

REPORT DOCUMENTATION PAGE				<i>Form Approved</i> OMB No. 0704-0188	
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1. REPORT DATE (DD-MM-YYYY)		2. REPORT TYPE		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (include area code)

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MASTERS OF MILITARY STUDIES

**TITLE: Contracting Officer Representatives:
The Key to Contract Success**

SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF MILITARY STUDIES

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Date: 17 APR 2018

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EXECUTIVE SUMMARY

Title: Contracting Officer Representatives: The Key to Contract Success

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Thesis: The Department of Defense's long-standing problem of poor contract management on a significant number of contracts can be mitigated by providing contracting officer representatives the time necessary to monitor contract performance effectively.

Discussions: The Department of Defense (DOD) is charged with protecting the nation and securing its interests around the world. Warfighters rely on capabilities provided through acquisitions of goods and services. The acquisitions are either adopted from an existing government capability, purchased from a commercial entity, or developed specifically for the government. Each of these approaches utilizes government contracts. Contracts are legal arrangements between the government and organizations selling a specific set of goods or services for an agreed upon pricing structure. A contracting officer representative (COR) is the government employee appointed in writing by the contracting officer to serve as a liaison between the government and the contractor throughout the life of the contract. Additionally, the COR is responsible for managing performance of the contract and providing oversight to the contractor's delivery of contractual requirements. The risk of ineffective or unsatisfactory contract performance is wasted time and money, as well as unmet warfighter needs. The government has identified the need to address the problem of poor contract oversight as one of the problems facing a growing number of contracts and has implemented multiple approaches in an attempt to solve the problem. Such attempts include increasing the number of people, developing new training, requiring certifications, and in some cases, providing the time necessary to accomplish the COR duties. Several case studies show poor-performing contracts can be turned around into high-performing contracts by employing an engaged COR with the training and experience to be successful.

Conclusion: DOD has, and continues to struggle with, poor contract management for many of its contracts. Too many dollars are wasted, and too many capabilities are delayed. The last 30 years of actions have made some improvements to DOD acquisitions but the status quo is untenable as a solution. A change is needed. Acquisitions must consider not just cost, schedule, and technical requirements of each contract, but the time and resources needed for effective contract management throughout the life of the contract. The COR is the solution when given sufficient time, training, and resources.

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank my personal Lord and Savior, Jesus Christ, for His mercy in my life of which this paper is but one small item on a very long list. Next, I would like to thank my wife, Sarah Kelley, and my daughters (Amanda, Amber, and Ashley) for their consistent patience and encouragement over the last many months. A special “Thank You” goes to Mr. Michael Stanford, Mr. Steve Pinter, Mr. Todd Wagenhorst, Mr. Daniel Fitzgerald, and Mr. Lon Crosier for their help in my selection to and process of getting to the Marine Corps Command and Staff College. Thanks to Dr. Jonathan Philips, Dr. Frank Marlo, Dr. Paul Gelpi and LtCol Ronald Rega for their mentorship throughout the development of this paper. Additionally, I’d like to thank Dr. Sherry Gaylor, MGySgt Bryan Boyd, Mr. Macon Robinson, and Maj Chad James for their direct assistance in the development of this paper. Finally, I want to thank my Conference Group 2 (CG2) brothers and sister for their continual support, encouragement, and motivation to stay in the fight and represent well.

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INTRO: The Army spent \$18 billion over six years before cancelling the Future Combat System (FCS) program in 2009 for several reasons, one of which was poor contract oversight.¹ The Department of Energy sought to build the National Ignition Facility over five years for \$2.1 billion.² However, due to poor contract oversight, costs grew to \$3.5 billion and the delivery date slipped from 2002 to 2009.³ The United States (US) federal government spends about \$300 billion annually on contracts to provide goods and services.⁴ In 1999, the annual amount contracted was only \$130 billion.⁵ The Department of Defense (DOD) accounts for roughly two thirds of all federal contracting dollars spent. As the US government continues to increase the amount of money spent on contracts, fiduciary responsibility becomes even more critical for the contracting officer representative (COR), the government official charged with providing contract management oversight.

The COR is a mandated role by the Code of Federal Regulations (CFR) and this appointed government civilian is charged with the oversight of contract performance. Specifically, the COR is the government's primary instrument to surveil contractor's performance to ensure the government receives what was purchased. However, for many DOD contracts, COR supervisors consistently struggle to provide CORs with the necessary time to effectively accomplish required duties thereby facilitating poor contract performance. As a result, a key problem arises with contract performance. Poor contract performance negatively impacts new and existing contracts; wastes money; delays delivery of needed warfighter capabilities; and, fails to provide the necessary insights into contractor performance during contract source selections as an indicator to future, contract risk. While a large contingent of DOD contracts are not problematic, the intent of this paper focuses on those with problems and seeks to prove a direct correlation exists between contract performance and the appointed COR's

level of engagement; to demonstrate the government, specifically the DOD, is aware of the criticality of contract oversight; to identify policy developed and implemented results in shortfalls; and to show the status quo is insufficient in solving the problem of poor contract management because CORs are not provided sufficient time to accomplish the tasks.

The risk to not addressing the problem is real. On March 8, 2013, the DOD Inspector General published a report titled *Inadequate Contract Oversight of Military Construction Projects in Afghanistan Resulted in Increased Hazards to Life and Safety of Coalition Forces*, which clearly identified one of the risks as being poor contract oversight.⁶ Additionally, this paper will provide potential mitigations which, if implemented, would serve to buttress existing efforts. As Mr. Solis, Director Defense Capabilities and Management, summarized in a 2006 report to Congressional Committees on military operations, “Without adequate contract oversight personnel, DOD is at risk of being unable to identify and correct poor contractor performance in a timely manner.”⁷ Therefore, the problem and the solution must both center around the COR.

COR ROLE: A contracting officer representative (COR) serves as the formal liaison between the government’s contracting officer and the contractor hired to fulfill contractual requirements. The contracting officer, also known as KO within DOD and CO outside of DOD, is the warranted individual charged with obligating the government via contract to receive goods and services. The COR, while not warranted to obligate the government, can be held financially responsible for his/her actions resulting in unauthorized costs incurred to the government. The COR serves as KO’s emissary with the contractor and fulfills the vital role of providing oversight of the contractor’s fulfillment of contractual responsibilities. The KO/COR team is vital, setting expectations, managing ongoing contract performance, and presenting an undivided

voice of the government. The KO is responsible for properly preparing the COR and ensuring the right person for the job has the right tools to succeed. Like any organization, people filling various roles vary from novice to expert, from unmotivated to leading the way, and from poor performer to star performer. Selecting the right person for the role of COR is multifaceted and must consider all these characteristics. The COR's responsibilities are numerous and preparation is key.

