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Understanding Defense Acquisition Workforce Challenges

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Symposium**

Understanding Defense Acquisition Workforce Challenges

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Executive Summary

The Department of Defense (DoD) acquisition system is a complex enterprise requiring professionals with many years of experience to execute the process expertly. However, the acquisition workforce faces several key challenges. First, the number of experienced acquisition professionals in the DoD is declining. They are being replaced by a young generation facing a long learning curve. Second, the acquisition workforce lacks the experience, knowledge, and tools necessary to digest and apply the wealth of information related to acquisition. Third, the workforce struggles to keep pace with the increasing complexity of the federal acquisitions.

The MITRE Corporation conducted this research to validate the significance of the key challenges facing the workforce and provide a foundation for “next steps”. MITRE developed an independent survey to document the issues facing practitioners in the field. Through our research, we validated that the workforce believes they are ill-equipped to meet the demands of the acquisition environment. We determined that the workforce needs solutions to assist them to shorten the learning curve, modern tools that appeal to the changing workforce demographic, and cultural changes that support and encourage the workforce to think critically to successfully operate in a complex environment. The recommendations proposed as part of this research include a digitized work environment, tailored acquisition models, and workforce cultural changes.

A digitized work environment is necessary to appeal to the junior acquisition workforce. They are accustomed to technology at their fingertips to answer questions and solve problems. Currently, acquisition policy and guiding documents are mainly a collection of static pdf documents spread across a variety of federal and organizational level websites. Digesting volumes of information to understand how to navigate acquisition processes is neither efficient nor appealing to a young and digitally focused workforce. Digitized policy provides centralized access to current policy and reference material to simplify complex processes.

Tailored acquisition models, provide streamlined approaches to address direction from acquisition leadership to tailor acquisition strategies when appropriate. Tailored models include the only the required elements for a specific type of acquisition and enable less experienced professionals to successfully navigate a tailored approach.

Workforce cultural changes include recommendations to address implementation at the workforce level. For example, policy changes to approve tailored models, implementing a coaching environment to transition the knowledge of the departing experienced workforce to the junior workforce, and implementing modern tools and apps to deliver digital capabilities.

About the Authors

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Workforce Challenges with Experience, Knowledge, and Tools

The government constantly calls upon the federal acquisition workforce to deliver acquisition solutions in an increasingly complex environment. Successfully accomplishing this task requires an extensive understanding of the acquisition system, a wide awareness of best practices and exemplars, and access to state-of-the-art digital tools to develop and leverage solutions across the DoD enterprise.

Overview of Workforce Challenges

Our research discussed in this paper shows that federal acquisition requires a unique skill set to navigate successfully so that government agencies can deliver systems and services that meet mission needs. Our research also supports that, in many cases, the acquisition workforce lacks the requisite experience, knowledge, and tools to keep pace with the demands of this environment.

Early career acquisition professionals receive Defense Acquisition University (DAU) classroom and online training to gain an overview of the core acquisition elements. Yet they cannot apply the knowledge in practice until they accumulate actual on-the-job experience. Going through the core activities to guide programs through the acquisition lifecycle represents the ultimate development of an acquisition professional.

Ideally, acquisition professionals would be exposed to a broad array of acquisition types early in their career. While some are so fortunate, such as military professionals who transfer every 2–4 years, not all are exposed to the variety of acquisitions and the skills necessary to develop a broad knowledge base. For example, the process for acquiring large weapons systems subject to DoD Instruction 5000.02 is clearly much more complex and rigorous than that for acquiring general services. Agile development acquisitions present even more unique challenges. Nonetheless, acquisition professionals are expected to have the capability to operate in any of these environments. At the very least, they are expected to turn to the massive amounts of statutory, regulatory, and guidance information currently available through on-line resources and figure out what they need to know to execute the acquisition successfully.

Our research illustrates that changing demographics present another challenge. Half of the DoD acquisition workforce is eligible to retire within the next 10 years – depriving countless programs of decades of experience. Compounding this loss of expertise, evidence shows that 40–50 percent of the workforce has less than five years' experience. With the workforce peaks at the early and late career stages, DoD reports often cite the huge shortfall of mid-career professionals who anchor most program offices. While DoD has made progress over the past few years in addressing this shortfall, it still poses a major risk to the acquisition workforce.

One of the most significant challenges in this area is an information gap. The existing DAU classroom and online training can provide the basic information, but without years of experience gaining the knowledge needed to successfully execute the variety of DoD

acquisitions, or access to professionals with the requisite knowledge, young professionals will be at a significant disadvantage.

