency 1.1 is titled Laws, Regulations and Contract Principles and subject matter competency 1.2 is titled Laws and Regulations. In Chapter 3 of the CMBOK, competency 1.1 is identified as Laws and Regulations, while 1.2 is identified as Contract Principles. (NCMA, 2011).

Similar to the discrepancy noted above, a second discrepancy was found regarding competency outline titles matching content descriptions. Under foundational competency Post-Award, subject matter competency 3.3 is titled Standards of Conduct and 3.4 is titled Subcontract Management. In Chapter 3 of the CMBOK, competency 3.3 is referred to as Subcontract Administration and 3.4 is referred to as Contract Changes and Modifications. Standards of Conduct were also previously covered under competency 1.3. (NCMA, 2011).

The final discrepancy falls under Business (5.0). The competency outline identifies competency 5.7 as Quantitative Methods, but it is referred to as Information Science or Information Technology in the chapter. Competency 5.8 is identified as Information Science in the outline, but as Leadership Skills in the chapter. Competencies 5.7, Quantitative Methods, and 5.10, Advisory Roles, are listed in the competency outline but are never discussed anywhere in the CMBOK (NCMA, 2011). Thus, there are inconsistencies in the CMBOK's competency outline and the detailed competency discussions in CMBOK Chapter 3 (NCMA, 2011).

G. SUMMARY

Chapter II provided an overview on contract management as a business function and detailed how agency theory attempts to explain the principal/agent relationship. This chapter also provided an overview of the six phases of contract management, as well as the professional associations that promote it. The majority of this chapter was analyzing and discussing NCMA's Contract Management Body of Knowledge (CMBOK). This

analysis will play an important part in the comparative analysis chapter (Chapter IV) when compared to the contracting competencies of both the DoD and FAI, which will be discussed in Chapter III.

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III. CONTRACTING COMPETENCIES FOR THE DEPARTMENT OF DEFENSE AND FEDERAL ACQUISITION INSTITUTE

A. INTRODUCTION

This chapter will discuss the contracting competencies for both the Department of Defense (DoD) and the Federal Acquisition Institute (FAI). The chapter will begin with a brief overview on how the DoD Contracting Competency model was developed, followed by a detailed analysis of the 11 Units of Competence of which it is comprised. Additionally, the chapter will briefly cover FAI contracting competencies, which are virtually identical to those of the DoD. The purpose of this chapter is to provide a detailed discussion of DoD and FAI contracting competencies that will be used in performing a comparative analysis with the NCMA's CMBOK, which will be presented in Chapter IV. The next section will discuss the DoD Contracting Competency Model.

B. DOD CONTRACTING COMPETENCY MODEL DEVELOPMENT

Of the Department of Defense's budget of \$671 billion dollars for fiscal year 2012, approximately \$360 billion, or 54%, resulted from contractual obligations for goods and services (GAO, 2011; GAO, 2013). Since "DoD Contract Management" continues to remain on the GAO's "high risk" list, the DoD has been working to identify deficiencies and improve practices related to contract management (GAO, 2013). At the heart of contract management is the contracting workforce, which includes contracting officers, contracting officers' representatives (CORs), and contract specialists.

As a result of the Defense Acquisition Workforce Improvement Strategy, the DoD contracting community has been focused on training and developing a more competency-based workforce (DoD, n.d.). In order to identify knowledge and capability gaps within the DoD contracting workforce, the department performed a DoD-wide Contracting Competency Assessment, which targeted over 20,000 members of the contracting workforce. In order for the DoD to perform an assessment of contracting competencies within the workforce, there needed to be a list of competencies to serve as guidance for

the assessment. That list of competencies became known as the DoD Contracting Competency Model (Appendix B) (DoD, n.d.).

In March of 2007, the DoD contracting community developed their own Contracting Competency Model, which was based on input from senior contracting leaders within the community. Additionally, 377 subject matter experts (SME) from all levels and components of the DoD were utilized to develop the technical contracting competencies included in the model. By analyzing the range and depth of over 600 simulated job situations, SMEs were able to analyze the range and depth of the skill sets required of various contracting professionals. For development of the Professional Competencies, which are more social in nature, the Office of Personnel Management (OPM) finalized a list of the 10 most significant competencies based on interpersonal characteristics needed to succeed in the contract management profession. The end result was a model consisting of 12 units of competence (11 technical contracting units and one professional competence unit) (DoD, n.d.).

C. DOD CONTRACTING COMPETENCY MODEL

The DoD Contracting Competency Model (Appendix B) is comprised of 12 units of competence. The first 11 units of competence contain contracting-related competencies, while the 12th consists of more general professional competencies. Within the 11 contracting units of competence are a total of 28 technical contracting competencies. Each of the 28 technical competencies is broken down further into 52 separate and distinct elements. Unit 12 contains 10 professional competencies. The 12 units of competences that comprise the contracting competency model are as follows:

- Unit 1 - Pre-Award and Award
- Unit 2 - Develop and/or Negotiate Positions
- Unit 3 - Advanced Cost and/or Price Analysis
- Unit 4 - Contract Administration
- Unit 5 - Small Business/Socio-Economic Programs
- Unit 6 - Negotiate Forward Pricing Rate Agreements (FPRA) & Administer Cost Accounting Standards
- Unit 7 - Contract Termination

- Unit 8 - Procurement Policy
- Unit 9 - E-Business Related
- Unit 10 - Construction/Architect & Engineering (A&E)
- Unit 11 - Contracting in a Contingent and/or Combat Environment
- Unit 12 - Professional Competencies (DoD, 2011)

1. Unit 1: Pre-Award and Award (Competencies 1–11)

a. Competency 1: Determination of How to Best Satisfy Requirements for the Missions Area

This competency contains three elements that focus on identifying mission requirements, as well as researching the means by which to do so. The first element discusses the use of requirements documentation and utilizing analysis and performance-based approaches to identify the best solution to meet the requirement. The second element is utilizing market research to gain a better understanding of the industry and to identify potential sources of supply and/or services. The third element under this competency mentions acquisition planning. It is important to consider all available sources and methods of procurement when evaluating meeting requirements and evaluating risk.

b. Competency 2: Consider Socio-Economic Requirements

This competency mentions utilizing socio-economic requirements such as small business, environmental, foreign, and labor when considering contracting and subcontracting opportunities.

c. Competency 3: Promote Competition

This competency contains two elements. The first element focuses on conducting pre-solicitation industry conferences. It also discusses analyzing responses to the terms and conditions in draft solicitations, as well as promoting full and open competition. The second element mentions increasing competition by facilitating the partnering on both solicitations and subcontracting opportunities.

d. Competency 4: Source Selection Planning

The source selection planning competency contains a single element. This element mentions documenting source selection plans that adhere to law, regulation, and policy.

e. Competency 5: Solicitation of Offers

This competency contains five elements. The first element suggests conducting pre-bid and pre-proposal conferences in order to help inform offerors and help clarify requirements of the acquisition. The second element mentions promoting competition by publicizing all proposed procurements. The third element mentions issuing a written solicitation that is consistent with requirement documents, and acquisition and source selection plans. This solicitation must include appropriate provisions and clauses that are tailored to the requirement. The fourth element discusses canceling solicitations or issuing amendments when they are lawful and are in the best interest of the government. The fifth and final element mentions pre-award inquiries. Responses to pre-award inquiries should be conducted with guidance from the FAR/DFARS.

f. Competency 6: Responsibility Determination

This competency focuses on utilizing past performance and financial information in determining contractor responsibility.

g. Competency 7: Bid Evaluation (Sealed Bidding)

This competency contains two elements. The first is the transparent evaluation of sealed bids to allow for a fair assessment of price, technical capability, and past performance. The second element is the utilization of price analysis in determining whether the lowest bid is reasonable and will provide the best value to the government.

h. Competency 8: Proposal Evaluation (Contracting by Negotiation)

This competency focuses on evaluating quotes and proposals against stated evaluation criteria. It also mentions requesting technical and pricing support documentation in evaluating offers, to verify if they are acceptable.

i. Competency 9: Source Selection

This competency contains two elements: establishing the competitive range and deciding whether to hold discussions.

j. Competency 10: Contract Award

Three elements in this competency focus on the contract award. The first element is selecting the offeror who will provide the best value to the government. The second element is awarding the contract. It also discusses issuing task or delivery orders upon availability of funding. The third element is conducting pre/post-award debriefings for all unsuccessful offerors.

k. Competency 11: Process Protests

This is the final competency under Unit 1. This competency focuses on processing protests and evaluating whether holding the award or stopping performance may be necessary as the result of a protest.

2. Unit 2: Develop and/or Negotiate Positions (Competencies 12–14)

a. Competency 12: Justification of Other than Full and Open Competition

This competency focuses on having to justify the need to award a contract without full and open competition.

b. Competency 13: Terms and Conditions

This competency focuses on determining contract terms and conditions that comply with laws and regulations. Examples of terms and conditions may include both financing methods and government property.

c. Competency 14: Preparation and Negotiation

This competency contains two separate elements. The first element is the preparation of negotiations and discussions by reviewing important documents such as audit and technical reports, as well as cost and pricing reports. This element also mentions developing pre-negotiation positions and determining trade-offs. The second element involves negotiating the terms and conditions based on a predetermined pre-negotiating objective. Establishing a give-and-take relationship with the offeror is important in order to help establish a fair and reasonable price.

3. Unit 3: Advanced Cost and/or Price Analysis (Competency 15)

a. Competency 15: Advanced Cost and/or Price Analysis

This competency contains four separate elements. The first element is the evaluation of a contractor's proposed cost/price for reasonableness when preparing for negotiations. The second element deals with the government developing positions on pricing-related contract terms and conditions. The third element focuses on the government researching advantageous price, cost and financing positions that are in line with stated objectives. The final element is concerned with the evaluation of both award-fee and incentive-plans to verify they are in accordance with policy and guidance.

4. Unit 4: Contract Administration (Competencies 16–20)

a. Competency 16: Initiation of Work

This competency contains two elements. The first element has to do with conducting post-award conferences in order to address customer concerns and clarify contractor responsibilities. The second element focuses on developing the contract administration plan, which includes delegating administrative functions, training and managing CORs, and outlining overall responsibilities.

b. Competency 17: Contract Performance Management

This competency contains four distinct elements focusing on managing contractor performance. The first element is utilizing the COR's feedback to help

administer the contract. This may include forcing the contractor to comply with contractual requirements. The second element is initiating past performance evaluation criteria and soliciting input from the contracting officer. The third element involves analyzing, negotiating, and preparing claims files in order to help make final decisions. The final element is resolving contractor performance problems by determining remedies and gathering facts to help resolve the problem and come up with a solution.

c. Competency 18: Issue Changes and Modifications

This competency focuses on both analyzing and negotiating contract changes and modifications as they are identified and required.

d. Competency 19: Approve Payment Requests

This competency focuses on progress payments, performance-based payments, and commercial financing under cost reimbursement contracts.

e. Competency 20: Close-out Contracts

This competency focuses on the contract administration procedures, such as property disposition and final payments, required to close out a contract. It also makes sure that all final documents and clearances have been properly closed out.