COR DUTIES: A COR's duties begin during the acquisition planning, continue throughout the life of the contract, and conclude with contract closeout and the final assessment of contractor performance. By assigning a COR before the contract is awarded, the KO can leverage the COR's training and experience to assist in the development of the performance work statement as well participate in the source selection evaluation board. During these critical foundational activities, the COR gains first-hand knowledge of the requirements, the desired end state, and the winning contractor's approach to delivering the capability. The COR effectively becomes a subject matter expert on the contract. Once the contract is awarded, the COR is responsible for developing and maintaining a COR file that serves as a central repository for all aspects of the contract. Typically hosted online via the Contracting Officer Representative Tracking (CORT), the COR file contains all official contract documents, official correspondence, test reports, delivery schedules, inspection reports, invoices, travel approvals, and many other contract-related pieces of information. The COR is responsible for monitoring contractor travel, tracking personnel and labor costs, performing invoice validation and approval, tracking government furnished property (GFP), performing inspection and acceptance (or rejection) of deliverables, managing problems, and assessing contractor performance through the annual contractor performance assessment reporting system (CPARS) annually. The appointment letter

explicitly identifies each required activity expected from the COR. Additionally, the COR is responsible for providing a monthly status report to the KO. Contract oversight is crucial to identifying and rectifying problems before the contract ends.

Another critical aspect of a COR's role is developing and maintaining a good working relationship with the contractor. The COR is responsible for regularly engaging the contractor directly in the performance of the contract. As such, clear and effective communication is key.

While a good working relationship is ideal, there are several relationship extremes which can be detrimental to the government, the COR, and the contractor. The COR must be acutely aware of these pitfalls and actively take steps to prevent such improper relationships. First, a COR can, and sometimes does, become friends with the contractor. While forging a positive relationship with the contractor, the COR must avoid the appearance of a conflict of interest and therefore developing a personal friendship is discouraged. Additionally, the COR must maintain his/her ability to clearly communicate any criticism about contractor efforts or deliverables that do not meet the contractual requirements. Additionally, the COR needs to be cautious not to violate information security by not disclosing improper information to the contractor. An example of improper disclosure would be to share government financial data or competitor data when the contractor is developing a proposal.

Another potential relational hazard arises when the COR allows the contractor to circumvent contractual requirements because of his/her friendship with the contractor. The contractor was selected to deliver contractual requirements and failure to do so puts the government, and ultimately the warfighter, at risk. Once a COR accepts a contract deliverable, the contractor releases all liability for that item or service not meeting contractual requirements. While exceptions exist for most everything, the only common exceptions for the contractor to

retain liability for a delivered product are for latent defects or fraud which falls into a separate category altogether.

While there are many different scenarios for a good COR/contractor relationship leading to improper activities, the COR must be cognizant of the potential for the relationship to become adversarial. When trust is lost, the COR will find themselves struggling to perform their role. When the COR's relationship with the contractor becomes soured, both sides will expend more energy dealing with misperceptions and poor communication. The fundamental prevention to poor communication is to invest proactively in a healthy working relationship where both sides feel empowered to succeed. The inverse has the potential to lead to poor contract performance.

RISK: The mission of the DOD is “to provide a lethal Joint Force to defend the security of our country and sustain American influence abroad.”⁸ A key enabler to implementing the mission is providing the warfighter with the capabilities needed. When the cost of developing the capabilities exceeds the budget, other capabilities are negatively impacted. When the capabilities are delivered late, the warfighter's mission suffers. When the capabilities are delivered but do not meet the contractual specifications, the warfighter's mission suffers. The COR's role is to manage the cost, schedule, and performance of contracts to ensure the warfighter's stated requirements are met contractually.

Many of the capabilities, which come in the form of goods and services, must be developed outside of the federal government by private sector companies. DOD and private sector companies pursue different missions. Where DOD pursues a mission of securing the nation, private sector companies pursue profitability instead. As such, there are circumstances when companies face mutually exclusive decision points between favoring profitability and enhancing national security. There should be no surprise when many companies consistently

choose profitability. When insufficient contract oversight exists, the risk to cost, schedule, and performance increases dramatically. In 2016, the Office of Inspector General affirmed the value of contract management in a report stating “Inadequate or a lack of monitoring to help ensure compliance with the requirements of a documented performance evaluation of contractors increases the risk that...obtaining quality goods and services on time and within budget—will not be met.”⁹ The warfighter deserves the right tools be provided on schedule and within budget to prosecute the mission.

Inadequate or missing contractor past performance information creates another risk to performing adequate contract management. The government created the Past Performance Information Retrieval System (PPIRS) to enable “source selection” teams the ability to review the past performance of government contractors from a single authoritative repository. Before a contract is awarded, the government convenes a source selection whereby a group of qualified government employees evaluate all potential offers submitted for consideration in response to a government request for proposal. While the cost and technical aspects of each proposal are evaluated against the requirements of the solicitation, the contractor submitting the proposal is also evaluated on prior government contract work. Former Secretary of Defense, Robert Gates, in testimony to the Senate Appropriations Committee, stated “We can’t afford to spend a single dollar that we don’t have to...because it takes away from resources to do other things. And to spend it on contractors who aren’t doing their jobs is not just waste, fraud, and abuse, it impacts our capabilities.”¹⁰ The COR is responsible for assessing the contractor annually, at a minimum, for the categories of quality, schedule, cost control, management, small business utilization, and regulatory compliance utilizing the Contractor Performance Assessment Reporting System (CPARS). The assessment then becomes available for review by potential government customers

through the PPIRS portal. Contractors are rated in each category as exceptional, very good, satisfactory, marginal, or unsatisfactory. Ideally, all ratings would include supporting information. Unfortunately, many CORs struggle to find the necessary time to adequately document performance. Falling behind on CPARS assessments consistently plagues many CORs across the federal government. According to a 2009 GAO report, of the 22,904 contracts in fiscal year 2007 requiring CPARS reporting only 7,007 (or 31% of) contracts actually had completed CPARS assessments.¹¹ However, when CORs do get around to inputting CPARS assessments, many provide insufficient information to support a satisfactory rating. Ratings other than satisfactory really need sufficient substantiating details provided as to validate the rating. When a COR fails to properly surveil the contractor's performance across these multiple categories, the CPARS rating is typically listed as satisfactory because of the minimal additional work needed to document. The satisfactory rating becomes problematic when a COR rates a contractor as satisfactory when in fact the work is marginal or unsatisfactory. Similarly, when a contractor actually earns a very good or exceptional rating but still receives a satisfactory rating, the information is misleading. A high PPIRS score can be the deciding point for a source selection depending on the evaluation criteria in the source selection plan. Likewise, the government suffers when a historically poor performing contractor is perceived by the source selection evaluation board as being satisfactory when in fact the contractor is likely to bring unnecessary risk to a program.

“Having complete, timely, and accurate information on contractor performance is critical for officials responsible to award new federal contracts to make informed decisions.”¹² Failure of the COR to perform his/her mission directly impacts the warfighter's ability to execute their mission. Lives are at stake.

EVIDENCE: Evidence of the contract oversight problem is plentiful. In 1992, the Government Accountability Office (GAO) began affirming both the significance of having effective contract management within the DOD and while also stating the need for DOD to improve contract management.¹³ Captured consistently as a high-risk area, contract management in DOD remains on the GAO high-risk areas list primarily due to the scope of the problem. In the years since the first report, DOD has continued to seek to improve contract management. GAO acknowledged in 2003 the DOD's strides for improvement when the High-Risk Issues report stated several acquisition processes had been streamlined. Unfortunately, the report also highlighted several missed opportunities for DOD to make widespread improvements.