Our research shows that acquisition involves a long learning curve. It takes many years of experience to develop the depth and breadth of skills and acquire adequate knowledge to execute the acquisition process for all types of requirements. Acquisition professionals are expected to have a broad knowledge base, but those practical skills come only with hands-on experience.

It is impossible to curb the pending retirement of experienced acquisition professionals. Therefore, the acquisition community needs advances in technology and tools to enable the next generation of the acquisition workforce to rapidly digest and synthesize the vast amounts of information in the acquisition environment. This is especially critical as the up-and-coming acquisition workforce is accustomed to digital technology and social media that enable instantaneous access to current and accurate information to solve problems. The federal government will find it difficult to hire, retain, and train a developing workforce capable of tackling complex acquisitions without incorporating advances in the digital space to replace the lack of long experience and knowledgeable professionals to consult.

The difficulties confronting the acquisition workforce are serious and have the potential to negatively impact the government's future ability to effectively execute acquisitions. Changes are desperately needed to adequately prepare and arm the workforce for the task at hand.

Research Methodology

The MITRE team first conducted a literature review to understand current assessments of the federal acquisition workforce. The review focused on the demographics of the current workforce, the rising complexities of federal acquisition, and the availability and access to acquisition knowledge and training.

Based on this literature review, the MITRE team developed hypotheses regarding workforce perceptions about achieving proficiency, the changing complexity of federal acquisition, and the availability of relevant and helpful tools and resources. MITRE then conducted a survey focused on acquiring data and metrics to test those hypotheses. MITRE analyzed this data to identify areas where improvement is needed to empower and assist the acquisition workforce to succeed in meeting federal acquisition needs.

MITRE also assembled three focus groups to assist in the analysis of our survey data and the data gathered in terms of the tools associated with learning acquisition. The focus groups were asked questions to assess the data gathered in terms of tool availability, tool design, and creating an efficient learning environment for acquisition professionals.

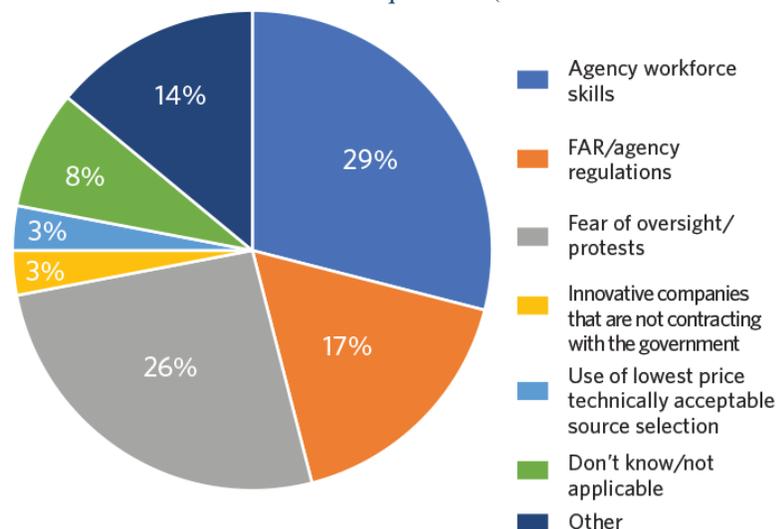
Literature Review

The literature review examined existing research and surveys of the acquisition workforce performed in recent years. MITRE found several recurrent themes in the existing data.

The federal government must meet wide-ranging and dynamic mission imperatives with limited budgets and resources. Programs are regularly faced with budget reductions and cost saving/efficiency targets, but are also challenged to think critically to develop innovative solutions to quickly acquire and deliver services and solutions to users. To address these challenges, the government relies on acquisition professionals who are knowledgeable of the acquisition system and capable of developing creative and innovation solutions in a constrained environment.

To understand the specific factors preventing the workforce from successfully developing and implementing innovation solutions, the MITRE team reviewed the 2016 government-wide survey of federal acquisition executives conducted by Grant Thornton Public Sector and the Professional Services Council (PSC), *Aligning for Acquisition Success: Overcoming Obstacles to Results*. One of the areas explored by this survey is barriers to innovation in acquisition. The survey asked about the perceived challenges preventing the acquisition workforce from successfully developing and implementing innovative solutions. Figure 1 depicts the breakout of the top reported barriers to innovation in acquisition.

