Beyond Business as Usual

Improving Defense Acquisition through Better Buying Power

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IBM Center for
The Business of Government

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Foreword

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, *Beyond Business as Usual: Improving Defense Acquisition through Better Buying Power,* by Zachary S. Huitink and David M. Van Slyke, Syracuse University.

This is one of the first full-scale examinations of the Department of Defense's "Better Buying Power" initiatives that were launched in 2010 by current Secretary of Defense Ashton Carter in his previous position as Under Secretary of Defense for Acquisition, Technology, and Logistics. The goal of the initiative is to get more for each dollar DOD spends on buying goods and services. Three iterations of Better Buying Power have been issued, most recently in April 2015 when Better Buying Power 3.0 was announced.

Huitink and Van Slyke examine the following core initiatives of Better Buying Power:

- Achieving affordability and controlling costs

- Promoting competition

- Providing incentives

- Reducing bureaucracy

- Improving services acquisition

For each core initiative, the authors examine the motivation for the initiative, experience to date, and the challenges facing each. The report sets forth eight lessons learned about implementing acquisition reform.

Although Better Buying Power was launched within the Department of Defense, the report's authors conclude that there is government-wide applicability of the initiative. The report concludes with three government-wide recommendations:

- Continue to pursue the idea of "agile" acquisition

- Maintain and enhance the focus on improving services acquisition

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- Further efforts to build partnerships outside the traditional defense industrial base
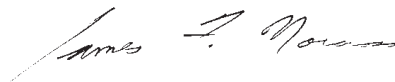
The report continues the IBM Center's long interest in acquisition. Recent IBM reports on acquisition include:

- *Eight Actions to Improve Defense Acquisition* by Jacques S. Gansler and William Lucyshyn

- *A Guide for Agency Leaders on Federal Acquisition: Major Challenges Facing Government* by Trevor L. Brown

We hope that all government leaders who are interested in improving acquisition in their organization will find this report useful and informative.

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Introduction

The U.S. federal government spends nearly a half-trillion dollars per year through contracts, buying everything from office supplies and automobiles to professional services, information technology, and complex weapon systems.[1] The effectiveness with which the government buys these products increasingly separates mission success from mission failure. Indeed, as recent events (e.g., the initial rollout of healthcare.gov) illustrate, acquisition can play a role in both the government's most laudable achievements and its highest-profile disappointments. As agencies continue to face pressure to do more with less, getting more for the money spent through contracts is critical. *Now, as much as ever, it is imperative that government is a smart buyer.*

Perhaps nowhere is smart buying more important than at the Department of Defense (DOD), which accounts for approximately seven of every 10 cents in annual federal contract spending.[2] At DOD, failure to achieve efficient and effective acquisition not only jeopardizes mission accomplishment, it risks lives.

Despite these strong imperatives to get things right, acquisition remains one of the Pentagon's most significant managerial challenges. While not all is amiss—for every failure or setback, there are many unheralded successes, attributable to the hard work of government and industry professionals—after over 60 years of attempts at reform, efficient and effective acquisition remains an elusive goal (Fox 2011). In light of this history, a recent report characterized defense acquisition as exhibiting "a significant degree of entropy"—a tendency to revert to established operating procedures despite the application of strong external forces (NDIA 2014). This same report went on to argue, however, that "meaningful improvement is possible" in the current environment, due in large part to a degree of leadership commitment not seen for many years (NDIA 2014). Within both DOD and Congress, the job of improving defense acquisition is a priority for knowledgeable, experienced, and committed leaders.

For the last five years, leaders within DOD's Office of Acquisition, Technology, and Logistics (AT&L)[3] have been leveraging downward pressure on defense spending to improve the Pentagon's acquisition outcomes. They call their effort "Better Buying Power," so-named because the change they envision aims at getting more for each dollar DOD spends on buying goods and services, or, "doing more without more" (Carter 2010).

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1.   For the most recently completed fiscal year (FY) as of this writing, FY 2014 (10/1/2013 – 9/30/2014), federal contract spending totaled $462.5 billion.
2.   In FY 2014, DOD contract spending totaled $308.6 billion, or roughly two-thirds of total federal contract spending for the fiscal year.
3.   The Office of Acquisition, Technology, and Logistics (AT&L) is located within the Office of the Secretary of Defense (OSD), which also houses all of DOD's civilian defense agencies (e.g., the Defense Logistics Agency). Other organizations within DOD—often called components—include the three military departments (i.e., the Department of the Army, Department of the Navy, and the Department of the Air Force); the Joint Chiefs of Staff; and an Inspector General's Office (which reports directly to the Secretary of Defense). For further detail, see a copy of the DOD organization chart, available at: http://odam.defense.gov/Portals/43/Documents/Functions/ Organizational%20Portfolios/Organizations%20and%20Functions%20Guidebook/DoD_Organization_March_2012.pdf

Though not the first (nor, no doubt, the last) of DOD's efforts to improve its acquisition practices, Better Buying Power is a timely and instructive case in the challenges and opportunities of enhancing acquisition performance through a commitment to continuous improvement—to constantly seeking greater efficiency and productivity in the acquisition enterprise rather than instituting a single reform or policy change. While some may claim defense is a bad model for others to follow, and would thus argue Better Buying Power is not of interest to a non-defense audience, this report offers a different perspective. The Defense Department does acquire a number of goods and services unique to its warfighting mission, but it also buys many products civilian agencies buy, such as professional services and information technology. Moreover, the principles Better Buying Power emphasizes apply equally to the acquisition of military- and non-military-specific products. These principles include:

- Professionalism

- Critical thinking

- Sound judgment

- Data-driven decision making

Accordingly, for busy acquisition executives and senior procurement officers striving to get more for the money that their agencies spend on critical goods and services, this report traces the origins, evolution, and broad impact to date of the Better Buying Power initiatives. Are these initiatives living up to their promise of moving defense acquisition beyond "business as usual"? What lessons do they offer for the rest of the federal acquisition enterprise?

To answer these questions, the report focuses on five initiatives[4] at Better Buying Power's core:

- **Core Initiative One: Achieving Affordability and Controlling Costs**—planning and executing large, complex acquisitions in a manner that ensures the projects are affordable within future budgets.

- **Core Initiative Two: Promoting Competition**—judiciously leveraging the benefits of competition to promote ongoing performance improvement and minimize lock-in risk.

- **Core Initiative Three: Providing Incentives**—using tools like contract type and source selection method in a manner that motivates vendors to be productive and innovative.

- **Core Initiative Four: Reducing Bureaucracy**—clarifying the chain of command to empower frontline acquisition managers and hold them accountable for results.

- **Core Initiative Five: Improving Services Acquisition**—taking a more strategic approach to acquiring services, which now outweigh weapon systems as a share of DOD's annual acquisition budget.

The report summarizes the thrust of each initiative, discusses DOD's successes and challenges implementing it, and presents lessons for acquisition executives and senior procurement officers in other federal departments and agencies. The analysis is based on a case study involving interviews with subject matter experts (SMEs) in government, industry, academia, and the think tank community, as well as review of a large sample of primary and secondary documents published by DOD, the Government Accountability Office (GAO), the Congressional Research Service (CRS), and other sources. Appendix II provides more detail on the interviews, documents, and other aspects of the research protocol.

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4. Another initiative at Better Buying Power's core is "Improving the Professionalism of the Total Acquisition Workforce." It is not included in the core initiatives featured in this report, for two reasons. First, it was introduced in Better Buying 2.0, while the five initiatives considered have been featured in all three versions of Better Buying Power. Second, this report takes the view that while professionalism is in and of itself an important concern, it is also one that cuts across Better Buying Power as a whole, including the five initiatives presented here.

The remainder of the report is organized in four sections. The first two sections set the context by providing, respectively, an overview of the defense acquisition system and the origins and evolution of Better Buying Power. The following section—the report's primary analytical component—discusses DOD's experience with the core Better Buying Power initiatives. Based on this analysis, the final section presents eight lessons for the broader federal acquisition community. The final section includes an outlook on the future of Better Buying Power and the prospects for smart buying efforts underway at DOD and in the federal government.

Overview of the Defense Acquisition System

Defense acquisition ("Big A") is a large, complex enterprise organized around three processes:

- **Requirements generation**—identifying, assessing, and prioritizing capabilities required to fulfill defense missions

- **Planning, programming, budgeting, and execution**—establishing and executing budgets for acquisitions

- **Acquisition ("little a")**—acquiring goods and services to support mission performance

Collectively, these three processes are referred to as "Big A" acquisition. The third—organized within the defense acquisition system—is referred to as "little a" acquisition (Schwartz 2014b). The remainder of this section focuses on "little a" acquisition and the defense acquisition system.

The Defense Acquisition System

The defense acquisition system is the "management process by which the Department of Defense provides effective, affordable, and timely systems to [end] users" (DOD 5000.01). As in the civilian context, in the defense context acquisition "is a broad term that applies to more than just the purchase of an item or service; the acquisition process encompasses the design, engineering, construction, testing, deployment, sustainment, and disposal of weapons or related items purchased from a contractor" (Schwartz 2014b). Likewise, as in the rest of the federal acquisition enterprise, DOD aims to maximize the value of its acquisitions by balancing cost, schedule, and performance, subject to applicable statutory and regulatory provisions.[5]

Supervision of the defense acquisition system falls under the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD-AT&L), a political appointee who serves as the Defense Acquisition Executive (DAE) and is DOD's third highest-ranking official, after the Secretary of Defense and the Deputy Secretary of Defense.

Each component within DOD (i.e., each military department, command, and civilian agency with acquisition responsibilities) contains a Component Acquisition Executive (CAE)—in the military departments, called the Service Acquisition Executive (SAE)—with responsibilities similar to the USD-AT&L, except at the component or service level. Thus, the following are key positions within the DOD acquisition community:

- The Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA-AL&T) serves as the SAE for the Department of the Army

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5. See DOD 5000.01, Section 3.1, which defines the defense acquisition system in terms of providing effective, affordable, and timely systems to end users. The 5000.01 is available at: http://www.dtic.mil/whs/directives/corres/pdf/500001p.pdf

- The Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN-RDA) serves as the SAE for the Department of the Navy (which includes the Marine Corps)

- The Assistant Secretary of the Air Force for Acquisition (ASF-AQ) serves as the SAE for the Department of the Air Force

Each CAE/SAE provides day-to-day oversight and direction of their component's acquisition activities, and each component acquisition system is organized in a slightly different way. Generally, however, for formal acquisition programs, the chain of command flows from the DAE to the CAE/SAE (depending on the size of the program, explained further below); from the CAE/SAE to a Program Executive Officer (PEO)—a military or civilian official overseeing a portfolio of acquisition programs (e.g., in the Navy, a PEO for ships); and from the PEO to a Program Manager (PM)—a military or civilian official directing a single acquisition program (e.g., in the Navy, a PM for a program to acquire a surface ship or a submarine). Individual PMs oversee program offices that employ engineers, budget analysts, contracting officers, and a variety of other personnel involved in managing and executing programs for development, production, and sustainment of weapons and other systems.

Figure 1: DOD Acquisition Chain of Command
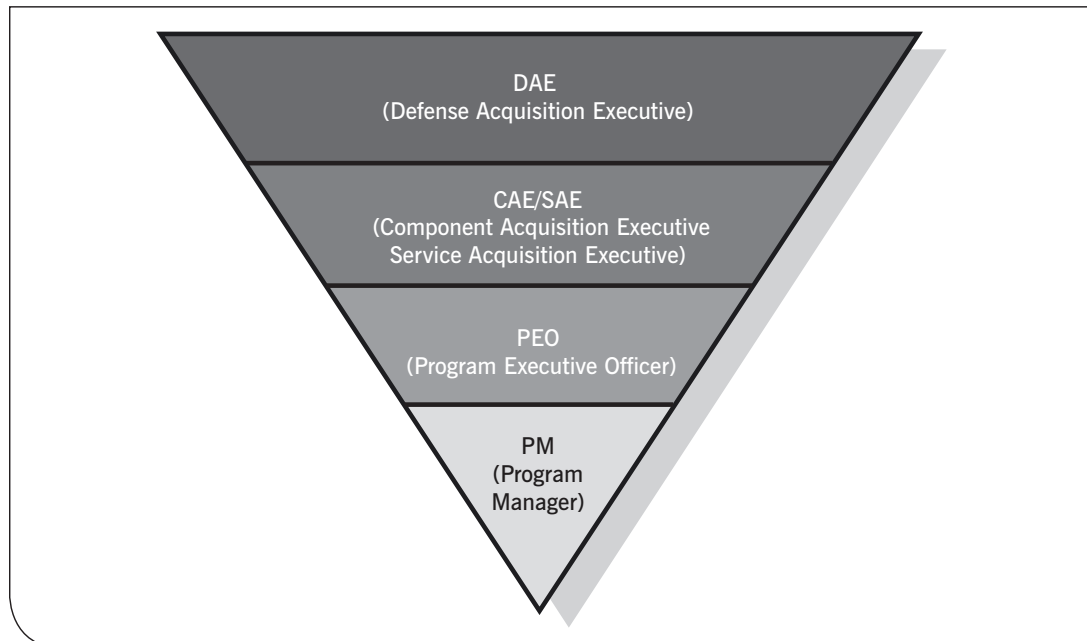
In addition to this formal chain of command, many defense acquisition and contracting activities occur within a large, diffuse network of operations in the United States and abroad, and they are heavily concentrated in services. Indeed, for many Americans the wars in Iraq and Afghanistan revealed for the first time the considerable extent to which the military relies on contractors for key service support. In these conflicts, as well as in the U.S. and other regions overseas, contractors were and remain a source of both invaluable operational support and, in certain cases, acute legal and ethical challenges. Whatever one's views on the issue, however, it is clear that operational contract support is often an important contributor to mission accomplishment or mission failure—so much so as to prompt now-retired Generals David Petraeus and John Allen (each of whom garnered significant praise for their performances leading forces in Iraq and Afghanistan) to assert that "contracting is the commander's business" (Kendall 2013).