The 2003 report listed unclear guidance, poor internal controls, and improperly trained personnel as the principal extents for missed opportunities for improving contract oversight.¹⁴ Fifteen years later the problem still exists as evidenced in the 2017 GAO high-risks report which states "Ensuring DOD has the people, skills, capacities, tools, and data needed to make informed acquisition decisions is essential if DOD is to effectively and efficiently carry out its mission in an era of more constrained resources."¹⁵

In June 2011, Mr. Solis, Director Defense Capabilities and Management, spoke before the Senate Subcommittee on Contracting Oversight, Committee on Homeland Security and Governmental Affairs on actions needed to address contract oversight and vetting of non-US vendors in Afghanistan. Mr. Solis' testimony corroborates with examples the problems identified. Instead of assigning the COR role as a full-time or half-time responsibility, most contracting officers assign Government employees the COR appointment as a collateral duty. In addition, CORs are regularly tasked with additional duties expanding their COR role. CORs are regularly given multiple contracts to monitor. In such cases where different contracts are located

in different geographic areas, CORs face the impossible challenge of being in two places at the same time or having the time necessary to travel between sites. Travel time is effectively down time. A natural solution is to assign another COR. However, there simply are not enough CORs available.

HUMAN CAPITAL: Another particular facet of the contract oversight problem is the aspect of human capital. Insufficient numbers and ineffective utilization of the limited human capital resources continues being included in GAO reports as a causal factor to poor performance. Looking back almost 30 years and a trend becomes strikingly clear. From 1989 to 1999, the DOD acquisition workforce was slashed by almost 46%.¹⁶ Nine years later, the DOD acquisition workforce experienced an additional 14% reduction in the number of government personnel, both military and civilian, responsible for performing acquisition-related activities.¹⁷ In the years following GAO's 1992 report that DOD contract management is a high-risk item, the government chose to outsource many acquisition-related duties to contractors. GAO's 2009 High-Risk Issues report captured the results of these overarching changes. GAO's report specifically called out three areas contributing to high-risk. The report identifies one of these three areas as "the lack of an adequate number of trained acquisition and contract oversight personnel contribute to unmet expectations and continue to place the department at risk" which clearly identifies human capital as a fundamental factor.¹⁸ The following year, DOD published strategic guidance to reverse the previous guidance philosophy of outsourcing and instead fill the 20,000 vacated government acquisition positions by 2015.¹⁹ Traditionally, these acquisition positions are "in the General Business and Industry (GS-1101), Contracting Specialist (GS-1102), Purchasing (GS-1105), and Procurement Clerical and Assistance (GS-1106) occupational

series, as well as Contracting Officer's Representatives (CORs) and Program and Project Managers (P/PMs).²⁰

IT ACQUISITIONS: In GAO's 2015, biennial update to the High-Risk Issues, GAO extracted yet another separate area of the contract oversight problem to focus in on "Improving the Management of Information Technology (IT) Acquisitions and Operations" to the list of high-risk issues being monitored. GAO cited the reason for adding IT acquisition management and operations as "federal IT investments too frequently fail or incur cost overruns and schedule slippages while contributing little to mission-related outcomes."²¹ COR oversight is the statutory mechanism intended to prevent these failures. The result of these failures is "billions of dollars [spent] on failed and poorly performing IT investments."²² The effective wasting of billions of dollars is irreconcilable regardless of perspective. An example of such waste is a DOD satellite system that was terminated in February 2010 after going over budget and being late.²³ The satellite was intended to provide a critical capability to meet mission needs. However, due to poor oversight, the original budget of \$6.5 billion ballooned to "about \$15 billion" and the schedule delayed over five years.²⁴ The DOD cannot afford to spend the time (typically calculated in years) or vast amounts of money for a capability that does not meet requirements.

CHANGE ORDERS: While billions of dollars wasted on a single program is easily identified, a larger problem arises from smaller amounts of money wasted across a much larger population of contracts. Known as change orders, these modifications to existing contracts arise from the government's changing requirements after contract award. These changes come in multiple forms such as, adding new requirements, changing how the contractor is to perform the work, accelerating the delivery date, or requiring the use of previously unspecified government

furnished equipment (GFE). Because these changes come after the contract award, neither the program funding nor the program schedule are likely to accommodate the changes.

In April 2013, GAO published a scathing report following a detailed assessment of Veteran's Affairs (VA) construction contracts. In the report, GAO uncovered almost \$2.9 billion of additional costs resulting from change orders.²⁵ One such VA facility under construction in St. Louis, MO, began with a cost of \$69 million which eventually grew 432% to a new total of \$367 million.²⁶ Another VA construction project in Bronx, NY, saw change orders skyrocket 176% past the initial \$82 million price tag to an eventual \$226 million.²⁷ While the staggering cost growth alone is cause for alarm, the affected schedules to complete the investigated construction projects also grew substantially. Some projects timelines extended 14 months while the worst project witnessed a delay of over six years.²⁸

The trend in DOD's poor contracting management appears to be expanding rather than diminishing. As time progresses, evidence suggests the situation in DOD contract management is falling behind. The current DOD approach to rectifying the GAO identified high-risk areas is unsustainable as evidenced by the growth in costs and schedules while technical capabilities have fallen.

APPROACH: DOD agreed corrective actions were necessary. In an effort to address the high-risk aspects of contract management, DOD consistently seeks multifaceted approaches. The various avenues of approaching the problem were increasing the number of personnel serving as CORs, updating policies, augmenting training, instituting certification requirements, and requiring more relevant experience. In the years following GAO's initial 1992 identification of DOD's contract management needing improvement, DOD continues to search for answers.

POPULATION: In 2007, the government acknowledged the criticality of contract oversight and pursued a coordinated effort to revitalize the COR population. Starting with a population of 9,182 CORs in 2007, the government began increasing the number of appointed CORs to 52,176 in 2012.²⁹ With the dramatic increase in the number of appointed CORs, component acquisition executives expected higher contract performance. In 2008, the DOD began a similar growth perspective with the larger DOD acquisition workforce as a whole. Between 2008 and 2016, the DOD acquisition workforce grew 24% ending the with over 30,000 employees.³⁰ However, the rate of acquisition workforce growth did not keep up with the significant growth and complexity of awarded contract dollars. (See Figure 1.) However, simply adding to the workforce proved insufficient alone to resolving the problem of effective contract management.

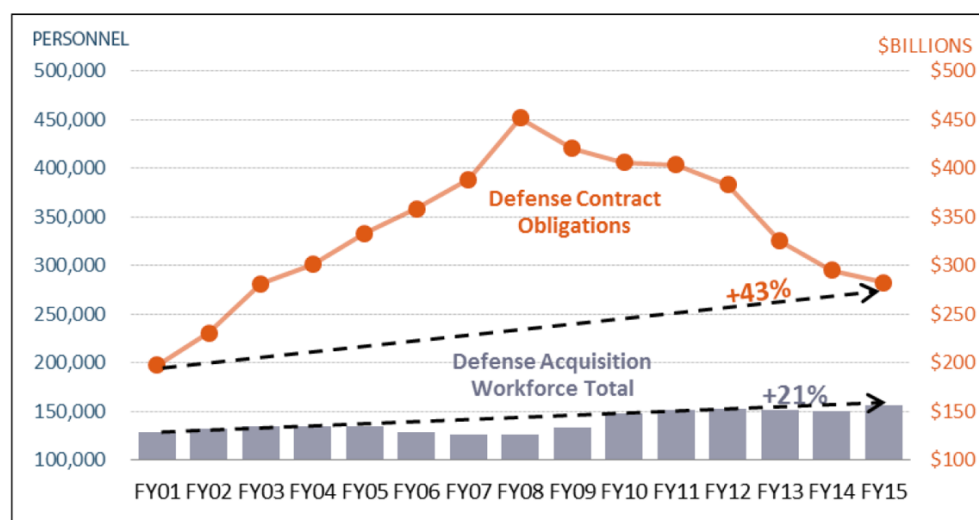


Figure 1. Comparison of Acquisition Workforce Size and Defense Contract Obligations, FY01-15³¹