Figure 1 Reported Barriers to Innovation in Acquisition (Grant Thornton and PSC, 2016)



Workforce skills was reported as the top inhibitor to innovation. The fear of oversight and protests was the second highest barrier to innovation. These two factors combined make up approximately 55 percent of the barriers reported. This is important as these responses suggest the workforce believes it is not adequately skilled to develop and

acquire innovative solutions nor adequately supported to take risks. Grant Thornton and PSC (2016) also goes on to say “these factors contribute to a confidence gap, as workers remain unprepared or unwilling to take well-reasoned risks to achieve potential innovations or cost savings, instead defaulting to familiar, often suboptimal, strategies.”

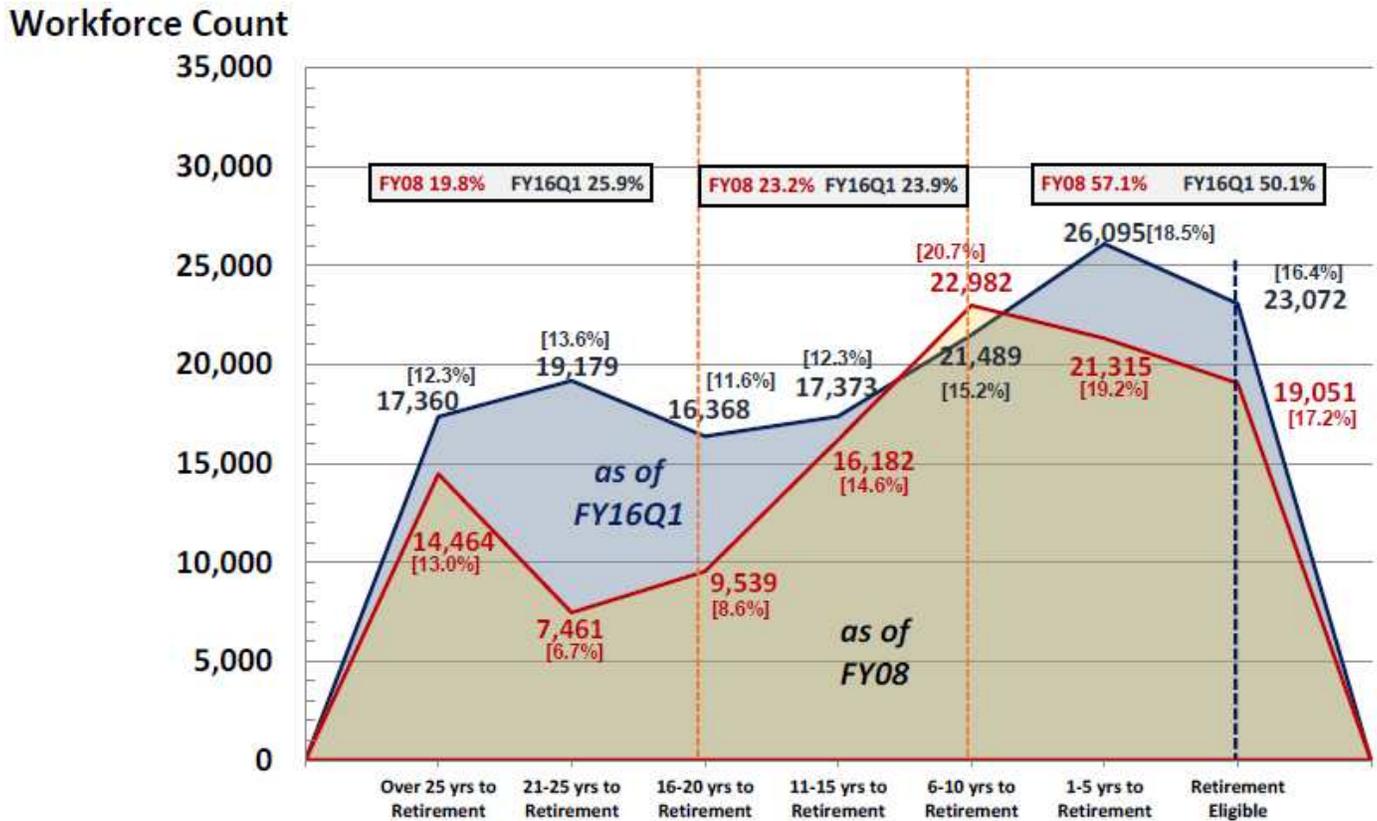
Grant Thornton and PSC made an important observation that, “These inhibitors are interconnected. Acquisition workers’ inexperience means they tend to focus on compliance and don’t understand the flexibilities in the FAR. Thus, they tend to be overly risk-averse out of fear of protests or punishment, rather than trying new and different things” (Grant Thornton and PSC, 2016).