On a dollars-and-cents basis, DOD spends slightly more annually on services than on supplies and equipment (including weapon systems; see DOD 2014). Moreover (and as a testament to the generals' observation), "the preponderance of contracted services support missions outside the normal acquisition chain" (Kendall 2013). As two experienced practitioners and researchers note, this change in the composition of DOD's overall contract spending—with a majority of dollars now being spent on services—represents a "major shift" from the pre- to the post-9/11 era (Gansler and Lucyshyn 2013).

Figure 2: Composition of DOD Contract Spending for FY13 (BY15$, billion)
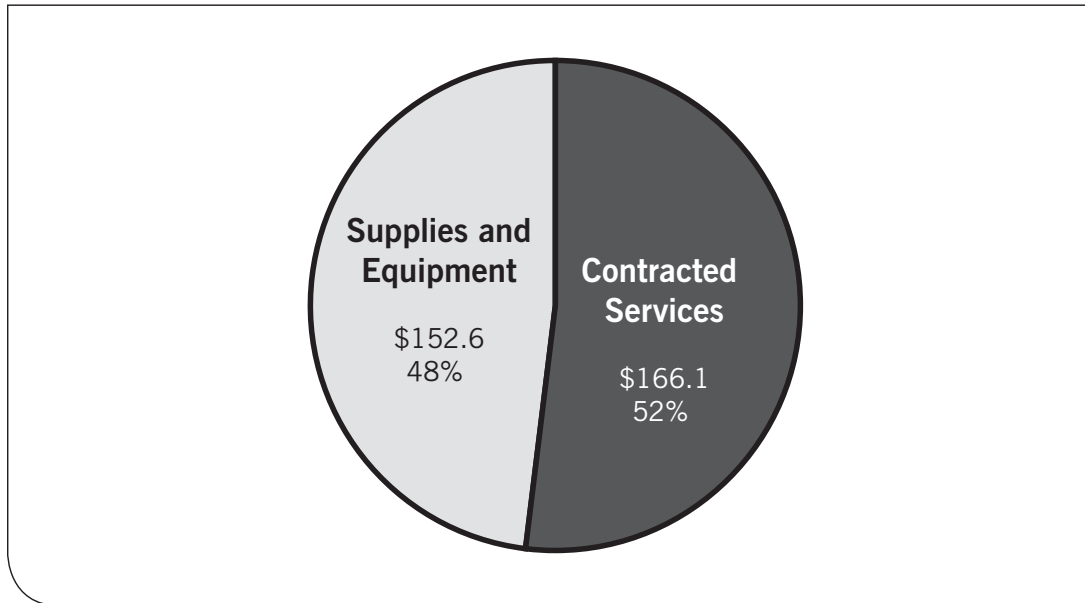
Source: Department of Defense, 2014. Performance of the Defense Acquisition System: 2014 Annual Report.

The Weapon Systems Acquisition Process

Despite the size and importance of services, observers still mostly associate defense acquisition with efforts to buy weapons and other major systems, and the core Better Buying Power initiatives focus extensively on enhancing the efficiency and productivity of these acquisitions. Thus, for context, the following is a brief overview of DOD's weapon systems acquisition process. The overview draws extensively from a CRS report entitled *Defense Acquisitions: How DOD Acquires Weapon Systems and Recent Efforts to Reform the Process* (see Schwartz 2014b). Interested readers are encouraged to consult this resource and its references for more detailed information.

For DOD, weapons and other systems are materiel solutions intended to meet military needs.[6] These solutions are identified through the requirements generation process—called the Joint Capabilities Integration and Development System (JCIDS)[7]—and are paid for using resources from a budget established through the Planning, Programming, Budgeting, and Execution (PPBE) system.[8]

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6. Not every need must be met using a materiel solution. Needs can also be met using non-materiel solutions like changes in training, doctrine, or organization (see Schwartz 2014b).
7. For more information on JCIDs, see the JCIDs manual (current as of January, 2015), available at: https://dap.dau.mil/policy/Documents/2015/CJCSI_3170_01I.pdf
8. For more information on PPBE, see Schwartz (2014b).

Upon identifying a materiel solution as a way to meet an operational need, the requirements community issues an Initial Capabilities Document (ICD) providing justification for the proposed solution. Once approved, the ICD permits the solution to proceed to the defense acquisition system.

As a matter of policy, the defense acquisition system is to operate in accordance with the principle of *flexibility.* Per DOD Directive 5000.01—which codifies the policies according to which the defense acquisition system should operate—there "is no one best way to structure an acquisition program" (DOD 5000.01).[9] Instead, each acquisition strategy should be tailored to "fit the particular conditions of [the] program, consistent with applicable laws and regulations and the time-sensitivity of the capability need" (DOD 5000.01). As such, DOD Instruction 5000.02, which describes the operation of the defense acquisition system in greater detail, presents six generic models that represent alternative ways to acquire a product based on its characteristics (e.g., hardware vs. software intensive) and urgency to end users.[10] For example, for urgently needed products, the 5000.02 provides for an "accelerated acquisition" model that "compresses or eliminates phases of the process and accepts the potential for inefficiencies in order to achieve a deployed capability on a compressed schedule" (DOD 5000.02). Following Schwartz (2014b), the description below corresponds to the "hardware-intensive model"—the "starting point for most military weapons systems" (DOD 5000.02).

Figure 3: Hardware-Intensive (Starting Point) Acquisition Model
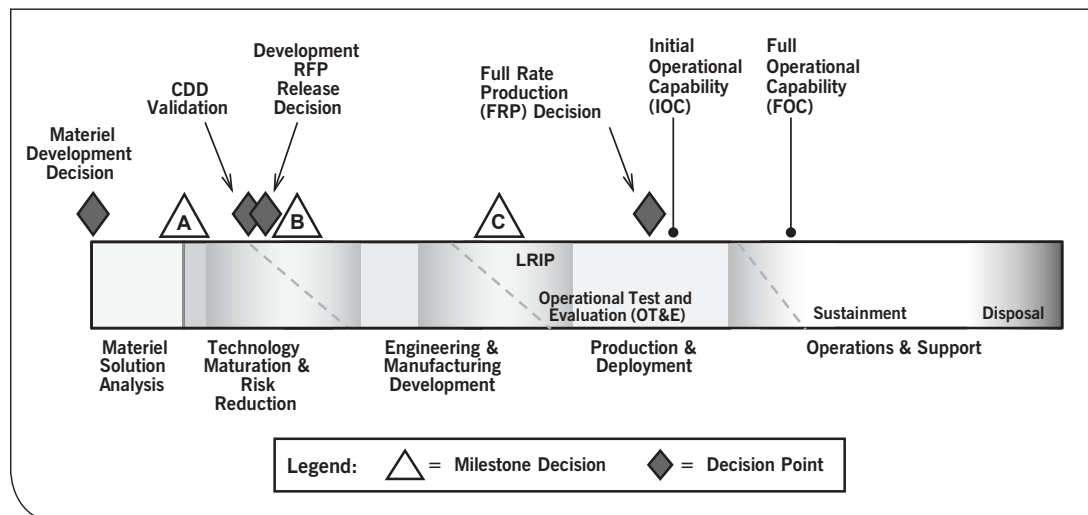
Like all other models, the hardware-intensive (or "starting point") model follows a process structured according to milestones that differentiate an acquisition into distinct phases. Entry into each phase is contingent upon approval by a Milestone Decision Authority (MDA), "the designated individual with overall responsibility for a program" (DOD 5000.01). The individual acting as the MDA generally depends on the size of the program, or its "acquisition category" (ACAT). For the largest programs—called Major Defense Acquisition Programs (MDAPs)—the USD-AT&L (acting as the DAE) generally serves as the MDA (although in some cases the relevant component head or CAE/SAE assumes this role). Component heads or CAEs/SAEs, or their designees, act as MDAs for smaller programs.

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9.   See supra note 4.
10. See DOD 5000.02, available at: http://www.acq.osd.mil/fo/docs/500002p.pdf

Figure 4: Acquisition Category Levels
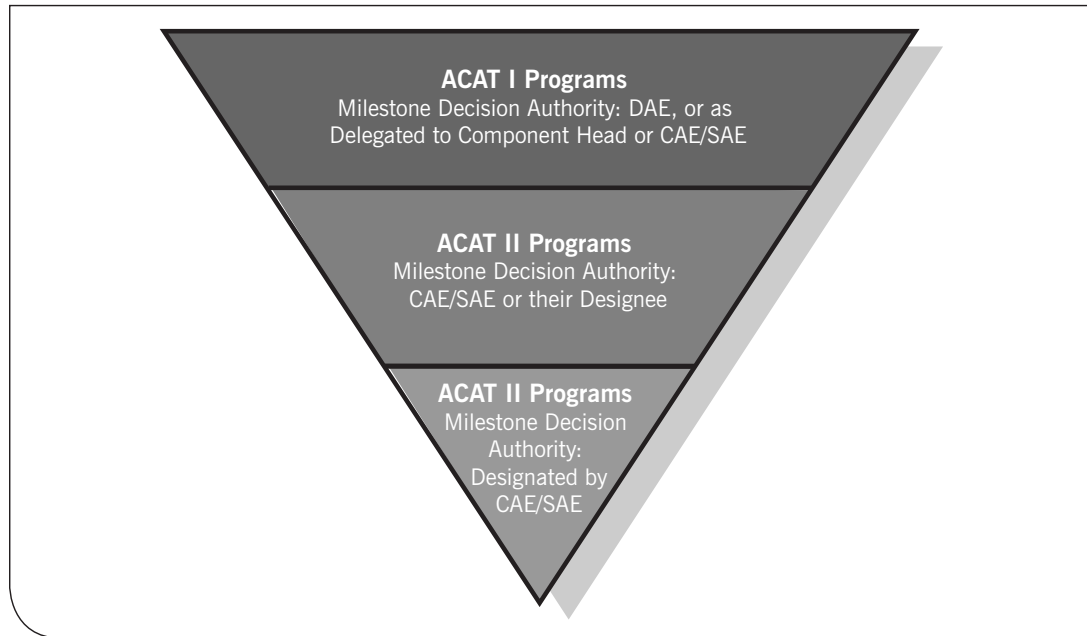
A materiel solution (as outlined in an ICD or comparable document) enters the acquisition system following a Materiel Development Decision (MDD), at which point the designated MDA determines whether the proposed solution is necessary to meet the identified need and, if so, determines which DOD component will oversee the program and which phase it will enter. Programs can enter the process at any phase for which they meet the relevant criteria. Assuming a program starts at the very beginning of the process, however, it proceeds as follows:

1. **Materiel Solution Analysis Phase.** This phase involves an Analysis of Alternatives (AOA) to compare the cost, schedule, performance, and other attributes of alternative versions of the proposed materiel solution; the development of an acquisition strategy; the appointment of a program manager; and the establishment of a program office. *The phase ends at* **Milestone A**, *the milestone at which the relevant MDA approves the proposed solution and acquisition strategy, and verifies that resources are available to pursue the strategy based on the proposed cost estimate (inclusive of life-cycle cost) and projections of future resource availability.*

2. **Technology Maturation and Risk Reduction Phase**. This phase involves efforts to mature the technology underlying the chosen solution and ensure it can provide the required capabilities within available resources. The phase involves preparation of a Capability Development Document (CDD), which outlines the solution's performance parameters, as well as competitive prototyping (a means of validating designs, cost estimates, and manufacturing processes to further understand and reduce technical risk; see GAO 2014b) and a Preliminary Design Review (PDR, to assess the completeness of the solution's preliminary design). The phase also involves release of a request for proposal (RFP) for full system development, at which time competing firms bid for the program's development contract and the acquisition strategy is initiated in earnest. *The phase ends at* **Milestone B**, *the milestone at which the relevant MDA approves an Acquisition Program Baseline (APB) outlining the program's cost, schedule, and performance goals, and the program is formally begun*.