POLICY: In August 2008, the Deputy Secretary of Defense, Mr. Gordon England, took an ambitious step and published a memo describing the most basic of requirements for a COR. In the memo, Mr. England required the COR be “afforded necessary resources (time, supplies,

equipment, opportunity) to perform the designated functions.”³² Nine years later, CORs are still attempting to comply with COR responsibilities without sufficient time or opportunity. In his September 2011 testimony to the U.S. Senate Committee on Homeland Security and Government Affairs, Subcommittee on Oversight of Government Management, Mr. Joshua Foust stated “for multi-million-dollar contracts I have personally encountered poorly trained government Contracting Officer Representatives (COR) who only perform their COR duties part time, and must perform other duties assigned by their superiors.”³³ In the subsequent publications of the COR Handbook, the requirement still exists for CORs to be provided with adequate time to accomplish their duties. Yet, with the current human capital limits, this foundational requirement is still out of reach. The most recent edition of the COR Handbook was published in March 2012 and another edition is currently in development. While the guidance in the COR Handbook is comprehensive, the problem currently rests with the implementation of the guidelines.

Additionally, in 2010, the DOD announced the Better Buying Power (BBP) 1.0 initiative. The initiative included DOD standing up a website, publishing memorandums, issuing training, and increasing visibility on various aspects of contracting to improve the likelihood of effective contracts. While BBP 1.0 included the category of improving tradecraft in services acquisition, it failed to address the criticality of proper contract oversight. In 2012, BBP 2.0 became the new and improved approach to enabling contract success. BBP 2.0 correctly identified CORs as a key success factor under the *Improve Tradecraft in Acquisition of Services* focus area. Specifically, BBP 2.0 training identified the need for CORs to maintain a good working relationship with the contractor, monitoring performance, and keeping leadership abreast of contract performance in support of the mission.³⁴ In August 2015, DOD published BBP 3.0 as another incremental

approach to strengthening the effort for efficiency. However, while the BBP 2.0 focus area of *Improve Tradecraft in Acquisition of Services* remained, BBP 3.0 focused less on the aspect of contract oversight and more on developing organic engineering capabilities within the acquisition workforce. While the focus of BBP 3.0 shifted away from the COR, the need still remains.

In September 2016, DOD's former Under Secretary for Acquisition, Technology, and Logistics, Mr. Frank Kendall, in the 2015 Performance of Defense Acquisition System report, recognized the need for efficiencies can result in a "crippled" acquisition workforce unable to effectively manage contracts.³⁵ Mr. Kendall summarized the risk as "Cutting these capabilities too much is a false efficiency and a mistake we have made in the past."³⁶ The missing key to COR success is definitely time availability. However, time alone will not breed success. A well-rounded approach is necessary to include training.

TRAINING: Included in the 2012 edition of the COR Handbook is a list of required training to include a mixture of classroom and online training. The Defense Acquisition University (DAU) manages the majority of the training curriculum. DOD continues to update the training requirements to address identified shortfalls within the list of COR responsibilities such as COR Contingency Training or as part of a larger government-wide solution such as DAU's CLE 025 "Information Assurance for Acquisition Professionals." Policy also requires between 8 and 16 hours of COR-related training every three years.³⁷ DAU provides a variety of training materials designed to enable CORs to become more effective that satisfies the COR-related training requirement. By comparison, DOD requires acquisition professionals complete 80 hours of acquisition-related training every two years.³⁸ Given the fact a COR is responsible for contract oversight and the lack of oversight results in high-risk, the logical deduction suggests current

COR training requirements are inadequate. In his June 30, 2011, testimony before the Senate Subcommittee on Contracting Oversight, Mr. Solis validated this logical deduction when he said “some gaps in training remain and not all of the required training is being conducted or completed.”³⁹ Additionally, Mr. Solis identified KO’s as contributing to the problem of incomplete training. In his testimony, Mr. Solis encapsulated the results of multiple interviews with KO’s where KO’s admitted failing to provide the specific COR training needed because of insufficient time. Apparently, the KO’s stated they were too busy awarding contracts.

Training is not just for the COR. According to GAO’s summary of Mr. Solis’ June 30, 2011 testimony, DOD failed to implement training for commanders and senior leaders on the importance of and role of a COR as suggested by multiple organizations. As a result, “commanders do not always understand their units’ roles and responsibilities to provide contract management and oversight.”⁴⁰ Without a clear understanding of the importance of effective contract management via COR, senior leaders are unlikely to provide the requisite time, resources, or access needed to effectively manage the contract. This type of misunderstanding is apparent when a single COR is given multiple contracts to oversee in addition to the COR’s primary job. The senior leader is more likely to consider the COR’s responsibilities as more of a simple checking-the-box activity vice serving as the contract’s subject matter expert responsible for managing the entire effort. This approach leads to CORs not having the time necessary to effectively perform their role and as such, are unable to ensure the time and money spent on the contract will result in capabilities being met. The more likely outcome is cost overruns, schedule delays, and goods or services not fully meeting contractual requirements. While training helps both senior leaders and CORs, there is no substitute for experience.

EXPERIENCE: Training is insufficient on its own. DOD policy acknowledges the criticality of experience in DOD Instruction 5000.72p *DoD Standard for Contracting Officer's Representative (COR) Certification* where certain years of experience are required in order to obtain different levels of certification. DOD sought to capitalize on the training and experience by developing certification standards.

CERTIFICATION: In March 2009, the Under Secretary of Defense for Acquisition, Technology and Logistics published a memo titled *DoD Standard for Certification of Contracting Officer's Representatives (COR) for Service Acquisitions* to improve integrity in services acquisitions. The memo identified three levels of COR certification (Types A, B, and C) to prevent inexperienced and untrained CORs from being assigned to contracts exceeding their preparation. Each level of certification builds upon the previous where the Type C certification represents the highest level of COR certification available. The certification strategy was mostly implemented across DOD. GAO acknowledged DOD's "positive step" to improve the workforce in the 2011 GAO High-Risk Update.⁴¹ While the training and certification requirements for DOD are managed by the Defense Acquisition University (DAU) the remainder of the non-DOD federal government has the Federal Acquisition Institute (FAI). DAU manages the training courses but does not actually issue COR certifications. The DOD certification process currently resides within each Component. FAI, on the other hand, does issue a Federal Acquisition Certification for Contracting Representatives (FAC-COR) certification.

While the 2009 memo initiated COR certification guidance, the more formal DOD instruction was not published until March 26, 2015. DOD Instruction 5000.72 titled *DOD Standard for Contracting Officer's Representative (COR) Certification* took seven years for publication. Included in this instruction letter were the reiterations of previous communications

requiring CORs be trained, certified, experienced, and given dedicated time necessary to effectively perform contract management.