An unskilled acquisition workforce has severe impacts on the government and its ability to execute its missions effectively. The Center for the Study of Democratic Institutions at Vanderbilt University, in cooperation with Princeton University and the Volcker Alliance, conducted a survey on the future of government service, garnering responses from over 3,500 federal executives that found very similar results. When asked if the executives worry about an inadequately skilled workforce as a significant obstacle to fulfilling their agency’s core mission, 39 percent responded “agree” or “strongly agree.” (Center for the Study of Democratic Institutions, 2015)

These results highlight the need to improve workforce skills and to develop and shape a workforce confident in their abilities and in having the right tools and access to information to develop and execute innovative solutions to achieve mission objectives.

MITRE also wanted to understand the impact of the changing acquisition workforce demographic to the government’s ability to effectively execute acquisitions. Figure 2 shows that approximately 50 percent of the acquisition workforce within the DoD is eligible to retire within the next 10 years. Jeffrey Koses, a Federal Acquisition Institute board member, notes that “fully developing an acquisition professional takes five to 10 years.” A transitioning workforce combined with a steep learning curve for acquisition has led to a knowledge gap. Koses says it best in terms of the future acquisition workforce, noting that the government should be “rethinking training to match the way these digital natives are accustomed to receiving and consuming information.” (McCabe & Laurent, 2015)

Figure 2 Civilian Acquisition Workforce Demographics (FY 2008 – 2016Q1) (AT&L, 2016)



Grant Thornton and PSC (2016) elaborate on this, stating that generational issues present a major challenge for the future. This includes replacing the retiring baby boomers who make up the 50 percent of the retirement-eligible workforce and training and retaining the millennials who will replace them. A Grant Thornton and PSC (2016) respondent commented “The federal employment construct of a ‘job for life’ is not the mindset of millennials.” This makes revitalizing acquisition workforce training and tools imperative not just to educate the new workforce but also to retain them.

Laurent & McCabe (2015) notes that keeping and maintaining a workforce from the millennial generation is very difficult because they tend to stay in jobs for only about 2 to 3 years. The Under Secretary of Defense, Acquisition, Technology, and Logistics (AT&L) Performance of the Defense Acquisition system 2016 Annual Report highlighted the need for a focus on younger generations given the amount of retirement eligible workforce members. (See Figure 2)

As the experienced workforce retires and moves on, federal acquisitions are challenged to bridge the knowledge gap and prepare the next generation of professionals to face the challenges of an increasingly complex acquisition system. We believe the changing workforce demographic is a significant impact to federal acquisitions.

Also of interest to our research is the workforce thoughts on existing acquisition training and tools. Acquisition workforce training and tools haven't modernized much over the past two decades. Stan Soloway, PSC's former President and Chief Executive Officer, states that training is "bound to traditional models and assumptions far more relevant to a hardware-dominated, single-customer market of limited commerciality." Existing training and tools provide a basic level of understanding necessary to establish a solid acquisition foundation, but remain relatively focused on tried and true methods that don't always lend to the innovative thinking and problem solving. The dated and status quo focus on the FAR being rigid and unforgiving discourages new hires to think outside of the box and doesn't develop skills to take advantage of the flexibilities it offers. The government must encourage the future acquisition workforce to change acquisition and its culture, and must embrace the innovative ways this generation learns. (McCabe & Laurent, 2015)

Additionally, more agile training methods are required to address the changing nature of acquisition, innovation and the market place. The typical large hardware system acquisition rubric doesn't translate well when acquiring rapidly changing technologies or services. Acquisition techniques need to evolve from those established decades ago to result in a successful acquisition workforce.

MITRE Acquisition Workforce Survey Methodology

MITRE conducted a survey to collect information to test the below hypotheses and to assess the need for development of solutions that enable the acquisition workforce to better navigate the acquisition processes, access acquisition information, and improve knowledge and skills to operate in the complex federal acquisition environment.

The survey was designed to explore the following theories:

- Federal acquisition has a long learning curve. Only those with 5+ years of experience have adequate knowledge and confidence to execute their role in the acquisition process for any size acquisition and any type of product or service without having to rely heavily on the expertise of others in their field. More than 25 percent of the current DoD acquisition workforce has less than 5 years of experience. Therefore, the DoD does not have enough experienced acquisition professionals to adequately execute acquisitions. (AT&L, 2016)
- Acquisition professionals rely heavily on the expertise of more experienced colleagues to learn acquisition skills. As the number of proficient acquisition professionals continues to decrease (due to attrition), those with less than 5 years of experience will not have enough experienced professionals available from whom to learn how to execute their role in the acquisition process.
- Acquisition has become increasingly complex over the past 5 years. If this trend continues and acquisition complexity continues to increase, it will become even more

challenging to train an inexperienced workforce, especially if existing tools are inadequate and not updated in a timely manner. This will decrease the likelihood that programs can successfully navigate the acquisition lifecycle to deliver within cost, schedule, and performance requirements

- Acquisition professionals do not have the necessary knowledge, tools, and training to tailor the acquisition process for the specific solution they are acquiring. Furthermore, the available information is not organized in an easily navigable fashion.