5. Unit 5: Small Business/Socio-Economic Programs (Competency 21)

a. Competency 21: Addressing Small Business Concerns

This competency contains three elements. The first element discusses relationships with small businesses. It highlights how government should understand small business concerns and identify potential contracting opportunities. This element also discusses the importance of communication between the small business and the government. The second element discusses the roles of a contracting activity's small business specialist, which includes performing reviews of small business requirements, evaluating performance, and planning the maximum effective use of small businesses in acquisitions. The final element discusses determining if particular acquisitions should be set aside for a particular small business program.

6. Unit 6: Negotiate FPRAs & Administer Cost Accounting Standards (Competency 22)

a. Competency 22: Negotiate Forward Pricing Rates Agreements & Administer Cost Accounting Standards

This competency entails exactly what is listed in its title. For billing purposes, the government will negotiate forward pricing agreements (FPRA) and make sure the contractor is complying with cost accounting standards.

7. Unit 7: Contract Termination (Competency 23)

a. Competency 23: Contract Termination

This competency focuses on terminating contracts when it is in the best interest of the government. The two types of terminations mentioned are termination for cause and termination for default.

8. Unit 8: Procurement Policy (Competency 24)

a. Competency 24: Procurement Analysis

The procurement analysis competency contains four elements. The first element concentrates on providing independent and detailed analysis on procurement issues that may affect contract documentation, legislative issues, and congressional inquiries related to acquisition. The second element involves developing and revising procurement policies through analysis of statutory and regulatory mandates and changes. The third element involves providing change recommendations in the procurement process, as deemed necessary. The final element is to perform periodic audits on contract files to ensure that proper oversight is being conducted and contract administration is consistent with agency policy.

9. Unit 9: E-Business Related (Competencies 25–26)

a. Competency 25: E-Business and Automated Tools

This competency focuses on using various e-business systems and other automated tools to better promote efficiency, standardization, and transparency.

b. Competency 26: Activity Program Coordinator for Purchase Card

This competency refers to the oversight and execution required for the Purchase Card Program.

10. Unit 10: Construction/Architect & Engineering (Competency 27)

a. Competency 27: Construction/Architect & Engineering (A&E)

This competency contains acquisition elements essential to construction and A&E acquisitions such as conducting negotiations, source selection, and issuing solicitations.

11. Unit 11: Contracting in a Contingency/Combat Environment (Competency 28)

a. Competency 28: Contracting in a Contingency and/or Combat Environment

This is the last contracting competency covered under the DoD Contracting Competency Model. It discusses applying contracting principles for contingency operations, as well as routine deployments and responding to natural disasters.

12. Unit 12: Professional Competency

Unit 12 provides ten professional competencies essential for all DoD contracting professionals. They include:

a. Problem Solving

This competency focuses on identifying, analyzing, and developing solutions to problems, as well as making recommendations based on evaluating alternatives and processing information.

b. Customer Service

This competency highlights meeting the needs of both internal and external customers, while providing the highest-quality products and services available.

c. *Oral Communication*

This competency emphasizes the importance of clear, concise, and convincing presentations, as well as being able to clarify information as needed.

d. *Written Communications*

This competency focuses on written correspondence that should be presented in a clear, concise, and organized manner.

e. *Interpersonal Skills*

This competency focuses on interpersonal skills such as treating individuals with courtesy and respect, as well as understanding that different situations require different responses.

f. *Decisiveness*

This competency highlights the importance of making well-informed and timely decisions with limited data. It also emphasizes that individuals must understand the implications of their decisions.

g. *Technical Credibility*

This competency focuses on the ability to apply relative principles, procedures, and policies when requiring specialized expertise.

h. *Flexibility*

This competency requires individuals to rapidly adapt to changing circumstances, obstacles, and the availability of new information.

i. *Resilience*

This competency requires an ability to deal with pressure and remain focused on objectives.

j. Accountability

This competency focuses on being able to hold oneself and others accountable for pre-determined objectives. It also discusses being willing to accept responsibility for mistakes while complying with the rules.

The next section will discuss the FAI contracting competency model.

D. FAI CONTRACTING COMPETENCY MODEL

The Federal Acquisition Institute (FAI) exists to serve acquisition professionals working for federal agencies other than the DoD (e.g., Department of the Interior, Department of Veterans Affairs, Department of the Treasury). For more than 35 years, the FAI has provided continuous professional development for acquisition and contracting professionals who serve the federal government. According to 41 U.S.C. 1703, FAI is responsible to the heads of civilian executive agencies to manage, develop, and train a professional acquisition workforce (FAI, 2013).

FAI provides career development planning, acquisition research and professional certification training to its members. Similar to the DoD, FAI provides occupational certification in contracting. The Federal Acquisition Certification-Contracting (FAC-C) is the certification for members of the federal contracting workforce, and is available to all civilian members of the federal contracting workforce. According to the Office of Federal Procurement Policy (OFPP), acquisition professionals who were issued new warrants after January 1, 2007 must maintain FAC-C certification. In order to receive FAC-C certification, one must meet certain education, training, and experience requirements (FAI, 2013).

Just like the DoD, FAI does not require personnel to take an examination to receive certification in contracting. However, FAI does require that members of the acquisition workforce have a certain level of knowledge and experience in order to perform their contracting duties. The basis of this knowledge is the FAC-C contracting competencies (FAI, 2013).

The FAI Contracting Competency Model (Appendix C) is identical to that of the DoD Competency Model. FAI's model also consists of 12 units of competence: 11 technical contracting units and one professional competence unit. For the purpose of this research, both the DoD and FAI Contracting Competency Models, which are identical, will be compared to the NCMA's CMBOK (FAI, 2013).

E. SUMMARY

This chapter provided an overview of the development of the DoD Contracting Competency Model, as well as a detailed analysis of the units of competence that comprise it. This chapter also highlights the fact that the FAI Competency Model is virtually identical to that of the DoD. The next chapter will provide a comparative analysis of NCMA's CMBOK against the DoD/FAI's contracting competency model. Chapter IV will also detail findings of the analysis, as well as recommendations on what improvements can be made to increase consistency between DoD/FAI contracting competencies and NCMA's CMBOK.

IV. COMPARATIVE ANALYSIS

A. INTRODUCTION

Chapter IV provides a comparative analysis of both NCMA and DoD/FAI contracting competency models as well as the detailed technical contracting competencies that comprise them. First, an analysis will be conducted on NCMA's Outline of Competencies model as illustrated in the CMBOK (Appendix A). Next, an analysis of DoD/FAI's Contracting Competency Model (Appendix B and C) will be conducted. Once both competency models have been individually analyzed, a comparative analysis will be conducted between them to identify findings, possible implications, and future recommendations. Upon completing the model analysis, the chapter will then focus on comparative analysis between the detailed technical contracting competencies contained in both models and will provide findings, possible implications and future recommendations. This research and analysis will focus on the key contracting competencies instrumental to the contract management process. A list of the technical contracting competencies to be analyzed will be provided later in the chapter. Thus, not every contracting competency from both models will be analyzed. The next section will provide a brief review of both contracting competency models.

B. CONTRACTING COMPETENCY MODEL OVERVIEW

NCMA's Outline of Competencies (Appendix A) contains five broad knowledge areas known as foundational (or core) competencies. These five foundational competencies are Pre-Award (1.0), Acquisition Planning/Strategy (2.0), Post-Award (3.0), Specialized Knowledge Areas (4.0), and Business (5.0). Each of the five foundational competencies contains technical contracting areas known as subject matter competencies. Subject matter competencies are specific knowledge areas that comprise a majority of the Contract Management Body of Knowledge (CMBOK) (NCMA, 2011).

The DoD/FAI Contracting Competency Model (Appendix B) consists of 12 distinct units of competence. The first 11 units contain 28 technical contracting competencies. The 12th unit of competence consists of more general professional

competencies. Many of the 28 technical contracting competencies are broken down further into distinct and specific elements. There are 52 distinct elements embedded within the 28 technical competencies. Unit 12 contains 10 professional competencies that are more interpersonal and social in nature (DoD, n.d.).

The six phases of the contract management process, as discussed in Chapter II, will be referenced throughout the chapter to provide a contracting frame of reference when conducting comparative analysis on both the competency models and the individual contracting competencies. The six phases of the contract management process are procurement planning, solicitation planning, solicitation, source selection, contract administration and contract closeout/termination (Garrett, 2010; Rendon, 2011). For the purpose of this research, these six phases will be aligned into three distinct categories reflecting the three categories of the contract life cycle as per the CMBOK: Pre-Award, Contract Award, and Post-Award. The first three phases, procurement planning, solicitation planning and solicitation, will align under the category of Pre-Award. Source selection will align under the category of Contract Award while the final two phases, contract administration and contract closeout/termination, will align under the category of Post-Award, as referenced in Table 1. The next section will provide an independent analysis of both NCMA’s and DoD/FAI’s contracting competency models. The analysis will include the discussion, any identified finding, implications, and recommendations.

Pre-Award	Contract Award	Post-Award
Procurement Planning	Source Selection	Contract Administration
Solicitation Planning		Contract Closeout/Termination
Solicitation		

Table 1. Contract Life Cycle and Related Phases

C. CMBOK CONTRACTING COMPETENCY MODEL ANALYSIS

Chapter 2 of the CMBOK begins by providing an overview of the contract life cycle. The contract life cycle is divided into three distinct categories, thus defining the parameters for which a contract begins and which it ends. The three categories of the contract life cycle are Pre-Award (which includes acquisition planning), Contract Award, and Post-Award (NCMA, 2011).

1. The Outline of Competencies model (Appendix B) in Chapter 1 of the CMBOK consists of five foundational competencies. The first three foundational competencies are Pre-Award (1.0), Acquisition Planning/Strategy (2.0), and Post-Award (3.0). As previously mentioned, Chapter 2 of the CMBOK outlines the three categories of the contract life cycle: Pre-Award (which includes acquisition planning), Contract Award, and Post-Award. Perhaps one might think that the first three foundational competencies in the model would mirror the three categories of the contract life cycle. In fact, only two out of three categories of the contract life cycle (Pre-award and Post-award) are actually reflected as foundational competencies in the model. Contract Award is the second category of the contract life cycle yet the model has Acquisition Planning/Strategy listed as the second foundational competency. According to the CMBOK, acquisition planning is an activity that falls under Pre-Award (1.0). Acquisition Planning/Strategy (2.0) is listed as the second foundational competency in the model but does not correspond to the second category of the contract life cycle, which is Contract Award (NCMA, 2011).