SOLUTION: GAO reports continue to provide evidence showing DOD has long struggled with contract management in spite of multiple approaches to address the shortfalls. Clearly the status quo is an unsustainable strategy if dramatic remediation is to occur. Because the current DOD approach to solving the problem failed to address one key factor, the solutions pursued to date have effectively only addressed symptoms of the problem and thereby been unsuccessful. Neither fewer contracts nor more CORs are the sole solution. The missing key is for the COR to have more time to perform their critical role. Only then, when combined with training, experience, and certification, will improvements in DOD contract oversight be possible on any type of large scale.

A comprehensive approach to contract planning has traditionally been too focused on the details of the contract (and the proper awarding of contracts) and not enough on managing the contract once awarded. This paper suggests DOD contract philosophy adapt by recognizing contract performance hinges on the availability of time for CORs to facilitate successful contract performance. When a COR actively engages in contract management, contracts have a higher probability of meeting the contractual requirements on time and within budget. Similarly, when a COR is afforded the time to surveil the contractor's performance, the contract is less likely to require a follow-on contract to fix the problems of the original contract. The end result is mission accomplishment as intended when requirements were levied.

CASE STUDY: A brief case study provides clear evidence that contract performance is directly tied to COR involvement. Twelve years ago, a KO awarded a contract for laundry services at a domestic DOD facility.⁴² The KO assigned COR responsibilities to an existing

government employee.⁴³ As a result, the COR was already preoccupied with an existing full-time job. The COR was qualified both through training and guidance to perform the duties assigned. However, the issue became availability of the COR to perform contract oversight. Over time, the quality of laundry services provided declined and self-serve laundry equipment became increasingly out of service resulting from disrepair. Complaints began accumulating amongst the customers. Because the COR rarely inspected the facilities or services provided, both the COR and the KO were unaware of the ongoing problem. At the conclusion of the first year, the COR solicited CPARS data through customer surveys. The contractor's performance feedback was poor and the COR rated contractor performance as marginal. The KO instructed the contractor to make improvements.

After four years of poor contract performance, the KO removed the existing COR and installed a different COR in hopes of correcting the laundry services contract performance. The COR was qualified both through training and guidance to perform the duties assigned. The KO made a bold move and adjusted the COR's workload to allow more hands-on contract oversight. As a result, the COR began making regular visits to the laundry facilities. When inspections revealed broken equipment, the COR worked with the contractor to implement a plan of actions and milestones to implement corrective actions. Further, the COR began regular visits to multiple customer organizations to solicit first-hand feedback of the ongoing laundry services. During the visits, the COR provided direct contact information and instructions to reach out should anything be of concern.

In the days and weeks following the COR's initial visits, phone calls were made and complaints provided regarding poor contractor performance. The COR responded to the requests by engaging with the contractor. At the conclusion of the first year under the new COR's

contract management, the contractor received a satisfactory CPARS rating. The following year, the contractor's performance improved so much the COR rated the contractor a very good.

In the eight years since the change in CORs, the contractor earned a very good CPARS rating for seven of the years. A brief review of the circumstances surrounding this case study shows the COR needed KO guidance on what to do, COR training on how to do it, and KO provided time to perform the role.

CASE STUDY: Another case study originates from an August 2012 GAO report of Department of State (DoS) and DOD interagency acquisitions for Iraq and Afghanistan.⁴⁴ In 2010, DoS faced a dramatic increase in the number of contracts needed in Iraq and Afghanistan to support operations. The DoS business approach for human capital planning considers the dollars planned for contract award in a given year and then calculates the assumed number of CORs required. DoS awarded multiple contracts and continued the historical practice of assigning CORs to the contracts as tertiary duties. GAO found DoS inconsistently considered potential increased complexity of Iraq and Afghanistan contracts and the potential requirement for additional COR involvement.

As time progressed, DoS realized the need for contract assistance. DoS reached out to the DOD to augment the contracting of services through the use of existing DOD contracts. This process, known as assisted acquisitions, involves one government agency paying another government agency for use of an existing contract. DOD responded and allowed DoS to accelerate the provision of contracted support through existing DOD contracts. However, since DOD performed the acquisition planning for the contracts, DoS was not included in the acquisition planning activities whereby the number of CORs were determined. Faced with shortfalls, DoS, with recommendations from the Defense Contract Management Agency

(DCMA), “dedicated four [DoS] personnel in Baghdad as full-time CORs rather than having them perform COR duties in addition to other responsibilities.”⁴⁵

Additionally, DoS considered the risks to mission success of insufficient contract management and determined the price of utilizing a full-time COR was worth the cost. DoS then applied this new approach to DoS world-wide operations and “requested funding to add 15 full-time positions specifically for oversight of its worldwide personal protective services contracts.”⁴⁶ GAO concluded by stating “A decision to proceed with acquiring needed services without sufficient oversight personnel in place puts the agency at risk of being unable to identify and correct poor contractor performance in a timely manner and ensure consistent delivery of goods and services critical to maintaining State’s presence in Iraq.”⁴⁷ A brief review of the circumstances surrounding this case study show agencies struggle when contract management is not critically considered for each contract. Additionally, the funding required for contract actions typically fails to consider the level of contract oversight required and results in risk to mission accomplishment. Proper planning can improve the effectiveness of contracting actions when contract management is a priority.

In 2008, the Commission on Wartime Contracting in Iraq and Afghanistan (CWC) was established to consider ways to improve the contracting process. After assessing DOD, DoS, and the U.S. Agency for International Development (USAID), the CWC made the recommendation for agencies to “Provide funding and direction to establish a trained, experienced, and deployable cadre [of Government civilians] for acquisition-management and contractor-oversight functions in areas of contingency operations so that the government has an alternative to relying on contractors for acquisition management and oversight.”⁴⁸

CONCLUSION: Over the last 30 years, DOD has grown in size and complexity. The US military departments have new capabilities. These capabilities are the result of DOD contracting. The DOD spends billions of dollars annually to maintain the world's most capable military. The process begins when the warfighter identifies a needed capability. The acquisition professionals work with requirements providers to develop requirements to fill the capability gap, seek out viable solutions, award and manage contracts to develop and deliver the capability, and then field the solutions. Cadres of trained, certified, and experienced acquisition professionals dedicate careers to enabling this process through managing cost, schedule, and performance. Key challenges exist in contract management throughout the product or service lifecycle and are managed by a specific group of government employees known as contracting officer representatives (CORs).

CORs provide a critical aspect to ensuring contractual performance meets the documented requirements to fulfill the warfighters' needs. Appointed in writing by the contracting officer, the COR is hand-selected for each contractual effort and provided specific guidance on his/her roles throughout the life of the contract. These duties include developing acquisition documents prior to contract award, serving on the source selection evaluation board to consider the risks and benefits of each offeror's proposal, monitoring progress after contract award, reviewing and approving invoices, and managing a complex relationship between the contracting officer and the contractor. Failure to manage the contractor performance effectively leads to poorly met or unmet requirements, excessive costs, or longer schedules and ultimately to warfighter needs going unmet. Former Under Secretary for Acquisition, Technology, and Logistics, Mr. Frank Kendall, succinctly captured this problem when he said, "A program that doesn't meet the user's needs is wasted money."⁴⁹