3. **Engineering and Manufacturing Development Phase.** This phase involves efforts to prepare the system for manufacturing, and to test it for design maturity and operational

effectiveness. The phase involves preparation of a Capability Production Document (CPD), which updates the CDD. *The phase ends at* **Milestone C***, the milestone at which the relevant MDA approves the system for production.*

4. **Production Phase.** This phase involves production of the system (following award of the production contract(s)), beginning on a small scale to verify the manufacturing process. Initial units undergo further operational testing and, subject to a positive assessment of operational effectiveness and production of a sufficient number of operational units, the program achieves initial operating capability (IOC). The relevant MDA conducts a Full Rate Production (FRP) decision review, after which units can be produced in larger numbers. Upon production of a sufficient number of units at the full production rate, the system achieves Full Operational Capability (FOC).

5. **Operations and Support Phase.** This phase involves sustaining the system for the duration of its useful life and, at the appropriate time, disposing of it. By the beginning of operations and support, a program will have typically incurred about 30 percent of its life-cycle costs; the other 70 percent are incurred in the operations and support phase.

Weapon System Acquisition Process: Summary of Major Milestones

- **Milestone A**—point at which program is formulated and enters technology maturation phase

- **Milestone B**—point at which program is initiated in earnest and enters system development phase

- **Milestone C**—point at which program makes the transition from development to production and, eventually, to the operations and support phase

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Better Buying Power

Defense Acquisition Reform: An Elusive Goal

Despite over 60 years of effort, getting better outcomes in defense acquisition remains an elusive goal (Fox 2011)—one pursued virtually unabated by DOD, Congress, and every presidential administration since the end of WWII. The collective efforts of participants in this process include over 150 studies (Schwartz 2014a), each arriving at the "same general findings with similar recommendations" (Fox 2011). From assessment to assessment, this remarkable degree of similarity prompted former Deputy Secretary of Defense David Packard—namesake of perhaps the most significant study conducted in the past three decades (the President's Blue Ribbon Commission on Defense Management, also known as the "Packard Commission")—to remark: "We all know what needs to be done. The question is why aren't we doing it?"

As noted in a recent report, "many of DOD's current initiatives to improve acquisitions can be traced back to the ideas and recommendations in the Packard [study]" (Schwartz 2014a). Nonetheless, defense acquisition has, with some notable exceptions, proven largely impervious to improvements in cost, schedule, and performance. This poor track record led one observer—writing immediately after the Obama Administration assumed office in 2009—to suggest that we "skip acquisition reform this time" (Sapolsky 2009).

In emphasizing that "continuous process improvement is the best approach to [enhancing] the performance of the defense acquisition enterprise" (Kendall 2014b), Better Buying Power takes the suggestion to "skip reform" as its point of departure. Indeed, in focusing on ongoing improvement rather than a single set of reforms or policy changes, Better Buying Power is predicated on the notion that "there is no easy or simple way to dramatically improve acquisition outcomes" (Kendall 2014c).

Better Buying Power: Origins and Evolution

While officially launched in 2010, one could argue Better Buying Power actually has roots in the pre-9/11 era. In fact, on September 10, 2001, then-Secretary of Defense Donald Rumsfeld delivered a major address dealing with defense management issues. His message: we need to overhaul how DOD does business—urgently. In short, Rumsfeld declared war on the Pentagon bureaucracy, taking aim at everything from human resources to financial management to healthcare. He reserved special ire for the department's beleaguered acquisition system, arguing "our process and regulations have become so burdensome that many businesses have simply chosen not to do business with the Department of Defense" (Rumsfeld 2001). The existing process, Rumsfeld argued, all but guaranteed DOD could not leverage industry's capacity for innovation, making purchased weapons "a generation old the day they're deployed." This was unacceptable. Change, the Secretary promised, would be coming.

The next day, it did.

After 9/11, the exigencies of combating global terrorism and conducting military operations in Afghanistan and Iraq eclipsed Rumsfeld's other war. In the interest of supporting these conflicts, Congress approved budgets ensuring growth in both DOD's teeth and its tail. With few exceptions, this budget growth effectively removed the pressure to transcend business as usual (Gansler and Lucyshyn 2013). As then-Secretary of Defense Robert Gates and his chief military advisor, Chairman of the Joint Chiefs of Staff Admiral Mike Mullen, put it, rapid budget growth diminished the department's need "to prioritize, to make hard decisions, to do tough analysis, to make trades" (Gates & Mullen 2011; Schwartz 2014a).

Gates was among the first to recognize that DOD would not indefinitely enjoy the budget growth it grew accustomed to after 9/11. Accordingly, on May 8, 2010, in the Eisenhower Library in Abilene, Kansas, he delivered a noteworthy address of his own. Gates argued that "given America's difficult economic circumstances and perilous fiscal condition, military spending on things large and small can and should expect closer, harsher scrutiny. The gusher has been turned off, and will remain off for a good period of time" (Gates 2010). To withstand the looming budget pressure, Gates launched the Defense Efficiency Initiative, an effort to reduce tail spending while protecting DOD's investments in readiness, force structure, and modernization of key capabilities.

Better Buying Power represents the acquisition community's response to Gates's call for greater efficiency in defense spending. Its original architect is the current Secretary of Defense, Dr. Ashton Carter, who designed Better Buying Power version 1.0 in consultation with stakeholders from AT&L, the military services, industry, and the broader community of defense acquisition SMEs. Now in its third version and fifth year of existence, Better Buying Power is DOD's self-proclaimed mandate to maximize the value of each dollar it spends on goods and services (Carter 2010).

Better Buying Power 1.0: Doing More Without More (September 2010)

The idea of getting more value from acquisition is clear in the September 2010 *Memo* in which Carter introduced Better Buying Power 1.0. In his words:

> [We] have a continuing responsibility to procure critical goods and services our forces need in the years ahead, but we will not have ever-increasing budgets to pay for them. We must therefore strive to achieve what economists call productivity growth: in simple terms, to DO MORE WITHOUT MORE (Carter 2010).

In the memo, Carter went on to outline 23 individual actions across five initiatives, all aimed at boosting the return on DOD's investments in its portfolio of contracted goods and services.

Across each of the initiatives, Better Buying Power 1.0 focused on a suite of specific best practices that, while not presented as authoritative guidelines, still sent a strong signal about how acquisition professionals should consider doing business. For instance, under the initiative "Improve Productivity and Innovation in Industry and Government," Better Buying Power 1.0 highlighted the value of using contract types that strike a middle ground between firm fixed price—which offers little flexibility and puts financial risk on the vendor—and various types of cost reimbursement, which are more flexible and put financial risk on the government.

In between these endpoints, Carter encouraged exploring options that preserve a degree of flexibility for industry but still limit the risk to which DOD would be exposed. In particular, he pointed to fixed-price incentive firm target (FPIF) contracts, which allow government and industry to share in either the upside of cost underruns or the downside of cost overruns according to a "share ratio" (e.g., 50/50). These contracts also impose a ceiling on the amount

of cost overruns government will absorb above a target cost level (e.g., 120 percent of the target cost). Carter argued these contracts are good candidates for motivating performance while still granting the flexibility needed to do work where there is some uncertainty about cost (e.g., product development).

Better Buying Power 2.0: A Guide to Help You Think (November 2012)

Introduced in November 2012 by Frank Kendall (Carter's successor in the role of Under Secretary for Acquisition, Technology, and Logistics), Better Buying Power 2.0 represented an incremental yet meaningful change in the program's tone and substance. Notably, it expanded the number of major initiatives from five to seven, including through introducing an initiative called "Improve the Professionalism of the Total Acquisition Workforce." This stemmed from Kendall's view that a professional workforce is the most important driver of acquisition performance (Kendall 2012, 2014c). Of course, in introducing this initiative, Kendall did not mean to imply that the workforce lacks professionalism—he has been careful to stress that the workforce is "highly professional" (Kendall 2014b)—but that each person in the acquisition business "can and should always be working to improve [their] abilities" (Kendall 2014b).

To solidify the importance of thinking and acting professionally, Kendall stressed that the second iteration of Better Buying Power represented "a guide to help you think" (Kendall 2012). Thus, in lieu of applying specific best practices, version 2.0 encouraged people to analyze each unique situation and devise an approach that best fits the circumstances. For example, whereas version 1.0 signaled a preference for fixed-price incentive contracts, version 2.0 called simply for employing appropriate contract types. In Kendall's words, "there are a range of contract types for a reason: one size does not fit all" (Kendall 2012). Carter used much the same language in his memo introducing version 1.0 (and in stressing the fixed-price incentive approach, aimed to steer managers away from highly risky firm fixed-price development), but for both contract types and the range of other topics Better Buying Power 2.0 addressed, it aimed to crystalize the idea of using "the right tool for the right job." As Kendall said:

> The first responsibility of the acquisition workforce is to think. We need to be true professionals who apply our education, training, and experience through analysis and creative, informed thought to address our daily decisions. Our workforce should be encouraged by leaders to think and not to automatically default to a perceived 'school solution' just because it is expected to be approved more easily. [Better Buying Power] 2.0, like [Better Buying Power] 1.0, is not rigid dogma—it is guidance subject to professional judgment (Kendall 2013).

Better Buying Power 3.0: Achieving Dominant Capabilities Through Innovation and Technical Excellence (April 2015)

Finalized in April 2015, Better Buying Power 3.0 maintained the program's focus on core initiatives, including achieving affordability, controlling costs, promoting competition, providing incentives, reducing bureaucracy, and improving services acquisition. It also put stronger emphasis on "innovation, technical excellence, and the quality of [DOD's products]" (Kendall 2015). As Kendall has argued, emphasis on these latter issues is important given the increasingly tenuous nature of U.S. technological superiority. This is a fundamental source of American military power—one that gives the nation key advantages over potential geopolitical rivals (e.g., the ability to offset a rival's superior numbers)—but in Kendall's words, it is threatened because:

> Potential adversaries have had decades to study the American way of war and to develop and field systems and tactics designed to defeat American forces, particularly our global power projection capabilities. At the same time, there has been a remarkable leveling of the state of technology in the world, where commercial

technologies with military applications such as advanced computing technologies, microelectronics, sophisticated sensors, and many advanced materials, are now widely available. In addition, the global information network has made protection of technical information much more difficult, a fact that potential adversaries are doing everything they can to exploit. *Our technological superiority is not assured, and in fact it is being challenged very effectively right now* (Kendall 2014b; emphasis added).

To promote innovation and preserve technological dominance, Better Buying Power 3.0 calls on the acquisition community to take a number of actions. Of particular note is version 3.0's call (under the initiative "Achieve Dominant Capabilities While Controlling Costs") to strengthen cybersecurity over the product life cycle to better shield DOD's products (especially its weapon systems) from various types of cyberattacks.

Making a greater effort to defend against cyberattacks is significant, given the increasing sophistication and effectiveness of state and non-state actors' cyber capabilities, as well as the very real cybersecurity vulnerabilities in complex weapon systems. If adversaries can steal weapon systems' technical information, for example, they could "significantly degrade U.S. technological superiority by saving [themselves] time and effort in developing similar capabilities or countermeasures" (Kendall 2015). Accordingly, from concept design to disposal and at all points in between, bolstering the cybersecurity of defense products represents a key DOD priority and, by extension, a critical component of Better Buying Power. To the extent it conflicts with other efforts—such as Better Buying Power's actions to reduce unproductive processes and bureaucracy—it also presents an important tradeoff that the AT&L leadership and personnel across the acquisition workforce must manage carefully going forward. Only time will reveal whether the workforce can negotiate this trade-off and, more generally, can balance the ongoing pursuit of productivity and efficiency with a newly established focus on innovation and technological superiority.