FINDING M-1: Only two out of three categories of the contract life cycle (Pre-Award and Post-Award) are reflected as foundational competencies in the CMBOK's Outline of Competencies model. Acquisition Planning/Strategy (2.0) is listed as the second foundational competency instead of Contract Award, which is the second category of the contract life cycle.

Implications: Possible implications may include the confusion created when referencing the model to locate various competencies within the CMBOK. For instance,

if someone wanted to search for contracting competencies related to contract award, they may just scan the five category titles listed in the model. They may then assume that competencies related to contract award are not discussed anywhere in the CMBOOK since there is not a competency category by the same name.

Recommendations: Restructure the Outline of Competencies model so that the first three foundational competencies listed in the model correspond to the three categories of the contract life cycle as reflected in Chapter 2 of the CMBOOK. Foundational competency Acquisition Planning/Strategy (2.0) should be renamed to Contract Award to reflect the second category of the contract life cycle (NCMA, 2011).

2. As previously mentioned, the second foundational competency in the CMBOOK is titled Acquisition Planning/Strategy (2.0) but does not reflect the second category of the contract life cycle, Contract Award. Under the CMBOOK's current model, Acquisition Planning/Strategy (2.0) consists of contracting competencies from both pre-award (acquisition planning and acquisition methodology) and contract award (negotiation, source selection and protests) categories of the contract life cycle. Regardless of what the foundational competency is titled, contracting competencies from two separate categories of the contract life cycle are combined together into one improperly named competency category. The foundational competency is titled Acquisition Planning/Strategy but contains competencies on negotiation and source selection. Negotiation and source selection competencies would fall under the category of contract award and not acquisition planning.

FINDING M-2: The Acquisition Planning/Strategy (2.0) foundational competency in the CMBOOK's model contains technical contracting competencies from both the Pre-Award and Contract Award categories of the contract life cycle.

Implications: If one was to look at just the title Acquisition Planning/Strategy, they may not notice this foundational competency contains a mixture of both pre-award and contract award contracting competencies. Acquisition planning competencies may best be utilized if they are reclassified under Pre-Award (1.0)

Recommendations: Acquisition Planning/Strategy (2.0) should be renamed to Contract Award (2.0). Once the name is changed, both acquisition planning and acquisition methodology competencies should be removed from Contract Award (2.0) and placed under Pre-award (1.0), where they belong.

3. The first three phases of the contract management process are procurement planning, solicitation planning, and solicitation. These three phases are pre-award activities that fall under the Pre-Award category of the contract life cycle. The CMBOK's competency model has Pre-Award (1.0) and Acquisition Planning (2.0) presented as two separate foundational competencies. According to the CMBOK, acquisition planning falls under the Pre-Award category of the contract life cycle and is not a separate competency category. Solicitation Planning and Solicitation are the next two phases of the contract management process but are not currently listed as contracting competencies under Pre-Award (1.0). In fact, both solicitation planning and solicitation competencies are not found anywhere in the model or even listed as contracting competencies in the CMBOK.

FINDING M-3: The Pre-Award foundational competency in the CMBOK's model does not adequately cover the first three phases of the Contract Management Process: procurement planning, solicitation planning and solicitation.

Implications: The implications of the CMBOK not covering both solicitation planning and solicitation as contracting competencies will be covered later in the chapter. As for the model, one might think that pre-award and acquisition planning competencies fall under completely different categories of the contract life cycle since they are represented as different competency categories in the model.

Recommendations: Incorporate the first three phases of the contract management process (procurement planning, solicitation planning, and solicitation) into the Pre-Award (1.0) foundational competency. Create three distinct sub-competencies under the Pre-Award competency reflective of the first three phases of the contract management process. As it currently stands, acquisition planning is a stand-alone foundational

competency while solicitation planning and solicitation competencies are not even covered anywhere in the CMBOK. NCMA should review which contracting competencies are critical to the Pre-Award category of the contract life cycle and restructure the Pre-Award foundational competency accordingly.

The next section will provide an analysis of the DoD and FAI Contracting Competency Models. Since the DoD and FAI contracting competency models are identical, this research will refer to both as the DoD/FAI contracting competency model.

D. DOD/FAI CONTRACTING COMPETENCY MODEL ANALYSIS

1. The DoD/FAI Contracting Competency Model consists of 12 distinct units of competence. The first 11 units consist of technical contracting competencies while the last unit contains more general professional competencies. The first unit of competence in the DoD/FAI model is titled “Pre-Award and Award.” It is the largest unit of competence in the model, containing 11 of the 28 technical contracting competencies. Both Pre-Award and Award are two separate categories of the contract life cycle, yet the DoD/FAI model has them combined to form a single unit of competence. The 11 technical contracting competencies consolidated together to comprise this single unit of competence are all either related to the pre-award or award categories of the contract life cycle (DoD, n.d.).

FINDING M-4: The DOD/FAI Contracting Competency Model combines both the Pre-Award and Award categories of the contract life cycle into a single unit of competence. Both pre-award and award technical competencies are included in this single unit of competence.

Implications: Even though both pre-award and award competencies are included in a single unit of competence, they are not designated as to which ones are pre-award and which ones are award. If an individual is unaware of what category a particular competency falls under in the contract life cycle, this model will not provide any help because they are not labeled as either a “pre-award” or “award” competency.

Recommendations: Separate the “Pre-Award and Award” unit of competence into two distinct categories: Pre-Award and Award. Additionally, verify that each of the technical competencies that comprised the original unit is properly categorized under their new unit of competency.

2. The DOD/FAI Contracting Competency Model contains separate units of competence for both Contract Administration and Contract Termination. Both of these units are distinct phases of the contract management process and fall under the Post-Award category of the contract management life cycle. In the model, Contract Closeout is listed as a technical competency under Contract Administration, whereas contract termination is its own separate unit of competence. The DoD/FAI model does not have a distinct unit of competence titled “Post-Award” (similar to that of the Pre-award and Award unit) that encompasses post-award competencies such as contract administration, contract closeouts, and terminations (DoD, n.d.).

FINDING M-5: The DoD/FAI Contracting Competency Model does not contain a Unit of Competence titled Post-Award. There are two separate units of competence titled Contract Administration and Contract Termination. They are the only two units that contain post-award competencies.

Implications: The model could lead one to believe that contract closeout is a competency falling under contract administration instead of a separate competency combined with contract terminations as the sixth phase of the contract management process (contract closeout).

Recommendations: The DoD/FAI model needs to have a unit of competence titled Post-Award. Both the Contract Administration and Contract Termination units of competence should be changed to technical competencies under this new competency unit. Additionally, contract closeout would fall under Post-Award as well. All three technical competencies previously mentioned would then reflect the final two phases of the contract management process as well as the Post-Award category of the contract life cycle.

3. The DoD/FAI model contains a unit of competence titled “Small Business/Socio-Economic Programs.” Additionally, there is a separate technical competency under Pre-Award and Award titled “Consider Socio-Economic Requirements.” Perhaps, one may ask, why is this competency covered twice in the model? The Small Business/Socio-Economic Programs unit of competence addresses small business concerns while the technical competency “Consider Socio-Economic Requirements” is more general in nature (DoD, n.d.).

FINDING M-6: Socioeconomic requirements and small business concerns are an individual unit of competence as well as a technical competency under Pre-Award and Award.

Implications: Even though both the unit competency and the technical competency contain the words “socio-economic” in their titles, it does not mean they cover the same topics. If someone was looking for information on small business concerns, they would be disappointed to find that the technical competency under Pre-Award and Award is very general in nature. They may not even realize that there is an entire unit of competence dedicated to small business concerns.

Recommendations: Combine the technical contracting competency “Consider Socio-Economic Requirements” with the unit of competence “Small Business/Socio-Economic Programs” to create one single technical contracting competency titled “Small Business/Socio-Economic Requirements” and make it a technical contracting competency under Pre-Award.

The next section will compare the NCMA CMBOK with the DoD/FAI contracting competency model.

E. CMBOK AND DOD/FAI CONTRACTING COMPETENCY MODEL COMPARATIVE ANALYSIS

1. Both the CMBOK and DoD/FAI contracting competency models provide a framework in which technical contracting competencies are organized. The CMBOK’s model contains five foundational competencies, which are further broken down into specific subject matter or technical contracting competencies (see Appendix A).

DoD/FAI's competency model consists of 11 categories known as Units of Competence. These 11 Units of Competence are broken down further into 28 distinct technical contracting competencies. Various technical competencies are broken down further into technical elements (see Appendix B). For the purposes of the comparative analysis in this next section, "major categories" will be used to describe both the CMBOK's five foundational competencies and DoD/FAI's 11 Units of Competence.

Both the CMBOK and DoD/FAI models contain a major category titled Pre-Award. This is the first foundational competency in the CMBOK's model and the first unit of competence for DoD/FAI's. One major difference between these two models is that the DoD/FAI model has both Pre-Award and Award grouped together into one major category, whereas the CMBOK does not even have a separate category titled Award. The CMBOK's model contains a "Post-Award" category but a category of competence by the same name is absent in the DoD/FAI model. DoD/FAI's model does, however, have competency units titled Contract Administration and Termination (see finding M-5).

FINDING M-7: The CMBOK and DoD/FAI's competency models contain only two out of three major categories of the contract life cycle. The CMBOK's competency model contains Pre-Award and Post-Award categories but does not have a separate category for Contract Award. DoD/FAI's model contains a single category titled Pre-Award and Award (grouped together) but does not have a separate category titled Post-Award.

Implication: Contracting competencies should correspond with the categories of the contract life cycle as well as the six phases of the contract management process. If a model lacks a major contracting life cycle category it may not be an effective tool for someone who may seek to reference it. If contracting competencies and categories are mixed together, one may get confused on where that competency may lie in the contract life cycle.

Recommendation: Restructure the CMBOK and DoD/FAI models so that all three categories of the contract life cycle are reflected as the three major competency categories: Pre-Award, Award, and Post-Award.

2. The CMBOK's contracting competency model consists of five major categories (foundational competencies), whereas DoD/FAI's model contains 12 (units of competence). Three out of the five major categories in the CMBOK's model contain contracting-related competencies, compared to 11 out of 12 competencies for DoD/FAI. Regardless of where individual contracting competencies fall within their respective models, they all fall into one of the three major categories of the contract life cycle: Pre-Award, Contract Award, and Post-Award. Even though the second category in the CMBOK's model is misleading (see findings M-1 and M-2), all contracting competencies should fall under one of three major categories, mirroring the contract life cycle. In DoD/FAI's model, "Contract Administration" is its own unit of competence. An individual who does not know that contract administration is a Post-Award activity may be confused.

FINDING M-8: Four out of five major categories in the CMBOK's model are contracting related, compared to 11 out of 12 major categories for the DoD/FAI's model.

Implication: DoD/FAI's model is confusing. For example, develop and negotiate positions is the second unit of competence. Someone unfamiliar with the contract life cycle may not know if that is a pre-award or contract award competency. The eighth unit of competency is procurement policy. Where might procurement policy fall in the contract life cycle? The model does not provide an individual any indication where various contracting competencies fall in the contract life cycle.