Too often, money is wasted after the contract is awarded. The waste comes from many sources such as ill-defined requirements prior to contract award, changing requirements after contract award, lack of effective oversight, incurring cost overruns, schedule slippages, and could limit costs of follow on change orders. When a COR is not involved in the acquisition planning, an opportunity is lost to ensure the right people are involved. A COR brings experience to acquisition planning and has the potential to ensure contract solicitations are properly worded to prevent undue delays or complexities. Since 1992, the Government Accountability Office (then the Government Accounting Office) began identifying DOD contract management as a high-risk issue that required mitigation. Since that initial report, DOD has pursued multiple separate initiatives to address the problem and have DOD contract management removed from the short list of high-risk issues. Some such attempts have included increasing the number of acquisition professionals, increasing the number of CORs, creating newer and more specific training classes, developing certification requirements, drafting new policies and procedures, requiring certain years of experience, and, in a few limited cases, providing the necessary time for CORs to accomplish the required duties. Several case studies show the direct correlation between the amount of time a COR spends performing required duties to the successfulness of a contract's performance. Indeed, when CORs are afforded the time and resources needed to accomplish the job, the warfighter benefits from solutions which meet contractual requirements, are delivered on schedule, and are affordable. The current DOD approach to addressing poor contract performance is missing the component of available time. In order for DOD to remove contract management from the list of high-risk issues, CORs must be given time to effectively accomplish the mission in addition to the necessary training, resources, and support. Failure to provide these resources is akin to requiring a platoon of Marines to accomplish an objective

when provided with weapons and no ammunition. Success can occur but will cost a great deal more than it should.

¹ Sebastian Sprenger, “30 Years: Future Combat Systems — Acquisition Gone Wrong,” (Vienna, VA: DefenseNews, October 25, 2016). <https://www.defensenews.com/30th-anniversary/2016/10/25/30-years-future-combat-systems-acquisition-gone-wrong/>.

² Government Accountability Office, “National Ignition Facility: Management and Oversight Failures Caused Major Cost Overruns and Schedule Delays,” (Washington, DC: Government Accountability Office, August 2000), pp. 4. <https://www.gao.gov/assets/240/230518.pdf>.

³ Lawrence Livermore National Laboratory, “FAQs,” (Livermore, CA: Lawrence Livermore National Laboratory, February 2015). <https://lasers.llnl.gov/about/faqs>.

⁴ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, February 2015), pp. 14. <https://www.gao.gov/assets/670/668415.pdf>.

⁵ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, January 2001), pp. 193. <https://www.gao.gov/assets/240/230005.pdf>.

⁶ Amy Frontz, “Inadequate Contract Oversight of Military Construction Projects in Afghanistan Resulted in Increased Hazards to Life and Safety of Coalition Forces,” (Alexandria, VA: DOD Office of the Inspector General, March 8, 2013). <https://media.defense.gov/2013/Mar/08/2001712811/-1/-1/1/DODIG-2013-052.pdf>.

⁷ Government Accountability Office, “Military Operations: High-Level DOD Action Needed to Address Long-standing Problems with Management and Oversight of Contractors Supporting Deployed Forces,” (Washington, DC: Government Accountability Office, December 2006), pp. 4. <https://www.gao.gov/new.items/d07145.pdf>.

⁸ Defense.gov, “DOD 101: Overview of the Department of Defense,” Defense.gov, last viewed January 11, 2018, <https://www.defense.gov/About/DoD-101/>.

⁹ Government Accountability Office, “Contract Management - Improvements Would Strengthen Controls and Reduce Risk” (Washington, DC: Government Accountability Office, July 1, 2016), pp. 11. <https://www.gao.gov/assets/680/678197.pdf>.

¹⁰ Commission on Wartime Contracting, “At what risk? Correcting over-reliance on contractors in contingency operations,” (Arlington, VA: Commission on Wartime Contracting, February 24, 2011), pp. 48. http://www.wartimecontracting.gov/docs/CWC_InterimReport2-highres.pdf.

¹¹ Government Accountability Office, “Federal Contractors: Better Performance Information Needed to Support Agency Contract Award Decisions,” (Washington, DC: Government Accountability Office, April 2009), pp. 2. <https://www.gao.gov/new.items/d09374.pdf>.

¹² Government Accountability Office, “Contractor Performance - DOD Actions to Improve the Reporting of Past Performance Information,” (Washington, DC: Government Accountability Office, July 2013), pp. 2. <https://www.gao.gov/assets/660/655594.pdf>.

¹³ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, January 2001), pp. 50. <https://www.gao.gov/assets/240/230005.pdf>.

¹⁴ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, February 2003), pp. 56. <https://www.gao.gov/assets/240/237063.pdf>.

¹⁵ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, February 2017), pp. 490.

<https://www.gao.gov/assets/690/682765.pdf>.

¹⁶ Government Accountability Office, “Human Capital - DOD Should Fully Develop Its Civilian Strategic Workforce Plan to Aid Decision Makers,” (Washington, DC: Government Accountability Office, July 2014), pp. 19. <https://www.gao.gov/assets/670/664697.pdf>.

¹⁷ Government Accountability Office, “Defense Acquisition Workforce: DOD Has Opportunities to Further Enhance Use and Management of Development Fund,” (Washington, DC: Government Accountability Office, March 2017), pp. 3.

<https://www.gao.gov/assets/690/683748.pdf>.

¹⁸ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, January 2009), pp. 77.

<https://www.gao.gov/new.items/d09271.pdf>.

¹⁹ Government Accountability Office, “Defense Acquisition Workforce: DOD Has Opportunities to Further Enhance Use and Management of Development Fund,” (Washington, DC: Government Accountability Office, March 2017), pp. 3.

<https://www.gao.gov/assets/690/683748.pdf>.

²⁰ Jeffrey B. Birch, “FY 2012 Annual Report on the Federal Acquisition Workforce,” (Fort Belvoir, VA: Federal Acquisition Institute, December 17, 2013), pp. 1.

<https://www.fai.gov/drupal/sites/default/files/FY%202012%20Annual%20Report%20on%20the%20Federal%20Acquisition%20Workforce.pdf>.

²¹ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, February 2015), pp. 37.

<https://www.gao.gov/assets/670/668415.pdf>.

²² Ibid.

²³ Government Accountability Office, “High-Risk Series: An Update,” (Washington, DC: Government Accountability Office, February 2015), pp. 38.

<https://www.gao.gov/assets/670/668415.pdf>.

²⁴ Government Accountability Office, “Information Technology: Critical Factors Underlying Successful Major Acquisitions,” (Washington, DC: Government Accountability Office, October 2011), pp. 5. <https://www.gao.gov/new.items/d127.pdf>.

²⁵ Government Accountability Office, “VA Construction - Additional Actions Needed to Decrease Delays and Lower Costs of Major Medical-Facility Projects,” (Washington, DC: Government Accountability Office, April 2013), pp. 34.

<https://www.gao.gov/assets/660/653585.pdf>.

²⁶ Ibid.

²⁷ Ibid.

²⁸ Ann Kirkpatrick, “GAO Report Exposes Cost Increases and Delays in VA Construction Projects,” The House Committee on Veterans' Affairs. May 8, 2013. <https://democrats-veterans.house.gov/news/press-releases/gao-report-exposes-cost-increases-and-delays-va-construction-projects>.

²⁹ Jeffrey B. Birch, “FY 2012 Annual Report on the Federal Acquisition Workforce,” Federal Acquisition Institute. December 17, 2013. pp. 6.

<https://www.fai.gov/drupal/sites/default/files/FY%202012%20Annual%20Report%20on%20the%20Federal%20Acquisition%20Workforce.pdf>.