Beyond Business as Usual? DOD's Experience with the Core Better Buying Power Initiatives

Though definitely not the first (nor, no doubt, the last) of DOD's efforts to improve its acquisition practices, Better Buying Power is a timely and instructive case in the challenges and opportunities of enhancing acquisition performance through a commitment to continuous improvement. This commitment is illustrated in the strong degree of continuity across Better Buying Power's three versions, and especially in the ongoing emphasis it places on five core initiatives:

- **Core Initiative One: Achieving Affordability and Controlling Costs**—planning and executing large, complex acquisitions in a manner that ensures the projects are affordable within future budgets

- **Core Initiative Two: Promoting Competition—**judiciously leveraging the benefits of competition to promote ongoing performance improvement and minimize lock-in risk

- **Core Initiative Three: Providing Incentives**—using tools like contract type and source selection method in ways that motivate vendors to be productive and innovative

- **Core Initiative Four: Reducing Bureaucracy**—clarifying the chain of command to empower frontline acquisition managers and hold them accountable for results

- **Core Initiative Five: Improving Services Acquisition**—taking a more strategic approach to acquiring services, which now outweigh weapon systems as a share of DOD's annual acquisition budget

The enduring place these initiatives occupy across versions 1.0, 2.0, and 3.0 make them an ideal place to start when asking whether Better Buying Power is moving defense acquisition beyond "business as usual," as well as what lessons it offers acquisition executives and senior procurement officers striving to get more for the money their own agencies spend on critical goods and services.

Table 1 crosswalks the five core initiatives discussed in this section with the initiatives contained in Better Buying Power versions 1.0, 2.0, and 3.0.

Core Initiative One: Achieving Affordability and Controlling Costs

Motivation for the Initiative

Affordability and cost control are fundamental prerequisites for acquisition success, especially for large, complex projects. Allowing unaffordable projects to enter the acquisition process and permitting ongoing cost increases can lead to disaster, for both the project in question and, potentially, for other projects in a portfolio of mission-critical investments. For DOD, the sheer range of materiel capabilities required to defend the nation and conduct operations on land; at sea; and in the air, space, and cyberspace impose stringent demands on resources. Achieving affordability and controlling costs are crucial to ensuring each of the Pentagon's highest priority investments gets the funding it needs.

Table 1: Better Buying Power—Major Initiatives

Core Initiatives Examined in this Report	Better Buying Power 1.0 (Five Components)	Better Buying Power 2.0 (Seven Components)	Better Buying Power 3.0 (Eight Components)
Core Initiative One: Achieving Affordability and Controlling Costs	Target Affordability and Control Cost Growth	Achieve Affordable Programs	Achieve Affordable Programs
Core Initiative One: Achieving Affordability and Controlling Costs		Control Costs Throughout the Product Life Cycle	Achieve Dominant Capabilities While Controlling Life Cycle Costs
Core Initiative Two: Promoting Competition	Promote Real Competition	Promote Effective Competition	Promote Effective Competition
Core Initiative Three: Providing Incentives	Incentivize Productivity and Innovation in Industry and Government	Incentivize Productivity and Innovation in Industry and Government	Incentivize Productivity in Industry and Government
Core Initiative Four: Reducing Bureaucracy	Reduce Non-Productive Processes and Bureaucracy	Eliminate Unproductive Processes and Bureaucracy	Eliminate Unproductive Processes and Bureaucracy
Core Initiative Five: Improving Service Acquisition	Improve Tradecraft in Services Acquisition	Improve Tradecraft in the Acquisition of Services	Improve Tradecraft in the Acquisition of Services
Better Buying Power Components Not Discussed in this Report as a Core Initiative			
			Incentivize Innovation in Industry and Government
		Improve the Professionalism of the Total Acquisition Workforce	Improve the Professionalism of the Total Acquisition Workforce

Experience to Date

Starting with version 1.0, Better Buying Power introduced two major actions to achieve affordability and control costs: setting and enforcing affordability constraints, and "implementing should-cost management."

These efforts—affordability especially—remain a work in progress. Then-Under Secretary Carter put it bluntly in the memo introducing Better Buying Power 1.0, arguing that if affordability means "conducting a program at a cost constrained by the maximum resources the Department can allocate for that capability, [many] of our programs flunk this most basic test" (Carter 2010). Of cost control, he went on to argue that (as of 2010) "[the] Department will obligate about $2 trillion in contracts over the next five years … so savings of a few percent per year [achieved through cost control measures] are significant" (Carter 2010).

Setting and Enforcing Affordability Constraints

For large acquisitions, Better Buying Power called on component leaders and acquisition executives to hold programs accountable by setting and enforcing affordability constraints. In essence, this action required establishing an affordability cap—a resource constraint to be treated like a key performance parameter akin to power or speed (Carter 2010)—at Milestone B, a program's formal start. A program derives its constraint—expressed in terms of maximum allowable acquisition costs (typically 30 percent of a program's life-cycle cost) and sustainment costs (typically 70 percent of a program's life-cycle cost)—from the analysis of two factors: first, how a system's costs vary, given changes in schedule and other performance parameters; and second, whether and to what extent incurring these costs is feasible, given future resource availability and commitments to other projects. For example, in the Navy's case, affordability analysis might ask whether and to what extent a surface ship's costs can be incurred, given commitments to other, similar assets in a portfolio of ship investments. Once established, the affordability constraint would place a ceiling on the amount of resources the surface ship project could consume before it exhausted available funding or crowded out other commitments.

Available data suggest DOD is enjoying some success in setting these constraints, although a number of its ongoing programs either passed the relevant milestone (Milestone B) before Better Buying Power and the establishment of the affordability requirement, or have yet to put a constraint in place. In its most recent annual assessment of major defense acquisition programs (MDAPs)—DOD's largest acquisition projects based on size (see "Overview of the Defense Acquisition System")—the GAO reports that roughly two-thirds, or 35 of 53 current and future programs for which it performed a detailed assessment (out of a total portfolio of 78 programs, 25 of which are only analyzed to determine portfolio-level trends), have established an affordability constraint (GAO 2015b). The GAO also reports that most major programs without a constraint "plan to establish one in the future" (based on still being in the pre-Milestone B portion of the acquisition process—see GAO 2015b). Progress at lower levels is less clear, based in part on challenges of obtaining data on smaller programs. The GAO recently reported that DOD "could not provide sufficiently reliable data [to] determine the number, total cost, or performance of [current] acquisition category (ACAT) II and III programs" (GAO 2015a). Obtaining more reliable data on these programs is necessary before any firm judgment can be made regarding their progress in achieving affordability through the use of an affordability constraint.

Implementing "Should-Cost" Management

To remain within affordability constraints and enhance efficiency, Better Buying Power made "should-cost management" one of its cornerstones. In short, "should-cost" means "what work should cost after the fat is squeezed out" (Fitzgerald 1989; Schwellenbach 2011). It differs from "will cost," which reflects what work will cost based on independent estimates. DOD uses this latter concept of cost as a basis for establishing program budgets, but as then-Under Secretary Carter argued in introducing Better Buying Power 1.0, "it does not help the program manager to drive leanness into the program. In fact, just the opposite can occur: the [will cost estimate], reflecting business-as-usual management in past programs, becomes a self-fulfilling prophecy. The forecast budget is expected, even required, to be fully obligated and expended" (Carter 2010).

To "interrupt this vicious cycle" (Carter 2010)—tantamount to making "did cost = will cost" (Fitzgerald 1989; Schwellenbach 2011)—Better Buying Power 1.0 required managers to establish should-cost targets that (at least in theory) motivate them to examine cost drivers and actively seek out areas to achieve efficiencies that drive expenditures below the will-cost level. As an incentive, programs may recoup some of their realized savings for purposes like buying more capability.

Across versions 1.0, 2.0, and 3.0, should-cost management appears to be one of the most widely implemented actions under Better Buying Power. Indeed, by the time he introduced Better Buying Power 3.0, Under Secretary Kendall stated that DOD had achieved near-universal implementation of the practice. In his words, "Nearly 100 percent of ACAT I programs, approximately 90 percent of ACAT II programs, and 80 percent of ACAT III programs now have should-cost targets and are managing to them" (Kendall 2015).

At least at the ACAT I level, the GAO's work verifies this claim. In its 2015 assessment of major programs, GAO reported that approximately 90 percent of the current programs it assessed (34 of 38) are pursuing should-cost targets through careful contract negotiation and program execution. As in the case of affordability constraints, detailed insights remain more difficult to capture from programs at lower levels, but multiple memos from the service acquisition executives (SAEs) indicate smaller program offices within each military branch have been directed to use should-cost management.

In DOD's largest programs, GAO's work points to over $32 billion in savings—$17.8 billion realized, $14.5 billion anticipated—from should-cost efforts. Based on a total portfolio of 78 programs with an estimated acquisition cost of $1.6 trillion, this is a relatively modest amount. Nonetheless, it does reflect a commitment to enhancing productivity and efficiency in some of DOD's most mission-critical acquisitions.

Outstanding Challenges

With respect to both its affordability and cost control measures, the DOD leadership's principal challenge going forward will be to follow through on commitments it has made to both enforce affordability constraints and reward aggressive use of should-cost management.

Better Buying Power calls on leaders at the AT&L and component levels to take corrective action for programs that:

- Are clearly shown to be unaffordable by the analysis done in advance of setting a constraint

- Appear likely to breach an established constraint

- Have breached their constraint (Kendall 2012)

Corrective actions include:

- Planning to buy a cheaper product

- Revisiting technical requirements or planned quantities (DOD 5000.02)

- In the most serious cases, terminating the project (Kendall 2012, 2013; GAO 2015b)

The logic and consistency with which leaders take these actions will ultimately determine whether program offices take their affordability constraint seriously, or discount warnings about breaching it as "cheap talk."

For programs that make aggressive use of should-cost management, Better Buying Power directs leaders to return realized savings "as closely as possible to their origin as Service and Department priorities allow" (Kendall 2012). As this directive implies, the key challenge will be to balance rewarding effective use of should-cost management (by returning savings to the programs that generated them) with meeting critical service- and department-level funding priorities (by re-allocating savings to areas outside their point of origin). Perhaps the most important requirement for striking this balance is articulating why savings must in some cases

be re-allocated to other areas, and clearly and consistently adhering to the principles that guide these choices.

For additional insight into DOD's efforts to achieve affordability and control costs, see the case illustration "Affording Deterrence: the Ohio Class Submarine Replacement Program," in Appendix I, page 40. This illustration discusses the affordability challenges DOD will face as it seeks to modernize its fleet of ballistic missile submarines—the "sea-based" (as opposed to air- and land-based) leg in America's nuclear weapons delivery triad—while still supporting other investments in naval assets and the nation's broader portfolio of nuclear capabilities.

Core Initiative Two: Promoting Competition

Motivation for the Initiative

Competition is one of DOD's most powerful tools for achieving efficient and effective acquisition. Ultimately, however, it is just a tool—there are both "good" and "bad" uses of competitive forces. Used appropriately, competition can motivate vendors to continuously seek lower costs and higher performance; used inappropriately, it can prove counterproductive, leading to the very outcomes its users seek to avoid (Gansler and Lucyshyn 2013). In particular, mandating competition through measures such as periodic re-competes of previously awarded business, rather than maintaining competition as an option to be exercised in the event of poor performance, creates "perverse incentives…since frequent re-competition will discourage high-performing incumbents from implementing and investing in continuous improvement programs" (Gansler and Lucyshyn 2013).

In introducing Better Buying Power 1.0, then-Under Secretary Carter noted that "in recent years, the Department has achieved the highest rates of competition in its history" (Carter 2010), and work from the GAO suggests DOD has largely sustained this momentum since launching the Better Buying Power initiatives. Since 2010, the data show that DOD has consistently obligated between 55 and 60 percent of its total annual contract and task order obligations on a competitive basis, with some components achieving near 80 percent competition rates year-over-year (GAO 2015d).[11] Nonetheless, as Carter noted in 2010, the department still does not "[avail] itself of all possible competitive situations" (Carter 2010). For example, while opportunities for competition exist across the entire process through which DOD acquires weapons and other major systems, it is often used only during the development phase and—depending partly on the nature of competition for development work—in the early stages of production (Gansler and Lucyshyn 2013). It tends to taper off during the production phase, "even though it is the key to ensuring a real incentive is given for contractors to ensure they meet cost, schedule, and performance requirements" (Gansler and Lucyshyn 2013).

Experience to Date

To further promote competition in large programs, Better Buying Power 1.0 required program managers to develop and present a competitive strategy at each major programmatic milestone (Carter 2010). Versions 2.0 and 3.0 maintained the emphasis on developing and implementing competitive acquisition strategies, with the goal of avoiding "lock-in" to a vendor for which incumbency advantages may discourage ongoing cost-reduction and performance-improvement efforts (DOD 2014). In particular, Better Buying Power has emphasized using modular open systems architecture (MOSA) and intellectual property (IP) strategies including data rights acquisition to create and maintain competitive environments.

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11. Competition varies across components due in part to the composition of their contract spending.