Recommendation: Of the two contracting competency models, the CMBOK's model has perhaps the best structure. Other than the second major category being improperly titled, it consists of three major contracting categories that reflect the contract life cycle. The CMBOK's model also contains a category for specialized knowledge areas as well as general business areas. DoD/FAI should restructure their model to mirror

the CMBOK's. It is not necessary to have 11 separate units of contracting competence when three will do the job. DoD/FAI should develop a model similar to the CMBOK's, where three units of competence reflect the three categories of the contract life cycle. All other existing units in DoD/FAI's model are technical contracting competencies that would either align under one of the three contracting categories or in a separate specialized competency unit, as reflected in the CMBOK model.

3. Both the CMBOK and DoD/FAI models contain major categories reflecting specific and specialized contracting competencies. The CMBOK's model has a category titled "Specialized Knowledge Areas." This category contains specialized contracting competencies such as service contracting, international contracting, major systems, and supply chain management. The DoD/FAI competency model has a category titled "Other Competencies" This category contains only three specialized contracting competencies: e-business, construction/architect & engineering (A&E), and contingency contracting. The purpose of this observation is not to compare specialized competencies between the models but simply to highlight how they are presented in their respective models. Specialized competencies will be compared and contrasted later in this chapter. Specialized contracting competencies fall under a single competency category in the CMBOK's model but are listed under "Other Competencies" in DoD/FAI's model.

FINDING M-9: The CMBOK's competency model contains a major category titled "Specialized Knowledge Areas," which consists of specialized contracting competencies covered in the CMBOK. DoD/FAI's model contains a separate unit of competence for each of its three specialized contracting competencies.

Recommendation: DoD/FAI should incorporate a competence category into their model that includes specialized contracting competencies. This category should reflect the CMBOK's model.

4. Both the CMBOK and DoD/FAI models contain competency categories that are not specific to contracting. The CMBOK has a category titled "Business (5.0)," which contains basic business functions such as accounting, economics, and financial

analysis. DoD/FAI's model contains a competency category titled "Professional Competency," which contains competencies more interpersonal and social in nature. Customer service, flexibility, resilience, accountability, and written communication are some examples of this competency. This analysis seeks to highlight the fact that both models have what may be considered a "miscellaneous" category in their respective models. Comparative analysis of these particular competencies will be conducted later in the chapter. Although these categories do not contain specific technical contracting competencies, they do contain technical skills and personal attributes critical to the contracting profession.

FINDING M-10: The CMBOK's competency model contains a competency category that includes basic business functions, whereas DoD/FAI's model contains a competency category that contains interpersonal and social skills.

Recommendation: The CMBOK should look at incorporating interpersonal skills into their competency model, whereas DoD/FAI may wish to incorporate more general business skills into theirs.

The next section will provide a comparative analysis of the detailed technical contracting competencies that comprise the CMBOK and DoD/FAI's contracting competency models.

F. CONTRACTING COMPETENCY COMPARATIVE ANALYSIS

In this section, a comparative analysis of the CMBOK's and DoD/FAI's detailed contracting competencies will be presented. Contracting competencies will be divided into the three categories reflecting the contract life cycle: Pre-Award, Contract Award, and Post-Award. Certain competencies may only be found in one model, while some may be found in both. After each competency is discussed, findings, possible implications from the findings, and future recommendations for competency improvement will be provided. For the purpose of this research, not every competency in each model will be analyzed. Only technical contracting competencies considered most vital to the contract management process will be analyzed. Additionally, a brief discussion will be presented

on the CMBOK’s Specialized Knowledge Areas as well as DoD/FAI’s professional competencies. Table 2 provides a list of the technical contracting competencies that will be analyzed. These technical contracting competencies have been aligned by the author under their respective contracting life cycle categories.

Pre-Award	Contract Award	Post-Award
Acquisition Planning/Market Research	Past Performance	Contract Administration
Socio-Economic Requirements	Cost/Price Analysis	Contract Performance
Contract Structures	Terms and Conditions	Changes and Modifications
Contract Methods	Negotiation	Contract Closeout
Contract Financing	Source Selection	Contract Terminations
Solicitation Planning	Contract Award	
Procurement Policy	Protests	

Table 2. Listing of Technical Contracting Competencies

G. PRE-AWARD

1. Acquisition Planning/Market Research

Both the CMBOK and DoD/FAI have contracting competencies related to acquisition planning and market research. The first technical contracting competency in DoD/FAI’s model is titled “Determination of How to Satisfy Requirements for the Mission Area.” This competency focuses on three key elements: analyzing and documenting requirements, utilizing market research to better understand available sources, and utilizing acquisition planning to evaluate all possible procurement methods in order to satisfy the mission (DoD, n.d.).

By comparison, the CMBOK has a competency simply titled Acquisition Planning. This competency describes acquisition planning as a process in which

acquisition professionals generate a plan to fulfill a buyer's need in a timely manner and at a reasonable cost. Both NCMA and DoD/FAI highlight two of the most important elements of acquisition planning, which are identifying customer needs (or mission requirements) and utilizing market research. The only real difference between the CMBOOK and DoD/FAI's competency is that the CMBOOK discusses market research (both internal and external) in great detail, whereas DoD/FAI simply highlights its importance (NCMA, 2011; DoD, n.d.).

FINDING C-1: Both the CMBOOK and DoD/FAI have a competency on acquisition planning/market research. Both competencies focus on identifying requirements and utilizing market research to acquire them.

2. Socio-Economic Requirements

Both the CMBOOK and DoD/FAI models have a contracting competency related to socio-economic programs and small business concerns. As previously mentioned, DoD/FAI contains two competencies dedicated to this topic (Competency #2 and #21). The CMBOOK's competency provides a broad overview of small business programs and policies before providing detailed descriptions of numerous types of small businesses. The CMBOOK also discusses labor laws and workplace/environmental considerations (NCMA, 2011).

DoD/FAI's model also mentions small business concerns but does not provide detailed examples like that of the CMBOOK. Labor and environmental considerations are listed under DoD/FAI's competency, as in the CMBOOK's. DoD/FAI does provide a detailed discussion of the importance of assigning a small business specialist responsible for monitoring small business performance and conducting small business reviews. All elements previously mentioned would fall under the supervision of the small business specialist (NCMA, 2011; DoD, n.d.).

FINDING C-2: NCMA and DoD/FAI both provide broad but consistent overviews of socio-economic/small business programs. NCMA concentrates on types of small businesses, whereas DoD/FAI places more emphasis on the roles and responsibilities of a small business specialist.

Implications: Even though the CMBOK sufficiently describes the various concerns and elements associated with small businesses, it does not address the need for oversight and management of small business programs. Often times, socio-economic programs are mandated by law and require monitoring to ensure they are being properly utilized. Small businesses may be improperly utilized or completely neglected if they are not being managed by someone knowledgeable in their requirements.

Recommendations: The CMBOK should incorporate a discussion on the roles and responsibilities of a small business specialist. The discussion should highlight the value they bring to an organization by focusing on the monitoring and oversight capabilities they can provide.

3. Contract Structures/Types

The CMBOK has a competency dedicated to contract structures/types. This competency begins by providing a very detailed description of both fixed-price and cost-reimbursement type contracts. Fixed-price contracts discussed include: Firm-Fixed Price, Firm-Fixed Price (level of effort), Fixed-Price (economic price adjustment) and Fixed-Price Redetermination (prospective and retroactive). Cost-reimbursement contracts discussed are Cost contracts, Cost-Sharing contracts, and Cost-Plus-Fixed-Fee contracts. Additionally, Time and Materials contracts are mentioned. This competency also covers contract incentives that include cost, delivery performance and quality incentives. This competency also covers Fixed-Price Incentive, Fixed-Price Award Fee, Cost Plus Incentive Fee, and Cost-Plus Award Fee type contracts. Basic Ordering Agreements, Letter contracts, and ID/IQ contracts are also discussed under this competency (NCMA, 2011).

DoD/FAI does not have a single contracting competency that discusses the various types of contract structures/types (DoD, n.d.)

FINDING C-3: The CMBOOK contains a competency on contract structures/types, whereas the DoD/FAI does not. The CMBOOK's competency is extensive and detailed, whereas DoD/FAI's is non-existent.

Implications: Understanding contract structures/types is perhaps one of the most important competencies a contracting professional can have. The relationship between requirement and risk dictates the need for a multitude of different contracting types. A contracting professional must understand when to utilize different contract types as well as what comprises them. If contracting professionals are not knowledgeable in the various contract types, how will they be able to effectively develop a solicitation? Solicitation planning requires that contract type and method be listed in the solicitation. If understanding contract structures is not a competency under DoD/FAI, then perhaps contracting professionals are not receiving adequate training on them. If individuals do not receive training on the various contract types, perhaps they may not know which contract type to use in certain situations

Recommendations: DoD/FAI needs to incorporate contract structures/types into their model by making it either a unit of competence or a technical competency under solicitation planning.

4. Contract Methods

Both the CMBOOK and DoD/FAI have a contracting competency related to contract methods. NCMA's competency discusses a multitude of contracting methods, which includes both sealed bidding and contracting by negotiation. Electronic commerce is discussed and FedBizOpps is highlighted. Additionally, request for quotation (RFQ), request for proposal (RFP), and request for information (RFI) are all examined under this competency. Additional topics include sales contracts, performance-based contracts, auctions, and gap contracts (NCMA, 2011).

DoD/FAI has only one competency dealing with contract methods and it focuses entirely on sealed bidding. This is the only contracting method discussed in DoD/FAI's competency model. There is a separate competency dealing with "contracting by negotiation" but it focuses more on the process of negotiating rather than negotiation as a contracting method (DoD, n.d.).

FINDING C-4: The CMBOK's competency on Contract Methods is extensive and detailed, highlighting several different contracting methods, whereas DoD/FAI's competency only covers one, sealed bidding.

Implications: DoD/FAI contracting professionals need to be proficient in identifying and understanding the various contracting methods. DoD procures weapon systems, supplies, and services that are expensive and complex, and which often require contracting by negotiation. DoD also utilizes simplified acquisition procedures. If contracting professionals do not understand various contracting methods, will effective solicitations be developed? Procurement planning requires that the contract method be appropriate for the acquisition and be identified in the resulting solicitation. If contract methods are not considered worthy enough to be its own competency, then perhaps the training provided on contract methods is minimal or even non-existent.

Recommendations: DoD/FAI needs to incorporate the full spectrum of contracting methods into a single competency and call it "Contracting Methods."