³⁰ Moshe Schwartz, Kathryn A. Francis, and Charles V. O'Connor, "The Department of Defense Acquisition Workforce: Background, Analysis, and Questions for Congress," Congressional Research Service, July 29, 2016. pp. 8. <http://www.dtic.mil/dtic/tr/fulltext/u2/1014172.pdf>.

³¹ Ibid, 9.

³² Gordon England, "Monitoring Contract Performance in Contracts for Services," Deputy Secretary of Defense Memorandum to Military Departments, August 22, 2008. pp. 3. <https://www.acq.osd.mil/dpap/policy/policyvault/2008-0468-DPAP.pdf>.

³³ Making Intelligence Contracting Smarter: Reexamining Government Roles and Oversight: Hearing before the U.S. Senate Committee on Homeland Security and Government Affairs, Subcommittee on Oversight of Government Management, the Federal Workforce, 112th Cong., (2011) (statement of Joshua Foust, Fellow, American Security Project). pp. 3. https://fas.org/irp/congress/2011_hr/092011foust.pdf.

³⁴ Defense Acquisition University, "Improving Tradecraft in Services--Address Causes of Poor Tradecraft in Services Acquisition," (Ft. Belvoir, VA, January 12, 2012), 18, <http://bbp.dau.mil/docs/Improving%20Tradecraft%20in%20Services--Address%20Causes%20of%20Poor%20Tradecraft%20in%20Services%20Acquisition.pdf>.

³⁵ Frank Kendall, "Performance of the Defense Acquisition System, 2015 Annual Report," Under Secretary of Defense, Acquisition, Technology, and Logistics. (Washington, DC: September 15, 2016). pp. iv. <http://bbp.dau.mil/docs/Performance-of-Defense-Acquisition-System-2015.pdf>.

³⁶ Ibid.

³⁷ Richard Ginman, "Department of Defense COR Handbook," Director, Defense Procurement and Acquisition Policy. March 22, 2012. pp. 150. https://www.acq.osd.mil/dpap/cpic/cp/docs/USA001390-12_DoD_COR_Handbook_Signed.pdf.

³⁸ James A. MacStravic, "DOD Instruction 5000.66 – Defense Acquisition Workforce Education, Training, Experience, and Career Development Program," (Washington, DC: Department of Defense, July 27, 2017), pp. 28. http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500066_dodi_2017.pdf.

³⁹ Operational Contract Support: Actions Needed to Address Contract Oversight and Vetting of Non-U.S. Vendors in Afghanistan: Hearing before the Senate Subcommittee on Contracting Oversight, Committee on Homeland Security and Governmental Affairs, 112th Cong., 6 (2011) (statement of William M. Solis, Director Defense Capabilities and Management). pp. 4. <https://www.gao.gov/new.items/d11771t.pdf>.

⁴⁰ Operational Contract Support: Actions Needed to Address Contract Oversight and Vetting of Non-U.S. Vendors in Afghanistan: Hearing before the Senate Subcommittee on Contracting Oversight, Committee on Homeland Security and Governmental Affairs, 112th Cong., (2011) (statement of William M. Solis, Director Defense Capabilities and Management). pp. 10. <https://www.gao.gov/new.items/d11771t.pdf>.

⁴¹ Government Accountability Office, "High-Risk Series: An Update," (Washington, DC: Government Accountability Office, February 2011), pp. 125. <https://www.gao.gov/assets/320/315725.pdf>.

⁴² MGySgt James Kulp, in-person conversation with the author, October 25, 2017.

⁴³ Dr. Sherry F. Gaylor, Deputy Director Regional Contracting Office, Marine Corps Installations East, telephone conversation with the author, October 30, 2017

⁴⁴ Government Accountability Office, "Iraq and Afghanistan - State and DOD Should Ensure Interagency Acquisitions Are Effectively Managed and Comply with Fiscal Law," (Washington,

DC: Government Accountability Office, August 2012), pp. 18.

<https://www.gao.gov/assets/600/593261.pdf>.

⁴⁵ Ibid, 25.

⁴⁶ Ibid, 26.

⁴⁷ Ibid, 27.

⁴⁸ Commission on Wartime Contracting in Iraq and Afghanistan (CWC) reporting on Contingency Contracting: Agency Actions to Address Recommendations by the Commission on Wartime Contracting in Iraq and Afghanistan report to Subcommittee on Readiness and Management Support, Committee on Armed Services, 112th Cong., (2012). pp. 10.

<https://www.gao.gov/assets/600/593235.pdf>.

⁴⁹ Frank Kendall, “Getting Defense Acquisition Right,” Under Secretary of Defense, Acquisition, Technology, and Logistics. (Ft. Belvoir, VA: January 2017). pp. 191.

<https://www.defense.gov/Portals/1/Documents/pubs/Getting-Acquisition-Right-Jan2017.pdf>.

Bibliography

- Birch, Jeffrey B. "FY 2012 Annual Report on the Federal Acquisition Workforce." Federal Acquisition Institute. December 17, 2013.
<https://www.fai.gov/drupal/sites/default/files/FY%202012%20Annual%20Report%20on%20the%20Federal%20Acquisition%20Workforce.pdf>.
- Carter, Ashton B. "Appendix 1: DOD Strategic Human Capital Plan Update: The Defense Acquisition Workforce April 2010." Under Secretary of Defense For Acquisition, Technology and Logistics. April 2010.
<https://www.dau.mil/policy/PolicyDocuments/the898DAW%20Report%20To%20Congress%202010.pdf>.
- Chantrill, Christopher. "US Spending." USGovernmentSpending.com. Last viewed January 11, 2018.
https://www.usgovernmentspending.com/federal_budget_estimate_vs_actual_2017.
- Commission on Wartime Contracting in Iraq and Afghanistan (CWC) reporting on Contingency Contracting: Agency Actions to Address Recommendations by the Commission on Wartime Contracting in Iraq and Afghanistan report to Subcommittee on Readiness and Management Support, Committee on Armed Services, 112th Cong., (2012). pp. 10.
<https://www.gao.gov/assets/600/593235.pdf>.
- Commission on Wartime Contracting, "At what risk? Correcting over-reliance on contractors in contingency operations," (Arlington, VA: Commission on Wartime Contracting, February 24, 2011), pp. 48.
http://www.wartimecontracting.gov/docs/CWC_InterimReport2-highres.pdf.
- Defense Acquisition University. "Improving Tradecraft in Services--Address Causes of Poor Tradecraft in Services Acquisition." (Ft. Belvoir, VA, January 12, 2012).
<http://bbp.dau.mil/docs/Improving%20Tradecraft%20in%20Services--Address%20Causes%20of%20Poor%20Tradecraft%20in%20Services%20Acquisition.pdf>.
- Defense.gov. "DOD 101: Overview of the Department of Defense." Defense.gov. Last viewed January 11, 2018. <https://www.defense.gov/About/DoD-101/>.
- England, Gordon. "Monitoring Contract Performance in Contracts for Services." Deputy Secretary of Defense Memorandum to Military Departments. August 22, 2008.
<https://www.acq.osd.mil/dpap/policy/policyvault/2008-0468-DPAP.pdf>.
- Federal Acquisition Regulation. Part 52.243-4 -- Changes (June 2007).
http://farsite.hill.af.mil/reghtml/regsfar2afmcfars/fardfars/far/52_237.htm#P474_71042.