Survey Results

Survey responses were received from over 250 individuals supporting the DoD, Civilian Agencies, and the Intelligence Community. Figure 3 depicts the survey respondents' demographics.

Figure 3 Respondent Community Breakdown



Acquisition Has a Long Learning Curve

Of the total respondents, 64 percent stated that it takes 10 years or more to become fully proficient in acquisition. Furthermore, the longer the respondent had been in the acquisition workforce, the more years of experience the respondent believed that it took to become proficient: 18 percent of respondents believed it took upwards of 15 years to become proficient and 10 percent believed that it takes 20 years or more to become proficient. These responses are shown in Figure 4 and validate MITRE's hypotheses. MITRE's hypotheses are further supported by a Harvard Business Review (HBR) article stating it takes time to become an expert, a minimum of ten years, and in some cases 15 to 25 years of steady practice. (Ericsson, Prietula & Cokely, 2007)

Figure 4 Respondent Proficiency Responses

64% believe it takes



18% believe it takes **15 Years**

10% believes it takes **20+ years**

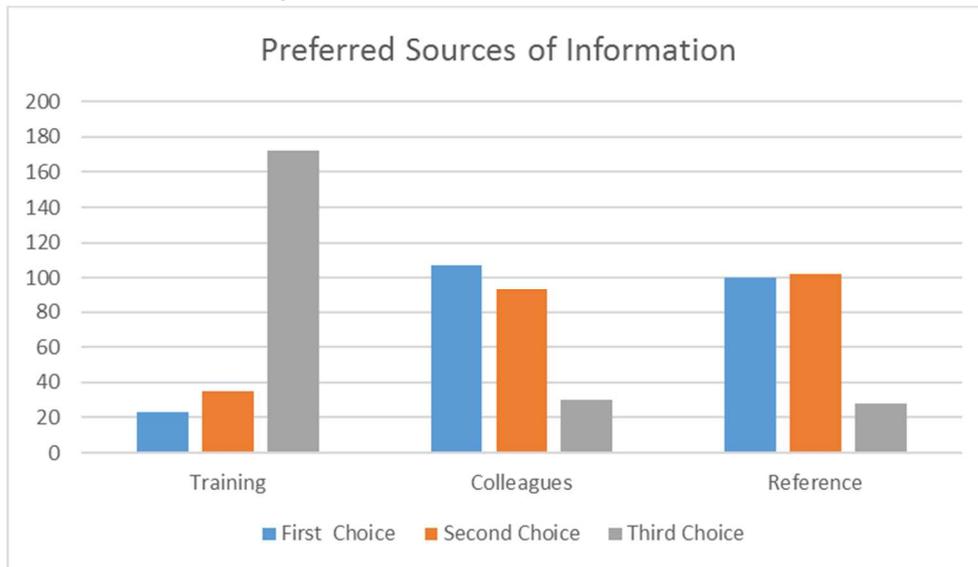
Respondants with more years of experience believe it takes longer to become fully proficient

Nearly 50 percent of the DoD acquisition workforce lacks the necessary years of experience to be considered proficient in acquisition using this measurement. (See Figure 2) This data supports the findings in the literature review of a sub-optimally experienced workforce. Taking into consideration the hypothesis that the learning curve associated with acquisitions is steep, the lack of experience equates to a sub-optimally skilled workforce as well.

Acquisition Professionals Rely Heavily on Expertise of More Experienced Colleagues and Reference Tools

First the study aimed to identify respondents' preferred sources of information about federal acquisition. Figure 5 shows how respondents ranked formal training, more experienced colleagues, and reference tools.

Figure 5 Preferred Sources of Information



Only 10 percent of the respondents cited formal acquisition training as their primary avenue for learning. While classroom training supplies foundational knowledge about acquisition, it does not deliver the specific acquisition knowledge that easily translates into day-to-day practice. Respondents preferred to use either their more experienced colleagues or reference tools to answer their acquisition questions.

Approximately 46 percent of respondents confirmed that experienced colleagues are their primary source of acquisition information while 44 percent use reference tools as their first choice. This confirms our hypothesis that acquisition professionals rely heavily on the expertise of more experienced colleagues, but also that professionals rely almost as much on reference materials. As the number of experienced professionals continues to decrease, the need for tools to bridge the knowledge gap becomes even more critical.