Using Modular Open Systems Architecture (MOSA) and Intellectual Property (IP) Strategies
Modular open systems architecture (MOSA) and various strategies for managing intellectual property (IP) are key ways of promoting competition in large acquisitions.

MOSA is a product development approach based on using modular (i.e., isolated, independent, and removable) system components and, where possible, connecting the components with one another using industry standard, publicly available hardware and software interfaces (GAO 2014a). The idea behind this approach is to develop products that do not rely on proprietary technology for which activities like product repair, upgrades, or component replacement can only be performed by one vendor. Accordingly, a key benefit of the approach is promoting a competitive environment in which an incumbent vendor is truly motivated by a concern to keep its customer's business. Other potential benefits include lower life cycle costs, increased innovation, reduced delivery times, faster and less costly upgrades and repairs, and enhanced interoperability (GAO 2014a).

Where a MOSA approach is not feasible, IP strategies such as acquiring the rights to a system's technical data is another way to mitigate lock-in risk. In these cases, the technical data (e.g., design drawings or specifications) represent the "glue" that holds together individual components of a system and allows them to operate in conjunction with one another. These data are important in that they "can have far reaching implications for DOD's ability to sustain and competitively procure parts and services for [weapon] systems," including systems that may "remain in the inventory for decades" (GAO 2011b). In other words, knowledge of and access to the relevant technical data are prerequisites for performing work on systems where the individual components are connected with one another by proprietary technology. While DOD can acquire technical data through its contracts with a particular vendor, to the extent it either does not acquire all the data it needs or the rights necessary to release these data to third parties, it limits its ability to perform system-related work in-house or to subject a vendor's work to the disciplinary forces of competition. When DOD does acquire the necessary data and the accompanying rights to release it to third parties, it preserves its option for competition and can more effectively harness competitive forces as a disciplinary device.

Available data suggest DOD's largest acquisition programs are making meaningful use of MOSA or IP strategies, including data acquisition, to create and maintain competitive environments. In its latest assessment of major programs, the GAO indicates that 91 percent of the programs for which it conducted a detailed assessment (48 of 53 current and future programs) "report that their acquisition strategy includes options for competition after system development start and through completion of production" (GAO 2015b). Moreover, GAO indicates that "the use of open systems architecture, or the acquisition of complete technical data packages were among the most frequently cited strategies" for creating and maintaining competitive environments (GAO 2015b). These findings suggest DOD is having some success in implementing the competition-related aspects of Better Buying Power, including (importantly) harnessing competitive forces across multiple phases of the acquisition cycle.

Outstanding Challenges

Going forward, DOD's principal challenges with respect to competition include sustaining the high competitive award rates it has achieved in recent years, while making smarter and more judicious use of competition as a tool. Seeking competition for its own sake—mandating periodic re-competes, for example—may be a well-intentioned policy, but it makes competition an end rather than a means of incentivizing cost control and performance improvement. The key will be to continue creating competitive environments where DOD retains the option to re-compete previously awarded business, and in doing so, prevent its vendors from succumbing to the complacency otherwise permitted by a strong incumbency advantage.

Using MOSA and IP strategies to create competitive environments will work best when these approaches are integrated into a program's acquisition strategy from the very start. They are much more difficult to implement after the program is underway. Use of the IP approach, in particular, requires careful early planning to determine which elements of a technical data package the government should acquire, as well as those elements for which it needs to secure release rights. This is challenging in and of itself, and it is compounded by the fact that parties in both government and industry may be inclined to resist the IP approach. To the extent government has not historically used an IP strategy when procuring its most complex products, the approach may not be strongly embedded in its culture or standard operating procedures. Moreover, industry may view an IP strategy as particularly threatening, since retaining IP is a key way to establish an incumbency advantage. Thus, again, the best time to start is early— such as when firms are competing for a product's initial development contract. Absent the sort of leverage this situation provides, it may prove more difficult to create and maintain a competitive environment through an IP (or a MOSA) strategy in a program's later stages.

Core Initiative Three: Providing Incentives

Motivation for the Initiative
Members of the defense industry make a vital contribution to U.S. national security, but firms are ultimately accountable to their owners, not the government. In other words, while defense differs significantly from other sectors of the U.S. and the global economy, it is still a business, and good business practice demands that firms look after their own interests. To the extent these interests do not align with those of the government, motivating firms to be productive and innovative comes down to developing appropriate incentives—to structuring business situations so that the objectives a firm wants to achieve are commensurate with achieving outcomes deemed valuable from the government's point of view. Providing stronger and smarter incentives to industry has been a core focus of Better Buying Power.

Experience to Date
Across each of Better Buying Power's three versions, DOD's leaders have experimented with various tools to incentivize productivity and innovation in industry. They have focused in particular on contract types and source selection methods.

Contract Types: Using the Right Tool for the Right Job
Under the right conditions, an appropriately chosen contract type can be a very effective way to motivate behavior and produce better outcomes. As Carter put it in his memo introducing Better Buying Power 1.0, "[choosing] contract type is one important way of aligning incentives of the government and the contractor" (Carter 2010). He went on to stress that "one size does not fit all," but he emphasized using the fixed-price incentive firm (FPIF) target contract—an intermediate contract type on the spectrum between more rigid fixed-price and more flexible cost-reimbursement approaches—"as a point of departure whenever conditions obtain (or can be created) that make it appropriate" (Carter 2010).

In essence, the FPIF contract type combines a target price with cost-control incentives that permit a degree of flexibility not available under a firm fixed-price contract (where the vendor bears the full financial risk). The basic elements of an FPIF contract include a target cost, a target profit, and a target price (cost + profit), plus a share ratio indicating how the government and its vendor can share in the upside of cost underruns or the downside of cost overruns, subject to a ceiling above which government will no longer incur liability for overruns of the target cost.

Fixed-Price Incentive Firm (FPIF) Target Contracting: A Simple Example

To see how a fixed-price incentive firm target contract can motivate cost control, consider the following example (adapted from an article entitled "Fixed Price Incentive Firm Target Contract Type," available online through the Defense Acquisition University (DAU)).*

Suppose a project's target cost is $100, its target profit is $10, and its target price is $110 ($100 + $10), with a 50/50 share line and a ceiling set at 120 percent—the parameters Carter recommended using as a starting point. Under these assumptions, a $10 cost underrun would imply the following:

Actual Cost = $100 − $10 = $90

Actual Profit = $10 + ($10 x 0.5) = $10 + $5 = $15

Actual Price Paid = $90 + $15 = $105

Actual Profit = $15/$90 = 16.67% (versus a planned profit of $10/$100 = 10.0%)

As the example illustrates, the FPIF contract rewards efforts to reduce cost by increasing the vendor's profit margin, which goes up due to higher earned profits calculated according to the ratio defining how government and industry share in cost underruns and overruns. Similarly, the contract penalizes failure to control costs by decreasing the vendor's margin. Thus, the real power of the FPIF contract is in using the "share ratio" to give vendors an incentive to control costs. To the extent they do, they earn more profit (and, as the example shows, the government pays a lower price). To the extent they don't, they earn less profit (and, up to a certain point—here $120 based on an overrun constrained at 20 percent of the target cost—the government pays a higher price; beyond this ceiling, the vendor must absorb all cost increases).

*See https://dap.dau.mil/acquipedia/Pages/ArticleDetails.aspx?aid=6794b407-22e0-4d83-aff9-80474fc70014

In emphasizing this contract type, Carter took care to lay out the conditions under which it would be appropriate, noting in particular that the "fixed-price" component of the FPIF approach requires that government know clearly what it wants to buy and that the vendor possesses enough knowledge of its costs and production processes to name a price (Carter 2010). Despite stressing these conditions, however, it appears (based on revisions in Better Buying Power 2.0) that some went on to use FPIF contracts in situations where they may not have been the best fit. For instance, while some forms of development and other high-knowledge content work may be amenable to incentive-based fixed price contracting, often times this approach cannot accommodate the uncertainty surrounding development work. Cost-reimbursable contracts are more appropriate in these latter cases, since they better account for uncertainty attributable to factors like "immature technologies or budgetary challenges, or the need to make changes as [a product's] design matures or the threat changes" (Gansler and Lucyshyn 2013).

To curtail unwarranted use of fixed price approaches, Kendall used Better Buying Power 2.0 to clarify Carter's original guidance. He stressed that fixed-price incentive contracts make sense "in certain situations [such as low-risk development or early production]," but that ultimately "the use of a specific contract type should be governed by the nature of the work and deliverables being placed on contract" (Kendall 2013). He used Better Buying Power 3.0 to further clarify this guidance, noting that analysis performed subsequent to the rollout of version 2.0 provided stronger evidence about the effectiveness of contract incentives that tie rewards to

performance (e.g., as in the FPIF approach), and demonstrated more generally that the nature of the incentive structure is what drives cost control; the broader distinction between "fixed price" and "cost-plus" is less important. Indeed, according to the study on which Kendall based his remarks (see DOD 2014), the nature and benefits of firm fixed-price (FFP) contracting may be particularly prone to misinterpretation. On the one hand, a fixed price is only "fixed" to the extent the contracted scope of work remains unchanged (if it changes, as it often does, costs will also change). On the other hand, the association between a "firm fixed price" and cost control does not necessarily imply that a fixed price *controls* costs. Instead, lower costs on firm fixed-price contracts often stem from the fact that DOD *uses the firm fixed-price approach in less risky circumstances* (for which costs may remain stable, anyway).

The manner and effectiveness with which DOD can use contract types that make sense in a given situation—that accommodate the nature and uncertainty of the work, and that provide vendors with the flexibility and motivation to do what government has asked, in a high performance fashion—will remain an enduring challenge. However, that the department's leadership has made a concerted effort to understand what works and what does not, and incorporated these insights into Better Buying Power, is an encouraging sign.

Source Selection Methodologies: Defining and Communicating the Meaning of "Best Value"

DOD makes the vast majority of its source selection decisions on a best-value basis, on which among a set of competing proposals will provide the department with the greatest return on its investment.[12] The logic underlying this approach is sound, but it implies that the department's workforce can readily define and communicate what constitutes "best value" from one case to the next. This is not always a simple exercise. Thus, using a best-value approach to award a contract can result in questions about how the government made its decision, and it is not guaranteed to provide the government with maximum value (even if the award decision is made according to this benchmark).

Better Buying Power 1.0 did not speak to the issue of source selection, but in the period following its rollout, industry stakeholders voiced concerns about DOD's growing, and in their view, increasingly indiscriminate use of price as a sole means of assessing the value of qualified competing proposals (e.g., see Soloway 2012).

By the time Kendall released Better Buying Power 2.0, it is clear that the Pentagon had heard industry's message. He said:

> Industry is entitled to expect that the government will express its requirements as clearly as possible and use the competitive source selection technique that is consistent with providing the best use of taxpayer dollars (Kendall 2013).

To improve the department's use of best-value source selection methods, Better Buying Power 2.0 called for, first, more clearly defining and communicating the meaning of best value—including what DOD would be willing to pay for solutions offering performance above minimum prescribed thresholds—and second, setting minimum thresholds in a way that provides for sufficient quality (Kendall 2012). This latter action aimed to ensure that when the department uses the Lowest Price Technically Acceptable (LPTA) strategy to make a best-value decision (i.e., when it relies solely on price to assess the value of qualified competing proposals), it does not sacrifice needed quality or performance just so it can pay less.

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12. The GAO reports that in FY 2013, DOD used one of two best value methods—Lowest Price Technically Acceptable (LPTA) or the trade-off method—for 93 percent of its competitively awarded contracts with obligations of over $1 million (GAO 2014).

Better Buying Power 3.0 maintained the emphasis on clearly defining and communicating best value (to include cases in which best value is defined on an LPTA basis), and it continued to stress that the department should specify what it is willing to pay for performance above thresholds. As Kendall argued in introducing version 3.0, "without information [on what DOD is willing to pay for higher performance], the default response will be to bid to the lowest acceptable [performance] level" (Kendall 2015).

To date, one of the most closely followed issues concerning Better Buying Power's approach to source selection has been use of the LPTA method. On the continuum that defines best value either more or less in terms of price (as opposed to non-price factors), LPTA is solely price-defined. In other words, using LPTA as a best-value selection method means using price to guide the selection of a winner in a set of bids that meet the minimum standard for technical acceptability. There is nothing inherently wrong with this approach, but as mentioned above, it is an often-cited source of bad contracting practice.