5. Contract Financing

Both the CMBOK and DoD/FAI have contracting competencies pertaining to contract financing. Contract financing is the process by which a contractor obtains the necessary funding in order to finance a contract. The CMBOK discusses both commercial contract financing and government contract financing. Commercial financing methods discussed include advanced, interim, and delivery payments. Commercial contract financing also includes obtaining loans or advance funding as well as arranging payment progress schedules. For government contract financing, the CMBOK references FAR Part 32, which outlines the order of preference a contracting officer should refer to when a

contractor requests financing. FAR Part 32 also provides guidance on both progress payments and advance payments (NCMA, 2011).

DoD/FAI's competency looks at contract financing primarily from the government perspective. This competency discusses approving payment requests from the contractor. Additionally, this competency also discusses final payments under cost reimbursement contracts, progress payments, and performance-based payments. Commercial financing is briefly mentioned (DoD, n.d.).

FINDING C-5: Both the CMBOK and DoD/FAI have a competency on contract financing. The CMBOK discusses both commercial and government contract financing, whereas DoD/FAI primarily deals with government financing.

6. Solicitation Planning

Both the CMBOK and DoD/FAI models have contracting competencies that focus on solicitation planning. The CMBOK refers to solicitation planning as “arguably the single most important function” in the acquisition cycle and satisfying a customer's needs at a fair price should always be taken into consideration when doing so (NCMA, 2011).

The CMBOK discusses solicitation planning in terms of creating a solicitation package consisting of six elements of requirements preparation: statement of work (SOW), contract type and method, terms and conditions, evaluation procedures, preparing and submitting proposals, and other considerations. This competency goes into great detail when discussing SOWs. Design, performance, and functional SOWs are described accordingly. Contract type, contract method, terms and conditions, and evaluation factors are all discussed as being part of the solicitation package. Instructions to potential offerors is the final piece of the solicitation package. Other considerations include pre-solicitation conferences and publicizing procurement opportunities (NCMA, 2011).

DoD/FAI's competency contains many similar elements to the CMBOK, from issuing a solicitation with the required documentation to including evaluation factors and terms and conditions in the solicitation. Publicizing and holding pre-solicitation

conferences are familiar topics, as well. DoD/FAI also discusses issuing amendments to solicitations as well as responding to pre-award inquiries in accordance with FAR/DFARS (DoD, n.d.).

FINDING C-6: Both the CMBOK and DoD/FAI have a competency on solicitation planning. Both competencies discuss key components of solicitation planning such as documentation requirements, evaluation factors, and terms and conditions.

7. Procurement Policy

Both the CMBOK and DoD/FAI have competencies discussing statutory and legislative guidance pertaining to procurement policy. The CMBOK's competency includes a detailed analysis of sources of law and procurement policy for both commercial and government contracting including the uniform commercial code (UCC), Federal Acquisition Regulation (FAR), as well as various other laws pertaining to both international contracting and case law. DoD/FAI's competency on procurement policy is more focused on contract documentation in terms of legislative, statutory, and regulatory compliance.

The CMBOK's competency begins by discussing the basics of commercial contract law (including the law of agency) followed by a detailed discussion of the various types of authority: actual, express, implied, and apparent. The UCC is discussed in great detail and topics include UCC code articles, formation of a sales contract, modifications, performance, implied warranties, and repudiation. The competency then switches focus to government contracting by providing a broad overview on statutes and regulations. The Anti-Deficiency Act (ADA), Competition in Contracting Act (CICA), and Armed Forces Procurement Act (AFPA) are all briefly described. The role of the FAR along with its supplements in government contracting is discussed in detail. Additionally, the CMBOK contains an appendix that lists all 53 parts and subparts of the FAR. The competency concludes with a discussion on laws related to international contracting. Export regulations, anti-boycott regulations, and foreign laws and customs

are discussed, with an emphasis placed on the Foreign Corrupt Practices Act (FCPA) and International Traffic in Arms Regulations (ITAR).

DoD/FAI's competency on procurement policy is broad in description and does not provide the same level of detail as in the CMBOK. DoD/FAI's competency is broken down into four distinct elements, each providing a different perspective. The first element mentions utilizing analysis to provide recommendations on contract documentation, legislative issues, and congressional inquiries impacting contracting matters. It does not mention or suggest what type of analysis should be used. The second element talks about developing procurement policy and changes in procedures by analyzing major procurements to comply with statutory and regulatory compliance. The third element suggests advising on high-level policy matters to recommend changes in the procurement process. The last element under this competency discusses performing oversight and auditing contract files to ensure consistent policy application (DoD, n.d.).

FINDING C-7: Both the CMBOK and DoD/FAI have a competency on procurement policy. The CMBOK's competency provides a thorough and detailed analysis of the regulations governing both commercial and governmental contracting, while DoD/FAI's competency is more focused on utilizing procurement analysis to improve current procurement policies.

Implications: The CMBOK provides a detailed analysis of statutory regulations pertaining to both government and commercial contracting. DoD/FAI's competency is purely focused on procurement analysis as pertaining to policy. DoD/FAI mentions that contracting policies and procedures should be changed based upon an analysis of statutory and regulatory compliance but makes no mention of any statutory/regulatory guidance (FAR/DFARS) or high-level legislation. If contracting professionals are required to analyze statutory contracting procedures, there should be some mention of which statutory procedures require analysis.

Recommendations: DoD/FAI should include an element on the FAR/DFARS in this competency. This element should include a brief overview of the purpose of the

FAR/DFARS as well as a condensed outline. The majority DoD/FAI's competency discusses the need for statutory policy analysis but does not highlight or discuss any of the policies.

H. CONTRACT AWARD

1. Past Performance

Both the CMBOOK and DoD/FAI have competencies on past performance. The CMBOOK discusses past performance as an evaluation factor during the source selection process, whereas DoD/FAI's competency discusses past performance in terms of standards of responsibility. The CMBOOK highlights how past performance is often a significant evaluation factor when making a source selection decision, as well as addressing how past performance issues are evaluated. Additionally, the CMBOOK discusses various government databases that compile past performance information such as the Federal Awardee Performance and Integrity Information System (FAPIIS), Contractor Performance Assessment Reporting System (CPARS), and Past Performance Information Retrieval System (PPIRS) (NCMA, 2011).

DoD/FAI's competency on past performance falls under the "Pre-Award and Award" unit of competence. This competency, titled "Responsibility Determination," highlights that future contractor responsibility can be gauged by assessing past performance as well as financial stability. An assessment is absolutely necessary to ensure that a potential contractor can satisfy government requirements. The competency does not go into detail on how past performance is used as an evaluation factor and does not provide an example of past performance databases (DoD, n.d.).

Within this competency, both the CMBOOK and DoD/FAI do not address past performance as a contractor assessment requirement at the end of the contract period in accordance with FAR Part 42.

FINDING C-8: Both the CMBOOK and DoD/FAI have a competency on past performance. The CMBOOK discusses past performance as an evaluation factor during the source selection process, whereas DoD/FAI discuss past performance as a standard of responsibility. Neither the CMBOOK nor DoD/FAI discuss past performance as a contractor assessment requirement. However, DoD/FAI does discuss past performance assessments in the contract performance competency. The CMBOOK also discusses past performance databases available to contracting professionals.

Implications: Since the DoD/FAI competency does not address past performance as an evaluation factor, DAU may not be providing the appropriate level of training on past performance evaluation factors, thus creating a knowledge deficiency in contract management professionals. Additionally, since neither the CMBOOK or DoD/FAI cover past performance as a contractor assessment requirement, contract management professionals may not be receiving the appropriate level of training thus creating additional knowledge deficiencies. Past GAO/IG reports have highlighted problems in evaluating past performance in the source selection process.

Recommendations: Both the CMBOOK and DoD/FAI should incorporate contractor performance assessments as required by FAR Part 42 in their past performance competencies.

2. Cost/Price Analysis

DoD/FAI contains a competency devoted to cost and/or price analysis, whereas the CMBOOK does not. DoD/FAI's competency is broken down into four distinct elements. Although the elements are general in nature, they highlight the importance cost/price analysis plays in awarding a contract. The first element discusses evaluating the reasonableness of the contractor's proposed costs or prices, especially when entering into complex negotiations. The second element discusses how the government should be able to develop and support positions on contract terms related to price or cost. The third element discusses researching and analyzing costs/prices that are in the best interest of

the government. The final element mentions evaluating award-fee/incentive-fee plans in accordance with policy and guidance (DoD, n.d.).

The CMBOK does not contain a competency dedicated to cost and/or price analysis. Under the Source Selection competency (2.5) there is mention that price (or cost) should be used as an evaluation factor. Chapter 4 of the CMBOK, titled “The CMBOK Lexicon,” contains a very detailed definition of cost/price analysis. Even though cost/price analysis is mentioned briefly throughout the CMBOK, cost/price analysis is not a stand-alone competency (NCMA, 2011).

FINDING C-9: The DoD/FAI has a competency dedicated to cost and price analysis, whereas the CMBOK does not.

Implications: Cost/price analysis is an important part of the source selection/negotiation process. If contracting professionals do not adequately understand the importance cost/price analysis plays in awarding a contract, it could lead to accountability, transparency and integrity issues as well as not ensuring contracts are based on fair and reasonable prices. Additionally, if cost/price analysis is not covered in the CMBOK, then perhaps it is not being tested on certification examinations or taught at NCMA seminars, thus creating a knowledge deficiency in contract management professionals.

Recommendations: The CMBOK should add a competency on cost/price analysis under Contract Award. It should contain an overview on the importance cost/price analysis plays in negotiating and awarding a contract and should perhaps contain a brief discussion of the Truth in Negotiations Act (TINA) as well as related FAR requirements.

3. Terms and Conditions

Both the CMBOK and the DoD/FAI models contain a contracting competency on terms and conditions. The CMBOK’s competency points out that the primary function of terms and conditions is to reduce the risk of ambiguity in the contract. It is also pointed out that the clauses that comprise the terms and conditions are automatically generated by

a software program that writes the contracts. Additionally, some clauses may be specifically added by legal counsel in order to meet individual needs. Terms and conditions should only be utilized to serve a legitimate purpose and should be directly related to the contract in question (NCMA, 2011)

DoD/FAI's terms and conditions competency is very general in nature. This competency contains one element that states that terms and conditions should be applicable for the acquisition (contract) and that they should comply with laws and regulations. Examples of compliance with regulations include financing methods, government and intellectual property, and specialty metals (DoD, n.d.).

FINDING C-10: Both the CMBOK and DoD/FAI have a competency on terms and conditions. Both competencies highlight the fact that terms and conditions should be relevant to the acquisition in question and should comply with legal and statutory requirements.

4. Negotiation

Both the CMBOK and DoD/FAI models contain competencies on contract negotiation. The CMBOK provides a very detailed breakdown and analysis of the negotiation process and its elements, whereas the DoD/FAI is more general in nature.