Acquisition Has Become Increasingly More Complex

The survey specifically asked if respondents believed acquisition has become more complex over the last five years. 74% of respondents believe that acquisition has become slightly more or significantly more complex. Along with this, respondents reported the results shown in Figure 6 regarding rating the most prevalent challenges to learning and executing acquisitions.

RANK ORDER OF CHALLENGES

LEARNING/EXECUTING ACQUISITIONS

- 1 Resistance to deviate from “way we’ve always done it”
- 2 Feel unsupported to think “outside the box”
- 3 Inconsistent organizational processes
- 4 Uncertain how to apply new policy and guidance
- 5 Unable to keep up with new policy and guidance
- 6 Lack of collaborative opportunities to share best practices
- 7 Limited access to individuals with acquisition expertise
- 8 Training opportunities aren’t timely or adequate

Respondents felt pressure to “think outside of the box” and to be innovative, but did not feel supported in doing so and encountered considerable resistance when they sought to deviate from the status quo. The results also show that the government releases a large amount of policy and guidance that respondents are unable to appropriately adjudicate due to uncertainty of application or time to process the new changes. This confirms the hypothesis that acquisition continues to become more complex. This data also illustrates that the acquisition workforce is neither adequately empowered nor equipped to successfully execute acquisitions. If the government continues trying to “fix” acquisition by releasing additional policies and guidance, the risk that programs will miss cost, schedule, and performance goals rises.

Acquisition Professionals Do Not Have the Necessary Knowledge, Tools, and Training to Tailor the Acquisition Process for the Specific Solution They Are Acquiring

The survey then focused on the current tools and guidance that respondents noted they rely on to learn a new process and stay current with new information. E.g., DAU Portal, or agency/organization specific tools. The survey asked respondents to rate on a scale of 1 to 5 the following aspects of the existing tools and guidance:

- Currency: Is the available information accurate and up to date?
- Relevancy: Does the information help you execute your acquisition?

- Availability: Are you able to easily find the information that you need when you need it?
- Usability: Are you able to easily navigate the tools (e.g., search capabilities)?
- Digestibility: Is the information conveyed in a way that is easy to understand and apply to your acquisition?

Respondents rated four out of the five aspects as poor, marginal, or fair. Figure 6 shows that the workforce believes current tools lack relevance, usability, digestibility, and availability. Most survey respondents believe the existing tools are difficult to navigate to find the relevant information sought.

Figure 6 Current Tool Ratings



Finally, the survey asked respondents to rate the adequacy of existing tools, information, and training to help the acquisition workforce to tailor processes to fit unique acquisition needs. 55% of respondents believe existing tools, information and training are inadequate or only somewhat adequate to conduct tailoring activities.

These ratings reinforce MITRE’s hypothesis regarding the state of existing tools for accessing the knowledge to execute acquisitions. In fact, a review of the major acquisition sites that provide the tools and information to the workforce revealed broken links, scattered information that is often outdated, misaligned guidebooks and recommendations with new policy, and scattered exemplars and best practices. Many of these websites were developed and designed in the 1990s/early 2000s and have never been updated.

Overall, the survey results, literature review and data analysis confirmed the hypotheses that MITRE developed about the acquisition workforce. MITRE used this information and generated recommendations for further research and development.

Analysis

MITRE found a disconnect between the expectations of DoD acquisition leadership and the capabilities of the workforce. For example, the workforce is constantly encouraged and challenged to be “innovative,” yet policy and processes for executing an acquisition

program remain unchanged. The current acquisition environment is largely confined to executing acquisitions in an outdated manner that does not align with the demands for a workforce that thinks critically and is equipped to develop innovative strategies and solutions to meet warfighter needs faster than ever.

The acquisition workforce is key in meeting Third Offset Strategy objectives that call for delivering innovative capabilities to ensure US military superiority, which is being challenged by our “pacing competitors.” (Pellerin, 2016) Yet the workforce is not currently trained to think critically or provided tools to enable such thinking. Fostering innovative acquisition thinking and strategies is essential to addressing acquisition challenges and keeping pace with technological challenges. The government must also institute cultural and organizational changes to incentivize the workforce to deliver innovative solutions.