Frontz, Amy. "Inadequate Contract Oversight of Military Construction Projects in Afghanistan Resulted in Increased Hazards to Life and Safety of Coalition Forces." (Alexandria, VA: DOD Office of the Inspector General, March 8, 2013).

<https://media.defense.gov/2013/Mar/08/2001712811/-1/-1/1/DODIG-2013-052.pdf>.

General Services Administration. "PIRS - Past Performance Information Retrieval System." (Portsmouth, NH: USA.gov, last visited January 13, 2018). <https://www.ppirs.gov>.

Ginman, Richard. "Department of Defense COR Handbook." Director, Defense Procurement and Acquisition Policy. March 22, 2012.

https://www.acq.osd.mil/dpap/cpic/cp/docs/USA001390-12_DoD_COR_Handbook_Signed.pdf.

Government Accountability Office, "Contract Management - Improvements Would Strengthen Controls and Reduce Risk." (Washington, DC: Government Accountability Office, July 1, 2016). <https://www.gao.gov/assets/680/678197.pdf>.

Government Accountability Office, "Contractor Performance - DOD Actions to Improve the Reporting of Past Performance Information." (Washington, DC: Government Accountability Office, July 2013). <https://www.gao.gov/assets/660/655594.pdf>.

Government Accountability Office. "Defense Acquisition Workforce: DOD Has Opportunities to Further Enhance Use and Management of Development Fund." (Washington, DC: Government Accountability Office, March 2017).

<https://www.gao.gov/assets/690/683748.pdf>.

Government Accountability Office. "Federal Contractors: Better Performance Information Needed to Support Agency Contract Award Decisions." (Washington, DC: Government Accountability Office, April 2009), pp. 2. <https://www.gao.gov/new.items/d09374.pdf>.

Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, January 2001).

<https://www.gao.gov/assets/240/230005.pdf>.

Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, February 2003).

<https://www.gao.gov/assets/240/237063.pdf>.

Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, January 2007).

<https://www.gao.gov/new.items/d07310.pdf>.

Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, January 2009).

<https://www.gao.gov/new.items/d09271.pdf>.

- Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, February 2011). <https://www.gao.gov/assets/320/315725.pdf>.
- Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, February 2015). <https://www.gao.gov/assets/670/668415.pdf>.
- Government Accountability Office. "High-Risk Series: An Update." (Washington, DC: Government Accountability Office, February 2017). <https://www.gao.gov/assets/690/682765.pdf>.
- Government Accountability Office, "Human Capital - DOD Should Fully Develop Its Civilian Strategic Workforce Plan to Aid Decision Makers." (Washington, DC: Government Accountability Office, July 2014). <https://www.gao.gov/assets/670/664697.pdf>.
- Government Accountability Office. "Information Technology: Critical Factors Underlying Successful Major Acquisitions." (Washington, DC: Government Accountability Office, October 2011). <https://www.gao.gov/new.items/d127.pdf>.
- Government Accountability Office, "Iraq and Afghanistan - State and DOD Should Ensure Interagency Acquisitions Are Effectively Managed and Comply with Fiscal Law." (Washington, DC: Government Accountability Office, August 2012). <https://www.gao.gov/assets/600/593261.pdf>.
- Government Accountability Office, "Military Operations: High-Level DOD Action Needed to Address Long-standing Problems with Management and Oversight of Contractors Supporting Deployed Forces." (Washington, DC: Government Accountability Office, December 2006). <https://www.gao.gov/new.items/d07145.pdf>.
- Government Accountability Office, "National Ignition Facility: Management and Oversight Failures Caused Major Cost Overruns and Schedule Delays," (Washington, DC: Government Accountability Office, August 2000), pp. 4. <https://www.gao.gov/assets/240/230518.pdf>.
- Government Accountability Office, "VA Construction - Additional Actions Needed to Decrease Delays and Lower Costs of Major Medical-Facility Projects." (Washington, DC: Government Accountability Office, April 2013). <https://www.gao.gov/assets/660/653585.pdf>.
- Kelman, Steve. "Improving statements of work to improve contract management." FCW.com. November 2015. <https://fcw.com/blogs/lectern/2015/11/kelman-contracting-better-sows.aspx>.

- Kendall, Frank. "Better Buying Power 3.0 White Paper." (Washington, DC: Department of Defense, September 19, 2014).
[http://bbp.dau.mil/docs/2_Better_Buying_Power_3_0\(19_September_2014\).pdf](http://bbp.dau.mil/docs/2_Better_Buying_Power_3_0(19_September_2014).pdf).
- Kendall, Frank. "DOD Instruction 5000.72 – DoD Standard for Contracting Officer's Representative (COR) Certification." (Washington, DC: Department of Defense, March 26, 2015).
<http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500072p.pdf>.
- Kendall, Frank. "Getting Defense Acquisition Right." Under Secretary of Defense, Acquisition, Technology, and Logistics. (Ft. Belvoir, VA: January 2017).
<https://www.defense.gov/Portals/1/Documents/pubs/Getting-Acquisition-Right-Jan2017.pdf>.
- Kendall, Frank. "Performance of the Defense Acquisition System, 2015 Annual Report," Under Secretary of Defense, Acquisition, Technology, and Logistics. (Washington, DC: September 15, 2016). <http://bbp.dau.mil/docs/Performance-of-Defense-Acquisition-System-2015.pdf>.
- Kirkpatrick, Ann. "GAO Report Exposes Cost Increases and Delays in VA Construction Projects." The House Committee on Veterans' Affairs. May 8, 2013. <https://democrats-veterans.house.gov/news/press-releases/gao-report-exposes-cost-increases-and-delays-va-construction-projects>.
- Lawrence Livermore National Laboratory. "FAQs." (Livermore, CA: Lawrence Livermore National Laboratory, February 2015). <https://lasers.llnl.gov/about/faqs>.
- MacStravic, James A. "DOD Instruction 5000.66 – Defense Acquisition Workforce Education, Training, Experience, and Career Development Program." (Washington, DC: Department of Defense, July 27, 2017).
http://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/500066_dodi_2017.pdf.
- Making Intelligence Contracting Smarter: Reexamining Government Roles and Oversight: Hearing before the U.S. Senate Committee on Homeland Security and Government Affairs, Subcommittee on Oversight of Government Management, the Federal Workforce. 112th Cong., (2011) (statement of Joshua Foust, Fellow, American Security Project). https://fas.org/irp/congress/2011_hr/092011foust.pdf.
- Operational Contract Support: Actions Needed to Address Contract Oversight and Vetting of Non-U.S. Vendors in Afghanistan: Hearing before the Senate Subcommittee on Contracting Oversight, Committee on Homeland Security and Governmental Affairs, 112th Cong., 6 (2011) (statement of William M. Solis, Director Defense Capabilities and Management). <https://www.gao.gov/new.items/d11771t.pdf>.

Schwartz, Moshe, Francis, Kathryn A., and O'Connor, Charles V. "The Department of Defense Acquisition Workforce: Background, Analysis, and Questions for Congress." Congressional Research Service. July 29, 2016.

<http://www.dtic.mil/dtic/tr/fulltext/u2/1014172.pdf>.

Sprenger, Sebastian. "30 Years: Future Combat Systems — Acquisition Gone Wrong." (Vienna, VA: DefenseNews, October 25, 2016). <https://www.defensenews.com/30th-annivesary/2016/10/25/30-years-future-combat-systems-acquisition-gone-wrong/>.