Industry, in particular, objects to using the LPTA approach when contracting for complex goods and services whose value cannot be differentiated by price alone, and observers often point out that LPTA may be used just because it is easier, faster, or more likely to minimize the chance of a bid protest (Gansler and Lucyshyn 2013). That said, evidence from a recent study by the GAO suggests DOD is not systematically misapplying LPTA (see GAO 2014b). In general, GAO found that DOD uses LPTA when it possesses sufficiently strong knowledge of its requirements and its vendor partners to determine that the vendor offering the technically qualified proposal at the lowest price provides the best value. Where it knows less about its requirements and/or its vendors, DOD opts for the trade-off method, meaning it accounts for both price and non-price factors in making its award decision.

In interviewing contracting officials about their choice of LPTA versus trade-off, a number of individuals told GAO that budgetary pressure and accompanying efforts to enhance efficiency—including through the Better Buying Power initiatives—prompted them to look more toward LPTA when evaluating offers and making awards. Again, it does not appear that DOD is systematically misapplying LPTA, but these reflections—taken from managers on or near the frontlines of the acquisition enterprise—do raise concerns about the leadership's ability to penetrate the many levels between themselves and members of the workforce tasked with putting Better Buying Power into practice, and suggest that initiatives like Better Buying Power are subject to a degree of interpretation and discretion that could lead to unintended consequences in some cases.

Outstanding Challenges

An increasingly strained budget and an expanding set of global security challenges demand that DOD do everything it can to incentivize productivity and innovation among its vendor partners. Contract types and source selection methods are not the only tools at the department's disposal—and they are certainly not a panacea for all its problems with cost, schedule, and technical shortcomings—but used effectively, these particular tools have real potential to motivate industry to be more productive and innovative in meeting its customers' needs.

The DOD leadership's ongoing commitment to understand what works, when, and why, especially with respect to contract types, is an encouraging sign, but the challenge will be to put these lessons into practice. With respect to both the choice of contract type and source selection method, DOD's leadership must maintain its commitment to communicating with its workforce and providing them with tools they can use to analyze each unique situation and select the approach that best fits the circumstances. Using the source selection process to convey to industry how much the department will pay for solutions over and above its basic

needs will remain an especially acute challenge, but also a critical one for the department to address as it works to maintain America's longstanding (but increasingly threatened) position of technological superiority.

For additional insight into DOD's efforts to incentivize productivity and innovation, see the case illustration "Providing Incentives in Product Development: the KC-46 Aerial Refueling Program" in Appendix I, page 41. This case illustration discusses DOD's efforts to contract for development work associated with modernizing its fleet of aerial refueling aircraft—planes that provide in-air refueling for other planes (e.g., fighter jets)—using an FPIF approach. This case is noteworthy given the modernization program's size (approximately $50 billion), the critical contribution it makes to U.S. and allied power projection capabilities in the air domain, and its use of a fixed-price type contract for product development (which, in the vast majority of cases, is done on a cost reimbursable basis).

Core Initiative Four: Reducing Bureaucracy

Motivation for the Initiative

DOD's acquisition workforce makes a vital contribution to national security, but it must negotiate a complex web of rules, reporting requirements, and organizational relationships in its efforts to build and buy products for the warfighter. This sheer amount of red tape and unclear chains of command often make program management about adhering to a process rather than achieving a value-enhancing outcome. Such large and overly burdensome levels of bureaucracy make it very difficult to empower program managers and hold them accountable for results. Accordingly, DOD's leaders made reducing unproductive processes and bureaucracy a key initiative across all three versions of Better Buying Power.

Experience to Date

The effort to break defense acquisition out of a large and overly cumbersome bureaucracy remains ongoing. According to Kendall, progress has been made, but the work remains in the following areas:

- Clarifying the chain of command

- Streamlining documentation and reporting requirements

- Facilitating rapid acquisition of critically needed capabilities

- Removing impediments (real or perceived) to tailoring a program's acquisition process and strategy to its individual circumstances (Kendall 2015; also see McKernan, Drezner, and Sollinger 2015)

Nonetheless, the signs are encouraging. As evidenced in recent, bipartisan legislative efforts, Congress has taken an increasing interest in empowering program managers and clearing away at least some of the thicket of rules and reporting requirements that consume a significant amount of their time (see, e.g., H.R. 1597, "Agile Acquisition to Retain Technological Edge Act," a proposal put forth by Rep. Mac Thornberry (R-TX), current chairman of the House Armed Services Committee (HASC), and co-sponsored by Rep. Adam Smith (D-WA), ranking member of the HASC). The sponsors of these bills recognize that they are not the first to address the drag bureaucracy imposes on defense acquisition, nor that their proposals represent a final solution to the problem. Instead, they readily acknowledge that putting acquisition on a more flexible, agile footing—while retaining needed oversight and accountability safeguards—will be a long process, one requiring patience in giving the adjustments time to see if they work as well as close cooperation with DOD's leadership.

An issue to which both Congress and DOD (through Better Buying Power) have been devoting significant attention, and, to an extent, finding themselves at odds, is clarifying the acquisition chain of command.

Clarifying the Acquisition Chain of Command

A clear chain of command is essential for promoting accountability and empowering individuals on the front lines. In this regard, defense acquisition is no different from other endeavors organized around hierarchical relationships where individuals operating at lower levels are accountable to others at successively higher levels of responsibility. In defense acquisition, individual program managers (PMs) report to program executive officers (PEOs) tasked with overseeing a portfolio of programs; PEOs report to their respective service or component acquisition executives (SAEs/CAEs); and SAEs/CAEs report to the defense acquisition executive (DAE—the Under Secretary for Acquisition, Technology, & Logistics).

At least in theory, this chain of command—from PMs and PEOs to the SAEs/CAEs and ultimately to the DAE—is how DOD has approached the organization and execution of its acquisition programs since the mid-1980s. Nonetheless, as Kendall noted when introducing Better Buying Power 2.0, "this policy has been eroded over time" (Kendall 2013). While each individual modification or addition to the chain of command may have been made with the best intentions, the collective effect of these changes has been to reduce managers' control over their own programs. The current SAE for the Army, Ms. Heidi Shyu, likens this situation to a bus where the program manager is meant to be the driver, but which in reality "gives every stakeholder a steering wheel and a brake" (Freedberg 2015b). Within this convoluted system, according to Shyu, "[we] have to file 68 documents before we can go from one milestone to the other and we have to have everybody on the bus concur…. Anybody along the signing chain can say 'no' and slow you down." (Freedberg 2015b).

One key stakeholder not in the chain of command, but whom many believe should be returned to it, is the military service chief. This individual is the highest-ranking officer in their respective branch of the military and, accordingly, a member of the Joint Chiefs of Staff (JCS). JCS is a council of the U.S. military's highest-ranking officers, led by a chairman who serves as the highest-ranking officer in the U.S. military and the chief military advisor to the President and the Secretary of Defense. Each chief plays a central role in determining the requirements and resources of their respective service's acquisition programs, but lacks authority over "little a" acquisition—having been removed from this process after Congress passed the landmark Goldwater-Nichols Act (GNA) of 1986, the most sweeping re-organization of DOD since its founding after WWII.

While otherwise lauded for promoting greater "joint-ness" (unified purpose) among the military branches and empowering field commanders vis-à-vis the military leadership in Washington, many questioned the Goldwater-Nichols Act's removal of the service chiefs from the acquisition chain of command—an action that, in their view, unnecessarily fragmented the requirements generation and "little a" acquisition functions, consigning the chiefs to the role of passive observer once their proposed weapon system enters the acquisition process. Under this arrangement, both current and former chiefs argue they can do little to address programs' problems with cost overruns, schedule delays, and unforeseen challenges in developing systems that meet their mission requirements (including unforeseen expansion, or "creep," in the technical requirements that must be met to field a system with all the desired capabilities; see GAO 2015e).

For some, including current chairman of the Senate Armed Services Committee, Sen. John McCain (R-AZ), solving this problem entails Congress passing legislation that returns the chiefs to a more formal position in the acquisition process. The idea behind this policy, its

proponents argue, is that through vesting the chiefs with more formal authority they can more readily address problems instead of being blindsided by them in the future, as well as have a stronger institutional incentive to build up their services' acquisition workforce. In essence, more authority over acquisition will compel the chiefs to make acquisition workforce development a higher priority.

Others, including Kendall, disagree, arguing that room already exists for the service chiefs to be more involved, e.g., through greater consultation with acquisition managers in the pre-MS B phase, where the chiefs, their systems engineering personnel, and their counterparts in acquisition can collaborate on arriving at a realistic, technically feasible set of mission requirements that will set the program up for success as it moves forward. In their view, new legislation is unnecessary. Moreover, they argue that the available evidence does not suggest a strong relationship between greater service chief involvement and better program outcomes, and they point to anecdotes suggesting the opposite may be true. Likewise, they do not believe the chiefs should be involved in making decisions that are truly "little a" in nature, such as choice of contract type. Finally, they warn that empowering the chiefs could further fuel the individual services' penchant for optimism about how much individual acquisitions will cost and how long they will take. On this last point, observers argue the question (of whether devolving more authority to the services exacerbates "optimism bias") remains an open one (Cook and Baldwin 2015), but existing research suggests over-optimism is especially prevalent in tight budget climates (McNichol and Wu 2014). Thus, Kendall argues, giving the chiefs more control over "little a" acquisition would be especially bad policy in the current fiscal environment, where competition for scarce resources may make the temptation to be optimistic very strong.

As the debate over the service chiefs suggests, concerns regarding the acquisition chain of command have focused not only on the number of players involved, but also on *who* is involved and *how*. Only time will tell whether and to what extent DOD and its partners in Congress can create and maintain a clear chain of command—involving the right stakeholders, in the right way—for program managers on the frontlines.

Outstanding Challenges

As Congress and DOD's leadership continue pursuing their efforts to reduce bureaucracy, including through clarifying the chain of command, their principal challenges will be at least three:

- First, and as alluded to above, leaders must strike an ongoing balance between efficiency and accountability. While there is a valid argument that concern for accountability has created an overly burdensome system of oversight—one in which the "watchers" outnumber the "doers"—it is imperative that streamlining efforts do not swing the pendulum too far in the other direction.

- Second, leaders must give adjustments—whether to the chain of command or other aspects of the regulatory and oversight system—time to see if they work. Absent this measured and systematic approach, there is risk that one change will simply be layered over another without any larger plan or purpose.

- Third, leaders must remain vigilant. The current system—the fragmented, diffuse chain of command included—emerged through a long, slow process of accumulation, of the kind that proceeds so subtly as to escape day-to-day attention. Only through a sustained commitment can the DOD and congressional leadership ensure that defense acquisition is governed via a clear, rational chain of command and oversight system that both permits those on the frontlines to do their jobs and ensures accountability for results.

Core Initiative Five: Improving Services Acquisition

Motivation for the Initiative

To accomplish its missions, DOD relies on a large, multi-faceted portfolio of contractor-provided support services, now larger than weapons and hardware as a share of the department's annual contract spending (see "Overview of the Defense Acquisition System"). Despite the size and importance of this spending to accomplishing defense missions, however, "the department's rules, policies, and practices are based on buying goods [i.e., on weapons and hardware]; and there are differences in optimizing the procurement of a tank and an engineer" (Gansler and Lucyshyn 2013). Spending on services contracts has grown rapidly since 2000, but efforts to adapt to the unique challenges of services acquisition and services markets remain a work in progress. As such, DOD's leaders made improving how the department buys services a core initiative of Better Buying Power.

Experience to Date

To date, Better Buying Power has introduced numerous actions to improve services acquisition, ranging from relatively basic and easily implemented adjustments in the department's management structure to building an enterprise-level taxonomy useful for tracking spending patterns across a set of major portfolio categories. It has also pursued improvements in acquisition tradecraft—improving requirements definition and market research, making smarter use of contracting practices, and addressing ineffective competition (situations where DOD received only one offer in response to a competitive solicitation)—that will take time, training, on-the-job experience, and (to an extent) a cultural transformation that uproots long-held beliefs about how business should be done in this sector.

Among these many changes in tactics, the larger enduring objective across all three versions of Better Buying Power has been to promote greater strategic management of services acquisition:

- Appointing senior managers and cross-functional domain experts that can provide better vertical and horizontal management across the whole of DOD's services acquisition enterprise

- Developing an enterprise-level classification system for tracking services contract spending

- Using an enterprise-level classification system to target opportunities for higher productivity and efficiency, including leveraging the department's buying power by eliminating duplication and overlap in purchases of similar services across many individual units.

These efforts are often referred to as "strategic sourcing," or more broadly, as the "category management" approach to acquiring goods and services.