Mr. Frank Kendall, Under Secretary for Defense, Acquisition, Technology & Logistics, has long encouraged critical thinking through the Better Buying Power 1.0 – 3.0 initiatives. DoD acquisition leadership also encourages tailoring of policy, when appropriate, to streamline acquisition timelines. For example, DoD Instruction 5000.02 contains more than 12 references to tailoring. The recent DoD Instruction 5000.75, Business Systems Requirements and Acquisition issued in February 2017, includes the following guidance regarding tailoring in Section 4: Procedures:

- a. Tailoring. The procedures used to develop business capability requirements and supporting systems will be tailored to the characteristics of the capability being acquired. Tailoring will focus on application of best practices to the totality of circumstances associated with the program, including affordability, urgency, return on investment, and risk factors. The functional sponsor, MDA, and CAE or designee will collaborate to tailor program strategies and oversight, including: program information, acquisition phase content, and the timing and scope of decision reviews and decision levels.*

This policy gives acquisition professionals the latitude to tailor requirements and use best practices to address affordability, urgency, return on investment, and risk factors. But it assumes the workforce is familiar with business systems best practices and has the in-depth knowledge to apply tailoring to a unique acquisition program. Much of the acquisition workforce does not have the deep understanding of acquisitions necessary to know which processes and documents can be tailored to achieve effective and efficient results.

The government must make revolutionary changes to align with the changing workforce demographic. Despite the massive amount of information available through on-line resources, the current acquisition environment lacks tools that enable the workforce to sort through all the policy, guidance, and available information to develop tailored solutions that satisfy warfighter needs.

Conclusions and Recommendations

The DoD is heavily burdened by bureaucratic processes, policies, and culture that prevent it from effectively exploiting leading technologies for military advantage. Former Defense Secretary Carter proclaimed that DoD has a strategic imperative to innovate, with speed and agility the key factors, and championed investment in agile, innovative organizational structures/constructs. He chartered the Defense Innovation Board, composed of executives from the leading Silicon Valley companies and academia, to infuse innovation in DoD. General Selva, Vice Chair of the Joint Chiefs of Staff, says DoD is not organized for innovation and needs more operational experimentation.

These expectations are lofty given the trajectory of the acquisition workforce. To achieve the success metrics established by DoD leadership, the DoD must make fundamental changes at the workforce level. The workforce needs modern tools to maneuver through the acquisition system and fill the gaps left by the retiring experienced personnel. To meet demands to identify, develop, and integrate game-changing technologies for our warfighters to maintain a technical superiority, the DoD must focus attention on the acquisition workforce to ensure it can respond to the ever-changing threat environment and the associated demands.

A Digitized Work Environment

The government needs new tools to shorten the learning curve and appeal to a younger workforce accustomed to digital solutions. Although many on-line resources are currently available, they are limited in functionality and still require an extensive baseline knowledge of the acquisition system.

Digitized policy allows the acquisition workforce, especially a more digitally focused workforce, to quickly access what is currently a collection of hundreds of pages of static .pdf documents with pages of reference documents. It provides instant clarification of terminology, links to relevant sections of up-to-date policy documents, and access to reference documentation without the user's having to leave the site.

Tailored Acquisition Approaches

HBR cites an argument from thirteenth century philosopher and scientist Roger Bacon that it would be impossible to master mathematics in less than 30 years. Today, individuals can master complex frameworks such as calculus in their teenage years. HBR attributes this to a change in the organization and accessibility of material and states, "Students of mathematics no longer have to climb Everest by themselves; they can follow a guide up a well-trodden path." (Ericsson, Prietula & Cokley, 2007) This concept of repacking and improving accessibility can be applied to acquisitions through tailored models.

Tailored acquisition models give users the benefit of pre-tailored, approved acquisition solutions for a variety of acquisitions. For example, tailored models for agile acquisitions

can offer streamlined processes to guide implementation of agile solutions. Chang & Modigliani (2017) liken tailored acquisition models to “Google maps for acquisition”:

Today, acquisition professionals are expected to tailor the DoDI 5000.02 on their own. This can be compared to handing them a map and telling them to figure out the best way to drive from New York City to Los Angeles. If this is their first time traveling this route, it would take a lot of time to study the map, plan the route, talk to others about shortcuts, and encounter traffic and detours along the way. Perhaps they will reach their destination, but not without wasting significant time and fuel. Proactively tailored models are the Google Maps for acquisition. Routes are optimized for the type of product or service being acquired with turn by turn guidance for each acquisition phase. Tailored acquisition models provide the acquisition workforce with a pre-chartered route that guide users on a path for success.

Tailored acquisition models are pre-filtered to provide only the information, processes, documentation, and reviews that are relevant for that type of acquisition. If a Service or Portfolio Acquisition Executive approves these models for their organization, programs no longer should request tailoring permission and obtain waivers from multiple oversight organizations. Programs can operate with pre-authorization to streamline specific procedures and documents based on the type of product or service being acquired.