The CMBOK competency begins by providing a general overview on the purpose of negotiation. The competency then focuses on negotiation preparation, which includes a detailed analysis of both forming the negotiating team and generating the negotiation objectives. Negotiation objectives for both firm-fixed-price and cost-plus-fixed-fee contracts are illustrated. The focus then shifts to negotiation guidelines, which include discussions on “caucus” and “concession” techniques. Strategy and tactics are discussed with an emphasis on four basic tactics: cooperative mode, competitive mode, time restrictions, and deadlock. The competency finally discusses the dynamics of the actual negotiation as well as reaching an agreement (NCMA, 2011).

DoD/FAI's competency contains two elements. The first element discusses the preparation required prior to the negotiation. It highlights the importance of reviewing

audit and technical reports as well as performing cost and/or price analysis. Additionally, developing a pre-negotiation position is important as well as identifying potential trade-offs during the negotiation. The second element briefly discusses the actual negotiation. This element focuses on negotiation based on the terms and conditions set in the pre-negotiation objectives, as well as maintaining a give-and-take mentality in order to establish a fair and reasonable price (DoD, n.d.).

FINDING C-11: Both the CMBOOK and DoD/FAI have a competency on negotiation.

The CMBOOK's competency walks through the negotiation process step by step and is very detailed, whereas DoD/FAI's competency is more general in nature and covers both pre-negotiation objectives and negotiation of terms and conditions.

5. Source Selection

Both the CMBOOK and DoD/FAI models contain contracting competencies related to source selection. The CMBOOK's competency on source selection is very detailed, beginning with an overview of developing the proposal evaluation plan and including discussion on a typical source selection team. Technical evaluation considerations are then covered in detail with an emphasis placed on price, technical, management, and past performance factors. Additionally, evaluation techniques are discussed that include compliance matrices as well as numerical, color, and adjectival scales. The competency also outlines the process of utilizing comparative analysis between proposal evaluations to reach a consensus (NCMA, 201).

DoD/FAI actually has two competencies related to source selection. The first competency (#4) covers source selection planning while the second competency (#9) highlights the actual source selection process. Once again, both competencies are very general in nature. The first competency discusses the documentation of a source selection plan that is consistent with public law, regulations, and policy. There is no discussion on what is in the source selection plan or what regulations guide the source selection plan development. The second competency emphasizes determining if discussions are

necessary based on proposal evaluations. This competency also highlights establishing a competitive range during proposal evaluations (DoD, n.d.).

FINDING C-12: Both the CMBOK and DoD/FAI have a competency on source selection. The CMBOK’s competency is very detailed and walks through the source selection process, step by step, leading up to contract award. The DoD/FAI competency is more general in nature and emphasizes developing a source selection plan, holding discussions, and establishing a competitive range.

Implications: Even though DoD/FAI has a competency dedicated to source selection planning, it is primarily focused on verifying the plan is consistent with regulation and policy and not what elements actually make up the plan (such as evaluation criteria and techniques). It may be possible that training on source selection is focused on policy regulations and not so much on evaluation criteria development. A knowledge deficiency in this area could lead to possible protests if a contract award was made based on evaluation criteria other than what was listed in the proposal.

Recommendations: DoD/FAI should combine both source selection competencies into one and include elements that discuss evaluation considerations (price, past performance, and technical) as well as evaluation techniques (compliance matrix, numeric and color scales).

6. Contract Award

Both the CMBOK and DoD/FAI models contain competencies on contract award. As previously recommended under the competency model analysis, each model should contain a separate major category titled “Award,” under which the competency source selection (as just discussed) would fall. For the purpose of this research, the contract award competencies under each model will be compared based on how they are currently presented.

The CMBOK breaks down the award competency into distinct sub-competencies: preparation of contract document and notification. Preparing the contract document

focuses on utilizing the correct terms and contract format. Both commercial and government contract preparation are discussed. For government contracts, sections A through M of the uniform contract format are listed for clarity. Additionally, a detailed breakdown of the contents required in the contract file is included in the discussion. The competency then shifts focus to notification, with an emphasis on both pre-award notification and post-award notification. The competency also discusses pre-award and post-award debriefings (NCMA, 2011).

Once again, the DoD/FAI competency on contract award is general in nature. It highlights selecting the awardee that provides the best value to the government. This competency also discusses awarding a contract only after ensuring funding availability, as well as holding pre/post-award debriefings for all unsuccessful offerors (DoD, n.d.).

FINDING C-13: Both the CMBOOK and DoD/FAI have a competency pertaining to contract award. The CMBOOK's competency details both the preparation of the contract and notifications. DoD/FAI's competency is focused on awarding a contract based on best value and verifying funding availability.

7. Protests

Both the CMBOOK and DoD/FAI models contain contracting competencies relating to protests. The CMBOOK focuses on both pre-award protest issues and post-award protest issues. Examples of potential pre-award protest issues include restrictive requirements, inappropriate sole-source requirements, ambiguous or erroneous evaluation criteria, ambiguous or incomplete requirements, and exclusion from the competitive range. Examples of post-award protest issues include unfair evaluation criteria, failure to evaluate as advertised, unreasonable best value analysis, unequal treatment, and failure to conduct meaningful discussions. The CMBOOK provides a brief explanation for each of the examples previously mentioned (NCMA, 2011).

DoD/FAI's competency highlights the processing of protests in determining whether or not an award should be withheld or performance should be stopped pending

the outcome of the protest. The competency does not mention any reasons (either pre-award or post-award) that a protest may occur (DoD, n.d.).

FINDING C-14: Both the CMBOOK and DoD/FAI have a competency on protests.

The CMBOOK provides detailed explanations on potential issues (both pre/post- award) that could lead to a protest. DoD/FAI's competency highlights the processing of protests to determine if an award should be withheld (pre-award) or performance should be stopped (post-award). DoD/FAI does not discuss potential causes of protests.

Implications: The CMBOOK discusses causes that may lead to a protest (proactive approach), whereas DoD/FAI discusses what to do in response to a protest (reactive approach). Since the DoD/FAI competency does not address the causes of protests, DAU may not provide the appropriate level of training on potential causes of protests, thus creating a knowledge deficiency in contract management professionals. Perhaps the number of protests would decrease if DoD/FAI contracting personnel knew the most common causes of protests. Perhaps it would change the way they advertised requirements, evaluated proposals, and held discussions.

Recommendation: DoD/FAI should incorporate an element into their competency highlighting the most common reasons for both pre-award and post-award protests.

I. POST AWARD

1. Contract Administration

Both the CMBOOK and DoD/FAI have competencies related to contract administration and are general in nature. The CMBOOK refers to contract administration as a set of “generic” tasks that are utilized to ensure appropriate contract performance begins. Contract administration is a shared responsibility of both the buyer and seller and is utilized as an oversight tool to ensure contractual promises are met (NCMA, 2011).

DoD/FAI's contract administration competency contains two elements. The first element discusses conducting post-award conferences to discuss customer concerns as well as contractor responsibilities. The second element outlines a "plan of action" for contract administration. This plan establishes administrative responsibilities by delegating administrative functions and designating, training and managing Contracting Officer's Representatives (CORs) (DoD, n.d.).

FINDING C-15: Both the CMBOK and DoD/FAI have a competency on contract administration. Both of these competencies provide a broad overview of the contract administration function without discussing specific administrative responsibilities.

2. Contract Performance

Both the CMBOK and DoD/FAI models have competencies on contract performance. The CMBOK's competency begins by highlighting the importance of communication between the buyer and seller. Post-award meetings are one way to help mitigate potential issues during the life of the contract and may cover procedural details such as communication authorization, subject matter, negotiation authority, and communications format. Periodic status meetings are also discussed as a way to gauge contract performance along with written status reports, all designed to keep the buyers and sellers on the same page with regard to contract performance. Observation (both direct and indirect) methods are discussed along with the importance of documentation throughout the life of the contract (NCMA, 2011).

DoD/FAI's contract performance competency contains four distinct elements. The first element focuses on evaluating performance by monitoring the COR's feedback to the contracting officer, as well as ensuring the contractor is in compliance with the contract requirements. The second element focuses on ensuring a past performance evaluation is initiated to document contractor performance. The third element discusses analyzing, negotiating, and preparing a claims file. Finally, the last element discusses resolving contract performance problems by gathering facts and determining solutions in order to correct any problems (DoD, n.d.).

FINDING C-16: Both the CMBOK and DoD/FAI have a competency on contract performance. Both competencies discuss various means by which to monitor performance, such as documentation, communication, observation, and feedback.

3. Changes and Modifications

Both the CMBOK and DoD/FAI models contain a competency on contract changes and modifications. The CMBOK begins by discussing the three most common types of contract changes: directed, constructive, and cardinal changes. The competency goes on to highlight the importance of identifying and communicating potential changes early in the contract life cycle. Additionally, identifying the individuals who are authorized to make contract changes and/or modifications is discussed in detail. Finally, written documentation regarding the scope, cost and effect of a change/modification is highlighted (NCMA, 2011).

DoD/FAI's competency on contract changes and modifications is general and brief. It focuses on identifying the need for contract modifications and the negotiations required to implement them (DoD, n.d.).

FINDING C-17: Both the CMBOK and DoD/FAI have a competency on contract changes and modifications. The CMBOK's competency discusses three types of contract changes, as well as the authority and documentation required to make one. DoD/FAI's competency focuses on identifying the need for contract changes, as well as the negotiation and issuance.

4. Contract Closeout

Both the CMBOK and DoD/FAI have a contracting competency related to contract closeout. The CMBOK describes the contract closeout process as a series of procedural and administrative tasks that must be completed once the seller has delivered the goods or service and the buyer has inspected and accepted them. Tasks required for contract closeout include verifying contractor invoices have been paid, returning

government furnished property, de-obligating excess funds remaining on the contract, and signing a formal notice of contract completion (NCMA, 2011).

DoD/FAI's contract closeout competency is similar to that of the CMBOOK's. It, too, discusses property disposition, final payments, and documenting that goods, services, and clearances have been received (DoD, n.d.).

FINDING C-18: Both the CMBOOK and DoD/FAI have a competency on contract closeout that addresses documenting final acceptance of goods or services, property disposition and settling final invoices/payments.

5. Contract Terminations

The CMBOOK and DoD/FAI both have contracting competencies focusing on contract terminations. The CMBOOK focuses primarily on "termination for default" and "termination for convenience." The following reasons for terminating for default are discussed in detail: failure to perform, failure to adhere to schedule, failure to comply with other terms and conditions, and repudiation. Termination for convenience is also discussed, along with termination by mutual consent and no-cost cancellations (NCMA, 2011).

DoD/FAI's competency on contract terminations focuses solely on "termination for default" and "terminations for convenience" if it is in the best interest of the government (DoD, n.d.).

FINDING C-19: Both the CMBOOK and DoD/FAI have a competency on contract terminations. Termination for default and termination for convenience are covered under both competencies. The CMBOOK provides additional guidance on terminations by mutual consent and no-cost cancellations.