Strategic Sourcing and Category Management

As in the rest of the federal government, DOD's efforts to manage its services acquisitions through a strategic sourcing/category management approach are progressing slowly. In accordance with Better Buying Power and more longstanding requirements from Congress, the department has put the basic elements of these approaches in place, appointing "senior services managers" (SSMs)—managers tasked with providing top-down direction of their components' services acquisition planning and execution efforts—and "functional domain experts" (FDEs)—subject matter experts tasked with providing greater coordination of efforts to buy one type of service (e.g., engineering and technical services) across acquisition's various functional disciplines. The department also developed and expanded upon a product taxonomy to provide clearer insight into its contract spending patterns across services markets. These steps are

important, and are necessary prerequisites for more strategically managing acquisition across a wide range of service types.

Where more work remains to be done is in putting the new management structure and analytical tools to use, harnessing them to analyze and understand who is buying what and how, and whether there are opportunities to enhance the productivity and efficiency of this spending. While this process involves more than just eliminating duplication and overlap in purchasing efforts—the kind of commonality needed for this purpose is especially difficult to achieve in knowledge-based services, such as engineering and technical support—the GAO and other observers have repeatedly highlighted opportunities for DOD and the broader federal enterprise to strategically source more contract spending by moving away from thousands of individual contracting vehicles and toward a broader, more aggregate approach (e.g., see GAO, 2012). Moreover, the GAO has reported that DOD can do more to track the efficacy of its service acquisition improvement efforts, including through establishing goals and performance indicators to assess progress (GAO 2013). Toward this end, a larger and more explicit effort to track the productivity of services contract spending—how much is the department getting for each dollar, and have there been improvements over time—would be a welcome addition to the system through which DOD tracks, analyzes, and assesses the state of its services acquisition activities.

Outstanding Challenges

To continue pursing more strategic management of services acquisition, DOD must overcome at least four challenges.

- First, and as noted previously, a large share of DOD's services contracting activities occur outside the formal acquisition chain of command, including at installations where operational considerations may tend to displace concerns for proactively managing contract spending. Combined with factors like unique mission needs and differences in local marketplaces, the difficulties many organizations and installations experience in making contracting a management priority may serve as an impediment to strategically sourcing services.

- Second, both inside and outside the formal acquisition chain, services requirements are often more difficult to write in a standardized format. That is, while DOD can readily specify its requirements for commodities like office supplies—and can do so in a way that permits it to leverage its buying power across multiple individual purchasing units—it is more challenged to do so in the services arena. The implication is that even when individual units go out to buy what is essentially the same type of service, each may describe its requirements in a unique fashion—regardless of whether its actual needs are unique or if they could be met through specifying requirements in a more standardized way.

- Third, and as mentioned above, standardization can be hard to attain in services acquisition. Especially when it comes to knowledge-based services like engineering, DOD is usually buying skill sets that pertain to very specific types of work. The skills required for ship design, for example, differ significantly from those required to perform engineering on satellites or aircraft. Thus, not only may DOD struggle to specify what it wants to buy in each of these cases, in each case it is buying something *fundamentally different*—it cannot readily aggregate its purchasing power. This issue has important implications for improving productivity in areas like engineering and technical services, one of the key action items under the services acquisition initiative in Better Buying Power 3.0. To boost the productivity of this spending, it may be that DOD has to lean more strongly on other, more targeted measures (e.g., using contract incentives).

- Fourth, the minimal extent to which DOD uses strategic sourcing across its entire acquisition portfolio suggests this approach is not embedded in the department's culture. As the

GAO has argued, organizations may consciously resist strategic sourcing out of fear that they will lose control of their contracting functions, or that they will generate large enough savings to call the overall size of their budgets (and their staffing levels) into question (GAO 2012).

For additional insight into DOD's efforts to strategically manage services acquisition, see the case illustration "Getting More for the Money in a Key Knowledge-Based Service: Contracted Engineering and Technical Support" in Appendix I, page 42. As noted above, improving the productivity and effectiveness of contracted engineering and technical support services is now a key action under Better Buying Power's improving services acquisition initiative. Getting more value from this service area will be critical going forward, since it is both an important input into DOD's broader efforts to maintain technological superiority, and an area where there is real potential for productivity enhancement. As the case illustration suggests, however, the unique and often highly asset- and project-specific nature of engineering and technical services will force DOD's leaders to be particularly creative in how they boost productivity in this area.

Based on this section's assessment of the core Better Buying Power initiatives, the next section offers lessons for acquisition executives and senior procurement officers striving to get more for the money their own agencies spend on critical goods and services.

Better Buying Power: Lessons and Recommendations for the Federal Acquisition Community

Lessons Learned

DOD's experience with crafting and implementing core initiatives under Better Buying Power reveals a number of lessons for acquisition executives and senior procurement officers striving to get more for the money their own agencies spend on goods and services. Across the five initiatives surveyed, eight lessons emerge.

Lesson One: Acquisition Is (Nearly) Everyone's Business

While many do not consider it their first priority, acquisition and contracting are an increasingly important fact of life for a large segment of an agency's workforce. As DOD's leaders like to say, "contracting is the commander's business." Accordingly, while efforts to procure large, complex products like weapon systems are a natural and appropriate target for greater efficiency—meaning the managers directing these projects (and their industry partners) are a key constituency to consult and engage when launching an acquisition improvement initiative—it is critical not to leave out those individuals doing acquisition and contracting outside the normal chain of command. Many of these latter managers do not deal with acquisition on a day-to-day basis (given their strong orientation toward operational issues), but their organizations may represent some of the most valuable targets for enhancing the productivity and efficiency of an agency's acquisition enterprise.

Lesson Two: Strong Forces Work to Preserve "Business As Usual"

A variety of forces serve to perpetuate "business as usual" in acquisition, including *parochial interests*—individual stakeholders in both government and industry are often best served by the status quo; *risk aversion*—in government especially, individuals typically go unrewarded, and in some cases are even punished, for taking risks, giving them little incentive to change their behavior; and *standard operating procedure*—even when change does not threaten to undermine interests or incur undesirable scrutiny from higher authorities, the power of routine remains. Combined, these forces create both conscious and unconscious forms of opposition that can blunt even the strongest push to improve the productivity and efficiency of the acquisition enterprise. As both Better Buying Power and DOD's larger history with acquisition reform demonstrates, success is never guaranteed. Accounting for opposition and devising strategies to address it, however, can improve the odds for success.

Lesson Three: "Creep" Is a Pervasive Threat

Creep—the gradual accumulation and expansion of mission objectives, requirements, accountability systems, contracting vehicles, and so on—is an ever-present threat to efficiency and productivity. This lesson is illustrated in particular by DOD's experience with the "reducing bureaucracy" and "improving services acquisition" initiatives, each of which (in its own way) demonstrates what can happen absent sustained leadership attention to policies and processes governing acquisition oversight and execution. Halting and reversing these trends

requires constant vigilance on the part of everyone from senior leaders to managers on the frontlines.

Lesson Four: Communication Is Always Subject to Varying Interpretation

There is tremendous value in leaders explaining how they think about a certain type of decision in a certain set of circumstances, such as using a particular contract type for product development work. But circumstances vary. Especially in acquisition, each program has a unique mix of requirements, technology, time sensitivity, and other factors that influence risk and risk management. Thus, as initially demonstrated under Better Buying Power's "incentivizing productivity and innovation" initiative—specifically, the emphasis leaders placed on the FPIF contract—signaling a preference for a certain approach (even with the caveat that "one size does not fit all") can steer individuals in the wrong direction. Some may interpret the guidance as just that—guidance—but others may see it a signal of what their leadership prefers them to use (and will want to see at a key decision point, such as a major program milestone). To minimize the chances of misunderstanding or uncritical application of a particular practice, it is more useful to provide a framework that incorporates the key dimensions of a decision (e.g., degree of technology risk) and suggested practices based on how those dimensions vary (e.g., fixed-price vs. cost-reimbursable contracting) than to emphasize one practice in particular.

Lesson Five: Following Through Is Crucial

Nothing detracts from credibility more than a failure to follow through. Especially under Better Buying Power's "achieving affordability and controlling costs" initiative, success depends on leaders upholding their commitments to enforce affordability constraints and reward aggressive should-cost management. Without clearly articulating the principles governing how they will make decisions in these areas—and consistently adhering to those principles—the leadership will put their credibility in jeopardy. Systems of rewards and sanctions can be effective ways to improve acquisition performance, but only when they are backed up by credible commitments.

Lesson Six: When It Comes to Some Practices, the Only Time to Start Is Early

It is certainly not the case that every acquisition program is "beyond saving," but some practices are only implemented to good effect when a program is in its nascent stages. As suggested under Better Buying Power's "promoting competition initiative," harnessing the power of competition through practices like modular open systems architecture and intellectual property management strategies works best when they are put in place early. This is especially true for IP, where the government is in its strongest bargaining position early on (e.g., when it is looking to award the initial development contract). Trying to use an IP or MOSA approach later is less feasible. Thus, to the extent these practices are emphasized as a way to promote and sustain competition, they should be aimed at younger programs. For older, more established programs, exploring other practices may be necessary.

Lesson Seven: Knowledge Is Power

Outside his office door, Under Secretary Kendall keeps a placard that says "In God we trust. All others bring data." Originally stated by the statistician D. Edwards Deming, this statement reflects Kendall's and the DOD leadership's commitment to measuring progress, learning from experience, and making changes that reflect new and improved knowledge of what works and what doesn't. As illustrated under the "providing incentives" initiative, Kendall and the entire cadre of leaders and analysts managing the defense acquisition enterprise have made a concerted effort to understand what kinds of contracting practices motivate vendors and how insights gleaned from analysis of historical data can be operationalized in smarter contracting

decisions. As stressed throughout this report, no practice—including no individual contracting practice—is a panacea, but to the extent effective approaches can be isolated and put to good use, they can only help in making acquisition more value-focused.

Lesson 8: Being Realistic—And Patient—Is Best

Even in small agencies, acquisition is a complex enterprise for which no single solution is a "magic bullet." As Under Secretary Kendall has emphasized to DOD, Congress, and the broader community of stakeholders involved in defense acquisition, "there is no easy or simple way to dramatically improve acquisition outcomes" (Kendall 2014c). Reforms—individual changes in policy or regulation—may make a positive contribution, but insofar as outcomes are mostly a function of the "thousands of individual daily decisions" (Kendall 2014e) acquisition managers make, it is clear that a steady and measured approach to improving managers' training, skills, and professionalism is the only sustainable route to better performance. To the extent this is true, it warrants being patient and realistic: getting more value out of acquisition can take considerable time, but pursuing it along sustainable routes is arguably better than oscillating from one reform fad to another.

Recommendations

For the modern government agency, the difference between mission accomplishment and mission failure increasingly turns on the ability to be a smart buyer—to build an efficient and effective acquisition enterprise on a foundation of professionalism, expertise, and commitment to getting the best possible business deal when buying goods and services.

Perhaps nowhere is smart buying as important as at DOD, where acquisition is not only a matter of dollars and cents, but a matter of national security and, ultimately, of the very well-being of those serving in America's armed forces. Despite these strong imperatives to get things right, value-enhancing acquisition performance remains one of DOD's most elusive goals (Fox 2011). After over six decades of attempts at reform, shortcomings in cost, schedule, and technical performance are a remarkably persistent drag on defense acquisition—so much so that some have suggested abandoning the very notion of "reform" as a way to achieve better outcomes.

For acquisition executives and senior procurement officers across the federal enterprise, Better Buying Power represents a timely and instructive case in an alternative approach, based on continuous improvement rather than a single set of reforms or policy changes. In this sense, it is an experiment from which there may be much to learn—now and in the future.

This report has aimed to glean some preliminary lessons from DOD's experience-to-date with Better Buying Power—to ask, in short, whether and to what extent this novel attempt at improving the productivity and efficiency of a deeply entrenched system has been successful or fallen short. As the report suggests, the answer is mixed. Better Buying Power is one of the few and most recent governmental initiatives to develop and implement an approach that is multi-faceted, benefits from sustained leadership commitment, and uses a window of opportunity associated with externally imposed events—such as sequestration and military force reduction in Iraq and Afghanistan—to attempt the implementation of sustained changes in the manner in which products and services are acquired to support America's warfighting mission.

Perhaps the most realistic outlook for Better Buying Power is one of cautious optimism. This type of organizational change can be difficult because of the short tenures of many leaders whose personal goals and preferences may diverge from the macro, organizational goals and bureaucratic initiatives of past and current agency executives. Such initiatives may have their

genesis in the efforts of past administrations, congressional actions, or the recommendations of oversight groups. They can also evolve from the recommendations and actions of internal stakeholders such as rank-and-file career employees, as well as from external stakeholders including vendors, industry associations, and good government groups that actively engage, transact, and partner with government in the execution of agency missions.