Tailored models aid acquisition professionals who lack a full understanding of the lifecycle DoDI 5000.02 process to quickly determine the applicable processes, artifacts, and milestones necessary to execute a specific type of acquisition, such as an acquisition for an agile IT system. These tailored models include only the necessary artifacts and consolidated processes and milestones to eliminate unnecessary requirements. The government cannot expect the workforce to move toward innovative and streamlined acquisition when they are clearly struggling with the basics.

Workforce Cultural Changes

In addition to new tools, such as tailored models and digitized policy, cultural changes are necessary to support and accomplish innovative solutions and translate high-level policy into actual implementation at the workforce level. For example, tailored models can only succeed if acquisition executives and leadership at the Program Executive Organization (PEO) levels approve the use of tailored models and the accompanying modified processes.

Accelerated learning can also be addressed by optimizing learning through on-the-job training opportunities. For example, rather than assigning a crushing workload to acquisition veterans, organizational leaders could instead refocus the priority of seasoned veterans on growing the junior staff. Given the overwhelming workload that plagues many organizations, this may be difficult to implement. Per HBR, having expert coaches makes a big difference in the learning process to include accelerating the learning

process. (Ericsson, Prietula & Cokely, 2007) But not attempting to identify opportunities to implement organizational cultural changes focused on developing the junior acquisition workforce present a long-term threat to the ability to execute acquisitions.

The increasing complexity of acquisition also must be addressed. Business models, as well as technology are changing. Continuing to rely upon traditional tools and training doesn't support the acquisition workforce to "think outside the box" and "think critically". The government has an opportunity to reshape the way it approaches acquisitions by leveraging the inexperience of the junior workforce. To do this, the government must create training opportunities that embrace the complex and changing landscape. For example, if the government were to simplify access to statutory and regulatory information through modern digital tools and implement tailored models, or even apps that speak to upcoming generations, training could instead focus around thinking critically and developing innovative solutions.

FFRDC Digital Acquisition Capability

To accelerate the learning curve through digital tools, MITRE recently launched ACQUIRE, a digital platform for acquisitions (<http://acquire.mitre.org>) to accelerate the learning curve through digital tools. ACQUIRE presents a new way of thinking about and executing acquisitions.

- ACQUIRE provides a digital capability for acquisition professionals to understand the mechanics of implementing a type of acquisition with which they may be unfamiliar.
- The platform contains digitized policy and tailored acquisition models that enable less experienced professionals to quickly navigate the complex acquisition environment by consolidating and simplifying the vast amounts of available information.

ACQUIRE gives members of the workforce one-stop access to current acquisition policy and enables them to quickly navigate to helpful and relevant information about the problem they are attempting to solve.

Since MITRE is a Federally-Funded Research and Development Center, the ACQUIRE capability was developed for the public good and is available for use and application to the acquisition work environment.

Federal acquisitions can also leverage leading Artificial Intelligence (AI) tools, like IBM's Watson, to digest vast amounts of structured and unstructured data from policies, guides, and program documentation to help programs apply the vast information sources and provide executives better visibility into their enterprise.

References

- AT&L, U. S. (2016). *Performance of the Defense Acquisition System: 2016 Annual Report*. Washington, DC: Department of Defense.
- Center for the Study of Democratic Institutions. (2015). *Survey on the Future of Government Service*. Washington, DC: Center for the Study of Democratic Institutions.
- Chang, S., & Modigliani, P. (2017). Proactively Tailored Acquisition Models. *Defense Acquisition University*.
- DoD. (2017). *Instruction 5000.75 Business Systems Requirements and Acquisition*. Washington, DC: DoD.
- Ericsson, K., Prietula, M., & Cokely, E. (2007). Managing People: The Making of An Expert. *Harvard Business Review*.
- Grant Thornton and PSC. (2016). *Aligning for Acquisition Success: Overcoming Obstacles to Results*. Washington, DC: Grant Thornton.
- McCabe, K., & Laurent, A. (2015, April 3). *The Real Problem with Acquisition Training*. Retrieved from Government Executive:
<http://www.govexec.com/contracting/2015/04/real-problem-acquisition-training/109138/>
- Pellerin, C. (2016, October 31). Deputy Secretary: Third Offset Strategy Bolsters America's Military Deterrence. *DoD News Defense Media Activity*.
- The Volcker Alliance. (2016). *Doing the People's Business: Key Competencies for Effective Public Procurement*. New York, NY: The Volcker Alliance.