J. ADDITIONAL CONTRACTING COMPETENCIES

Both the CMBOOK and DoD/FAI contain additional contracting competencies that do not directly fall under one of the three categories of the contract life cycle. The CMBOOK contains a category called "Specialized Knowledge Areas." This category

consists of specialized areas of competence within the contracting profession, to include services and international contracting, supply chain management, and information technology (NCMA, 2011).

Unlike the CMBOK, DoD/FAI does not have a category dedicated to special knowledge areas. However, DoD/FAI does have a category titled “Other Competencies” consisting of several contracting competencies such as contingency contracting, construction/engineering, purchase card procedures, and e-business (DoD, n.d.).

FINDING C-20: Both the CMBOK and DoD/FAI have specialized contracting competencies. The CMBOK has a major category dedicated to specialized contracting competencies whereas DoD/FAI has a category of other competencies with competencies listed individually.

The last major competency category in the CMBOK’s model focuses on business. Competencies in this category include marketing, management, accounting, and economics. The last major competency category in DoD/FAI’s model focuses on interpersonal professional competencies such as flexibility, resilience, problem solving, and decisiveness. The CMBOK’s category on business contains competencies that are technical in nature, whereas the DoD/FAI’s professional competencies are more of a personal nature (NCMA, 2011: DoD, n.d.).

FINDING C-21: The CMBOK contains a category titled “Business,” which includes numerous technical business competencies, whereas DoD/FAI’s final category contains interpersonal competencies that are more personal in nature.

K. SUMMARY

This chapter began by providing an individual analysis on the structure of each of the CMBOK and DoD/FAI contracting competency models that led to findings, possible implications, and future recommendations. A comparative analysis was then conducted between the CMBOK and DoD/FAI models. The results of this comparative analysis led

to findings, possible implications, and future recommendations. The majority of the chapter was spent conducting a comparative analysis on the detailed technical contracting competencies contained within both models. The competencies were first broken down into the three categories of the contract life cycle: pre-award, award, and post-award. Additionally, a brief analysis was done on the other competencies (specialized, business, and professional) that comprised the models. After analyzing and comparing each detailed technical competency, findings, possible implications and future recommendations were provided. Although the analysis revealed a finding for every competency, implications and recommendations were not provided for all. The next chapter will provide a summary of the research, a conclusion, and areas for further research.

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V. CONCLUSION

A. SUMMARY

In fiscal year 2012, the DoD incurred contractual obligations of approximately \$360 billion to acquire major weapons systems, information technology, base services, and consumable items (GAO, 2013). As contracting has become instrumental in supporting the mission of the DoD, it has continued to encounter significant problems with regard to contract management and oversight. In 1992, DOD contract management was initially placed on the Government Accountability Office's "high-risk" list and still remains there today (GAO, 2013).

Capabilities, skills and training of the contracting workforce continue to be identified as a contributing factor in why DOD's contract management is still being assessed as high risk. The Defense Acquisition Workforce Improvement Act (DAWIA) was established by the federal government in 1990 to address this issue by providing specialized training and occupational certification in contracting (GAO, 1993). Additionally, federal civilian agencies requiring the same formal training and certification as the DoD established the Federal Acquisition Institute (FAI) in 1976. As the DoD and other federal agencies continue to lose experienced contracting personnel due to retirement, the contracting knowledge gap will continue to widen.

As a response to the increasing knowledge deficiencies in contracting, the DoD and other federal agencies have put an emphasis on both training and certification. Despite this emphasis, contract management problems continue to exist. Given this environment, one must ask, does the training received by today's acquisition professionals truly reflect what is required and needed of them in the workplace? Perhaps acquisition training received by the workforce does not reflect basic contracting competencies? Perhaps these contracting competencies are not consistent within the government (DoD and FAI) and between the government and industry (DoD, FAI and NCMA).

To supplement the training that DoD and other federal contracting professionals receive, they are encouraged to join professional associations such as the NCMA. The NCMA maintains its own professional certification standards that reflect contracting competencies established in its Contract Management Body of Knowledge (CMBOK) (NCMA, 2011).

The purpose of this research was to conduct a detailed comparative analysis on the contracting competencies established by the DoD, FAI, and NCMA. The research was to identify similarities and differences, as well as to present findings, possible implications, and future recommendations, among contracting competencies from both a government perspective (DoD, FAI) and a professional association perspective (NCMA). Additionally, the competency models for all three organizations were analyzed to gain a better understanding of the organizational frameworks in which these contracting competencies are presented. The next section will present the conclusions of this research.

B. CONCLUSION

The answers to the research questions below are based on the results of comparative analysis conducted on both the technical contracting competencies and contracting competency models for DoD, FAI and NCMA.

1. How Consistent Are Contract Management Competencies Established by Both the DOD and FAI?

The results of the comparative analysis found that the contracting competency models of both DoD and FAI were identical. Additionally, the detailed technical contracting competencies established by both the DoD and the FAI were identical as well.

2. How Do Both the DoD and FAI's Contracting Competencies Compare to the Contracting Competencies in the NCMA CMBOK?

The results of the comparative analysis revealed similarities and differences between both the competency models and the technical contracting competencies for both DoD/FAI and the CMBOK as established by NCMA.

Comparative analysis revealed that neither model is structured using the six phases of contract management. Additionally, both the CMBOK and DoD/FAI models contain only two out of three contracting competency categories that reflect the contract life cycle. The CMBOK's competency model contains Pre-Award and Post-Award categories but does not contain a Contract Award category. In comparison, DoD/FAI's model contains a single category combining both Pre-Award and Award categories but does not have a separate category for Post-Award. The CMBOK model contains five major competency categories, whereas the DoD/FAI model contains 12. The first four categories in the CMBOK model contain technical contracting competencies, compared to 11 out of 12 for DoD/FAI. Additionally, the CMBOK's last competency category covers technical business concepts (accounting, economics, and finance), whereas DoD/FAI's final competency category focuses on professional competencies that are more personal in nature (resilience, flexibility, and accountability).

Comparative analysis revealed that, of the technical contracting competencies analyzed under the three categories of the contract life cycle as reflected in Table 2, 17 were covered by both the CMBOK and DoD/FAI. Cost/Price analysis was a contracting competency covered by DoD/FAI but was not covered in the CMBOK, whereas the CMBOK contains a competency on contract types whereas DoD/FAI does not. Both the CMBOK and DoD/FAI contain competencies focusing on specialized areas within contracting such as construction/architect & engineering (A&E), contingency and services contracting, as well as e-business.

Although both DoD/FAI and the CMBOK cover many of the same contracting competencies, the level of detail in discussing the competencies is far greater for competencies covered in the CMBOK than those of DoD/FAI. DoD/FAI provides a very broad view of contracting competencies, whereas the CMBOK provides detailed

explanations, diagrams, and examples. Additionally, DoD/FAI's competencies are more focused on the action (determine, provide, evaluate, document) required to perform a contracting function and not as much on the actual contracting knowledge itself (types of contracts, evaluation criteria, solicitation planning documents).

3. What Improvements Can Be Made to Increase Consistency between DOD and FAI Contracting Competencies as Well as Between DoD/FAI and NCMA's CMBOK?

Conducting comparative analysis between competency models and their related technical contracting competencies revealed that improvements can be made in order to increase consistency between DoD/FAI and NCMA.

With respect to the models, both NCMA and DoD/FAI should look at restructuring their competency models to reflect the three categories of the contract life cycle. The first three categories in each model should be Pre-Award, Award, and Post-Award. Additionally, Pre-Award should consist of procurement planning, solicitation planning, and solicitation. Award should consist of source selection and Post-Award should consist of both contract administration and contract closeout/termination. The CMBOK does not have a category titled Contract Award, whereas DoD/FAI's model has both Pre-Award and Contract Award combined into a single category. Additionally, DoD/FAI does not have a category titled Post-Award. The CMBOK's second major competency category is titled Acquisition Planning/Strategy and contains contracting competencies from both the Pre-Award and Contract Award categories of the contract life cycle. This category should be renamed Contract Award and the pre-award competencies should be aligned accordingly.

The CMBOK contains five major categories, whereas DoD/FAI contains 12. DoD/FAI should condense the categories in their model down to five to reflect the CMBOK. For example, socio-economic programs is a separate competency category in DoD/FAI's model whereas it is just one of many detailed technical competencies listed under the Pre-Award category in the CMBOK.

Perhaps the greatest improvement regarding the detailed technical competencies could be implemented by DoD/FAI. Although both DoD/FAI and the CMBOK cover many of the same contracting competencies, the level of detail in discussing the competencies is far greater for competencies covered in the CMBOK than those of DoD/FAI. DoD/FAI needs to provide greater detail when discussing their contracting competencies, by providing examples and detailed explanations like those of the CMBOK. DoD/FAI's competencies focus on the actions required to perform a contracting function, but there is not much discussion on actual contracting knowledge. DoD/FAI consistently references adhering to statutory and policy requirements when performing contracting functions, but never mentions or lists any of those requirements. DoD/FAI contracting competencies, at the very least, should incorporate the FAR as a point of reference for many competency knowledge areas.

It is acknowledged that the research provided in this report was done by comparing a contract management body of knowledge (CMBOK) against a model simply listing contracting competencies (DoD/FAI). The CMBOK provides a very detailed analysis of contracting competencies, whereas DoD/FAI's model is just a list of those competencies. The research findings provided in this report may perhaps one day benefit both the CMBOK and DoD/FAI in terms of both their competencies and the models that comprise them. Perhaps one day DoD/FAI will establish their very own contract management body of knowledge or possibly even adopt NCMA's CMBOK.

C. AREAS FOR FURTHER RESEARCH

The research provided in this report set out to find similarities and differences among contracting competencies established by the DoD, FAI, and the NCMA. The findings in this report lay the groundwork for further research. There are three particular areas of further research that could be built upon the findings in this research.

First, the DoD/FAI's contracting competencies were analyzed against the contracting competencies set forth in the CMBOK. Further research may be to examine DoD/FAI's contracting competencies against other professional contracting associations such as the International Association for Contract and Commercial Management

(IACCM), National Institute for Government Purchasing (NIGP), or the Institute for Supply Management (ISM).

Second, another possible research topic could be to compare DoD contracting competencies against DAU contracting course learning objectives. Research could include evaluating how adequately contracting competencies established by the DoD are being covered by DAU training courses. Research may point to deficiencies in specific knowledge areas, as well as highlighting DAU training that is not representative of contracting competencies established by the DoD.

Finally, one last possible research topic would be to expand upon the DoD Inspector General Report of 2009 and research how many of the 12 key deficiency areas (relating to the contract management process) were based on knowledge area deficiencies, poor or inadequate training, or lack of accountability and oversight.