For both DOD and the broader federal acquisition community, learning from past successes and failures and incorporating new ideas from a range of internal and external stakeholders to craft a comprehensive, sustainable approach to acquisition improvement presents an acute challenge. Adopting the "Better Buying Power" model—initiating and institutionalizing change through a decentralized and cascading approach that engages stakeholders, measures results, learns from and evolves toward clarifying priorities and continuously strengthening performance—is no easy task. Nonetheless, the historical experience with "magic bullet" reforms suggests it may be the better of the two alternatives.

With that in mind, what should Better Buying Power look like as it evolves beyond version 3.0? Determining the precise content and direction of future iterations is beyond the scope of this report, but at least three potential avenues DOD leaders could pursue in a future version of Better Buying Power include the following:

Recommendation One: Continue to Pursue the Idea of "Agile" Acquisition

As the world becomes more chaotic, unpredictable, and prone to present the U.S. with a wide array of security challenges, DOD must continue building on both its own and congressionally-sponsored efforts to make defense acquisition more agile—faster and more adaptive to changing circumstances. Whether it's combatting transnational terrorism, managing the complex and evolving threat from cyberattacks, or more generally, acquiring critical weapon systems and information technology (IT) necessary to meet its increasingly numerous responsibilities, the nation's security strongly depends on DOD's ability to design, develop, and field capabilities that support mission accomplishment in a rapidly changing world. This will require the department to invest greater effort in improving both its own processes and human capital, as well as explore opportunities outside its walls. For example, recent efforts by the General Services Administration (GSA) to create agile contracting solutions for digital and IT products may, if not in their current form, at least in future ones, present a real opportunity for DOD to tap agile-focused efforts being undertaken in the rest of the government.

Recommendation Two: Maintain And Enhance the Focus on Improving Services Acquisition

Across versions 1.0, 2.0, and 3.0, efforts to improve the tactics and tradecraft underlying DOD's services acquisitions, and overall, to put the department's services purchasing on a more strategic footing, have been an important and much-needed focus of Better Buying Power. As Better Buying Power continues to evolve, both over the remainder of the current administration and (potentially) into the next one, a greater focus on the opportunities stemming from deeper and more extensive exploration of services markets would be a welcome addition. As those representing the community of service contractors are quick to point out, there is not one "services market" or "services industry," but a rich, diverse ecology of individual industries and marketplaces with much to offer DOD.

Recommendation Three: Further the Effort to Build Partnerships Outside the Traditional Defense Industrial Base

While recent efforts to make inroads into Silicon Valley may (for the time being) be more symbolic and aspirational than anything else, DOD's professed commitment to building

partnerships outside the traditional industrial base is an encouraging sign. Of course, it is important not to be naïve about the prospects of these partnerships—both culturally and operationally, DOD and young, high-tech, commercially focused start-ups are in different worlds (Kelman 2015)—but a future iteration of Better Buying Power may be an ideal vehicle through which the defense establishment can develop and implement new approaches to doing business with and even recruiting from outside its established set of industry partners.

Appendix I: Case Illustrations

Affording Deterrence: The Ohio Class Submarine Replacement Program

The Ohio Class Submarine Replacement Program—a project to replace the Navy's fleet of ballistic missile submarines (the sea-based leg in America's "triad" of sea-, air-, and land-based nuclear weapons capabilities)—represents a significant potential test of the DOD leadership's ability to ensure affordability. In introducing Better Buying Power 1.0, then-Under Secretary Carter recognized this program—at that time, early in the development stage, and currently approaching production—as an exemplary case of achieving greater affordability through careful analysis of cost-capability trade-offs (Carter 2010). While the program remains likely to put heavy pressure on the rest of the Navy's already-strained shipbuilding budget, efforts to make it more affordable have, at least within the current five-year window (2016-2021), prevented it from swamping the broader DOD/Department of Energy nuclear weapons budget (Freedberg 2015a).

Beyond this window, however, the picture looks bleaker. Starting in 2021, when the program enters production, Under Secretary Kendall recently acknowledged it will create an affordability problem, given the current budget outlook (Freedberg 2015a). While Kendall signaled the Pentagon's commitment to press on despite this issue, stating "[nuclear deterrence] is [DOD's] most important mission, so we will do our best to protect it," he also acknowledged that doing so will mean making "painful" choices about other programs (Freedberg 2015a). What will these choices entail? There could be at least three options.

The *first* option is to cut back on investments in the nation's nuclear capabilities, including the Ohio-class program itself. The problems with this approach, however, are two: first, and as noted, DOD leaders consider nuclear deterrence to be the department's most important mission; and second, according to recent research by defense budget experts, cuts to nuclear capabilities (e.g., reducing the planned number of new subs DOD intends to buy by two, from 12 to 10) would produce relatively small savings compared to savings garnered through other actions, such as reforming the military healthcare system (Harrison and Montgomery 2015; Freedberg, 2015b). The *second* option is to continue supporting the full nuclear modernization plan, providing all the necessary funding to upgrade the land-, sea-, and air-based legs of the nation's nuclear triad as those upgrades come due in the years ahead by cutting back on investments in conventional weapons. This option may be more workable, although funding nuclear modernization strictly by displacing funding for conventional weapons still increases overall strategic risk. The *third* option is to fully fund the nuclear modernization effort through a mix of reductions in conventional weapons programs and other areas, such as military pay and benefits. This is perhaps the most desirable among the three options since, among them, it would distribute funding cuts more evenly and therefore result in less of an increase in risk.

Overall, as DOD approaches the 2020s, it will be strained to fund all its nuclear and conventional weapons procurement efforts, meaning it will be forced to prioritize. Recent work from

the GAO suggests the department has not adhered to an enterprise-level investment portfolio approach that would aid in this process (GAO 2015f). Even if DOD does better in this regard, however, its leaders will still need to make credible, rational choices that accord with the broader principles governing how they think about affordability. Since funding the Ohio-class and other nuclear programs could mean reductions elsewhere, these choices will need to be thought through very carefully.

Providing Incentives in Product Development: The KC-46 Aerial Refueling Program

The KC-46 Aerial Refueling Program (also known as the "tanker" program) is a notable example of how the fixed-price incentive approach has been used to contract for product development work.

The tanker program is a $50 billion initiative to modernize the U.S. Air Force's fleet of aerial refueling assets—planes that refuel other planes in mid-air—and in particular, to replace the KC-135 (the "mainstay" of the existing fleet; see GAO 2015c). The Air Force began using the KC-135 in the 1950s; the fleet now averages 50 years old (GAO 2015c). At this advanced age, the planes increasingly experience mechanical issues, require significant operations and maintenance expenses, and lack defensive capabilities Air Force leaders deem necessary to guard against new and emerging threats. Based on its analysis of alternatives (AOA), the Air Force determined that the KC-46 (the KC-135 replacement) would be developed off a commercial jet manufactured by Boeing, with minor modifications to incorporate military hardware and software. Given these parameters—a stable design, mature technology, and, accordingly, relatively low risks associated with equipping the jet with military hardware and software applications—defense officials deemed program risks low enough to use a fixed-price incentive firm target contract for the development work. The contract features the basic FPIF components, including a target price (sum of target cost and target profit) of $4.4 billion, with a price ceiling of $4.9 billion and a 60/40 share ratio, meaning that relative to a "baseline" 50/50 ratio, the government is assuming slightly more responsibility for cost overruns within the range for which it will incur cost liability, but that the vendor's profit margin is also less responsive to cost savings.

While Under Secretary Kendall has repeatedly stated that he is conservative about using fixed-price type approaches for development, he is not entirely opposed to the practice. For example, he has justified the DOD's use of an FPIF approach to contract for development work in the Presidential Helicopter Replacement Program, a program to deliver a new fleet of helicopters with security, transport, and other enhanced capabilities deemed critical to safely transporting the president in the post-9/11 environment. This program, Kendall has argued, meets "all the criteria [considered] important for fixed-price development," including "firm requirements, no significant technology risk, a well-qualified and experienced industrial base, firms with resources to complete development in case of unforeseen problems, and a business case for them to do so" (Kendall 2014a).

The KC-46 program is currently on a very tight schedule, with Boeing obligated to deliver 18 aircraft by August 2017. This has increasingly forced the company to forgo development work, including product testing, it planned to complete before production. Failing to complete all this work before entering production (called "concurrency") can be problematic, since it risks costly production disruptions caused by issues that could have been addressed at the development stage. To date, Boeing has experienced two major issues—one related to wiring, one to the plane's fueling system—but the cost cap in the FPIF contract has shielded the Air Force from the associated costs. Moreover, as a large, well-resourced contractor, Boeing has

been able to absorb these costs without undermining its ability to continue working on the KC-46 planes, and it has been motivated to make management changes to put the program back on track (Mehta 2015). To keep costs under control going forward, the Air Force must be vigilant in preventing unforeseen problems at the production stage effectively offsetting the costs it avoided in development.

Getting More for the Money in a Key Knowledge-Based Service: Contracted Engineering and Technical Support

A sizable portion of DOD's annual services contract spending goes to engineering and technical support (ETS) services—roughly $13 billion in FY 2014—a point Under Secretary Kendall emphasized in introducing Better Buying Power 3.0. In his words, "[the] Department relies heavily on contracted services for technical management support, systems engineering, and engineering services" (Kendall 2014b). Of course, while DOD also makes extensive use of other types of services (including other types of knowledge-based services, such as program management), contracted ETS is especially important, given the department's goals to preserve and bolster the nation's technological superiority. As DOD continues to pursue next-generation weapon system capabilities, as well as sustain its current capabilities, it will be crucial to maximize the efficiency and effectiveness of its purchases of various types of ETS.

As with services of other types, one of the key prerequisites for improving efficiency and effectiveness in the ETS area is to understand the department's spending patterns: what is being bought, where, by whom, and for what purpose. This is especially challenging in ETS, because the range of services contractors provide is highly diverse. At the highest level, the ETS category includes everything from support for submarines to satellites, missiles, and aircraft. Thus, even though DOD can get an aggregated, enterprise-level picture of its ETS purchasing behavior, the data indicating levels and trends of spending mask considerable underlying variations in the substance of what is being bought. Relative to a number of other service types, then, the aggregated picture for ETS is not as revealing or informative. In this case, data-driven insight requires a more refined and differentiated picture of what's going on. Collecting and analyzing the data is more labor intensive.

Using the data to identify opportunities for greater productivity and to evaluate effectiveness is also harder. While approaches like strategic sourcing and category management are about more than consolidating individual purchases to leverage the government's buying power, using this strategy to increase productivity/efficiency is very often infeasible in the ETS space. Going out as a single buyer for office supplies or even relatively simple services like refuse collection has its challenges, but to try to pool ETS is exceedingly difficult. Most of the time, there is not a sufficiently high degree of commonality to make this approach a reality. Whereas there is only so much variation a contractor will encounter in mowing a lawn or picking up trash at location X vs. Y, or for customer X vs. Y, these types of variations are much more pronounced in the engineering area. That is, ETS contractors' skill sets are more oriented toward individual assets and projects that can differ considerably from one another. So, while a refuse collection contractor might relatively easily make the transition from providing its services to an element of Naval Sea Systems Command (NAVSEA—focused on building, buying, and supporting the Navy's ships), to providing them to an element of Naval Air Systems Command (NAVAIR—focused on building, buying, and supporting the Navy's planes), for an ETS contractor this could be much more difficult. The kinds of ETS-related work the two organizations focus on is fundamentally different. Accordingly, to get more for the money spent on ETS services, DOD must focus not as much on aggregating purchasing at the enterprise level, but on sharpening it at the asset-, project-, and individual relationship-level. Among other things, this could mean making smarter use of contracting practices like designing contract incentive

structures. More broadly, it means trying to measure the success with which engineering teams execute work on the department's behalf, rather than simply tracking metrics like the number of heads it is buying, as well as sustaining and expanding upon the department's internal engineering capability so that it can be a well-informed customer. These will all be critical steps if DOD's leaders want higher efficiency and productivity in ETS.

Appendix II: Research Protocol

This report is based on a case study involving interviews with a purposive sample of more than 24 SMEs. Interviewees were drawn from the following sources:

- Government (including DOD, OMB, and the oversight community)

- Industry (including individual firms and industry associations)

- Academia

- Think Tanks

In accordance with requirements issued by the relevant university institutional review board, the authors guaranteed all interviewees confidentiality and the right to withdraw from an interview at any time. If the interviewee gave permission, the authors recorded the interview. Interview transcripts and field notes (taken in cases where interviews were not recorded) were analyzed for thematic content.

The authors supplemented the interview data with information gathered from a large sample of publicly available primary and secondary documents published by the Department of Defense (DOD), the Government Accountability Office (GAO), the Congressional Research Service (CRS), and others.

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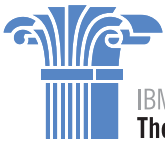
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