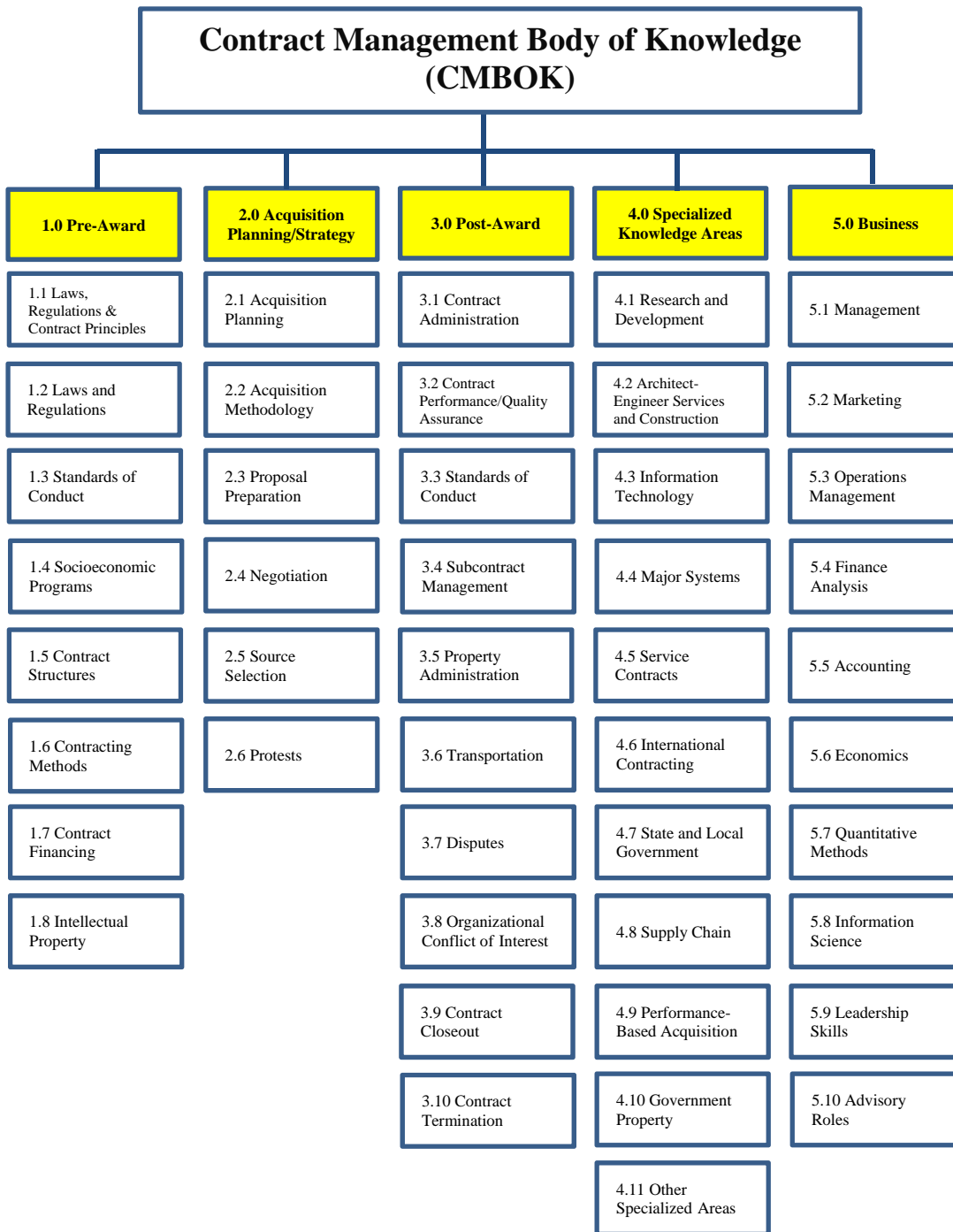
APPENDIX A. CONTRACT MANAGEMENT PROCESS FAR MATRIX

Contract Management Key Process Area	Contract Management Key Practice Activity	FAR Part
Procurement Planning	Requirements Analysis	11
	Required Sources of Supply and Services	8
	Acquisition Planning	7
	Market Research	5, 10
	Determine Competition Environment	6
Solicitation Planning	Document Competition Environment	6
	Determine Procurement Method	12, 13, 14, 15
	Determine Evaluation Strategy	12, 13, 14, 15
	Develop Solicitation Documents	12, 13, 14, 15
	Determine Contract Type/Incentive	16
	Determine Terms and Conditions	52
Solicitation	Advertise Procurement Activities	5
	Conduct Conferences (pre-sol, pre-proposal)	10, 15
	Amend solicitation documents as required	12, 13, 14, 15
Source Selection	Evaluate Proposals	12, 13, 14, 15
	Apply Evaluation Criteria	12, 13, 14, 15
	Negotiate Contract Terms and Conditions	12, 13, 14, 15
	Contractor Responsibility Standards	9
	Select contractor	12, 13, 14, 15
	Manage Protests, Disputes and Appeals	33
Contract Administration	Conduct conferences (post-award, pre-performance)	42
	Manage contract change process	43
	Monitor contractor's management of subcontracting	44
	Manage government furnished property	45
	Monitor and measure contractor performance	46
	Manage Transportation Issues	47
	Manage Value Engineering Issues	48
	Manage contractor payment process	30, 31, 32
	Manage patents, data, copyright, bonds, insurance, taxes	27, 28, 29,
	Manage Protests, Disputes and Appeals	33
Comply with terms and conditions	52	

Contract Close Out	Verify contract completion	42
	Verify contractor compliance	42
	Ensure contract completion documentation	4
	Make final payment	4, 31, 32
	Document lessons learned/best practices	4
	Process contract terminations, if applicable	49
	Dispose of buyer-furnished property and equipment	45
	Process contract closeout procedures	4
Specific Contracting Areas	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
Social Responsibility Areas	Small Business Programs	19
	Application of Labor Laws to Government Acquisitions	22
	Environ, Energy/Water Efficiency, Renw. Energy Tech., Occup. Safety, Drug Free Workplace	23
	Protection of Privacy and Freedom of Information	24
	Other Socioeconomic Programs	26

(From: Rendon, 2011)

APPENDIX B. CMBOK



(After NCMA, 2011)

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APPENDIX C. DOD CONTRACTING COMPETENCY MODEL

DoD Contracting Competency Model (established March 2007)	
Pre-Award and Award	Determination of How Best To Satisfy Requirements
	Consider Socio-economic Requirements
	Promote Competition
	Source Selection Planning
	Solicitation of Offers
	Responsibility Determination
	Bid Evaluation (Sealed Bidding)
	Proposal Evaluation (Contracting by Negotiation)
	Source Selection
	Contract Award
	Process Protests
Develop and/or Negotiate Positions	Justification of Other than Full and Open Competition
	Terms and Conditions
	Preparation and Negotiation
Advanced Cost and/or Price Analysis	Advanced Cost and/or Price Analysis
Contract Administration	Initiation of Work
	Contract Performance Management
	Issue Changes and Modifications
	Approve Payment Requests
	Close-out Contracts
Small Business/Socio-Economic Programs	Addressing Small Business Concerns
Negotiate Forward Pricing Rate Agreements and Administer Cost Accounting Standards	Negotiate Forward Pricing Rate Agreements and Administer Cost Accounting Standards
Contract Termination	Contract Termination
Procurement Policy	Procurement Analysis
Other Competencies	E-Business and Automated Tools
	Activity Program Coordinator for Purchase Card
	Construction/Architect and Engineering
Contracting in a Contingent and/or Combat Environment	Contracting in a Contingent and/or Combat Environment
Professional Competency	Problem Solving
	Customer Service
	Oral Communication
	Written Communication
	Interpersonal Skills
	Decisiveness
	Technical Credibility
	Flexibility
	Resilience
Accountability	

(After Department of Defense, n.d.)

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APPENDIX D. FAI CONTRACTING COMPETENCY MODEL

FAI Contracting Competency Model	
Pre-Award and Award	Determination of How Best To Satisfy Requirements
	Consider Socio-economic Requirements
	Promote Competition
	Source Selection Planning
	Solicitation of Offers
	Responsibility Determination
	Bid Evaluation (Sealed Bidding)
	Proposal Evaluation (Contracting by Negotiation)
	Source Selection
	Contract Award
	Process Protests
	Develop and/or Negotiate Positions
Terms and Conditions	
Preparation and Negotiation	
Advanced Cost and/or Price Analysis	Advanced Cost and/or Price Analysis
Contract Administration	Initiation of Work
	Contract Performance Management
	Issue Changes and Modifications
	Approve Payment Requests
	Close-out Contracts
Small Business/Socio-Economic Programs	Addressing Small Business Concerns
Negotiate Forward Pricing Rate Agreements and Administer Cost Accounting Standards	Negotiate Forward Pricing Rate Agreements and Administer Cost Accounting Standards
Contract Termination	Contract Termination
Procurement Policy	Procurement Analysis
Other Competencies	E-Business and Automated Tools
	Activity Program Coordinator for Purchase Card
	Construction/Architect and Engineering
Contracting in a Contingent and/or Combat Environment	Contracting in a Contingent and/or Combat Environment
Professional Competency	Problem Solving
	Customer Service
	Oral Communication
	Written Communication
	Interpersonal Skills
	Decisiveness
	Technical Credibility
	Flexibility
	Resilience
Accountability	

(After FAI, n.d.)

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APPENDIX E. CMBOK “REVISED OUTLINE”
(Reflects CMBOK Chapter 3)

<p><u>1.0 Pre-Award</u> 1.1 Laws and Regulations 1.2 Contract Principles 1.3 Standards of Conduct 1.4 Socioeconomic Programs 1.5 Contract Structures 1.6 Contracting Methods 1.7 Contracting Financing 1.8 Intellectual Property</p> <p><u>2.0 Acquisition Planning/Strategy</u> 2.1 Acquisition Planning 2.2 Acquisition Methodology 2.3 Proposal Preparation 2.4 Negotiation 2.5 Source Selection 2.6 Protests</p> <p><u>3.0 Post-Award</u> 3.1 Contract Administration 3.2 Contract Performance/Quality Assurance 3.3 Subcontract Administration 3.4 Contract Changes and Modifications 3.5 Property Administration 3.6 Transportation 3.7 Disputes 3.8 Organizational Conflict of Interest 3.9 Contract Closeout 3.10 Contract Termination</p>	<p><u>4.0 Specialized Knowledge Areas</u> 4.1 Research and Development 4.2 Architect-Engineer Services and Construction 4.3 Information Technology 4.4 Major Systems 4.5 Service Contracts 4.6 International Contracting 4.7 State and Local Governments 4.8 Supply Chain Management 4.9 Performance-Based Acquisition 4.10 Government Property 4.11 Other Specialized Areas</p> <p><u>5.0 Business</u> 5.1 Management 5.2 Marketing 5.3 Operations Management 5.4 Financial Analysis 5.5 Accounting 5.6 Economics 5.7 Information Science/Information Technology 5.8 Leadership Skills</p>
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(After NCMA, 2011)

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