

INNOVATION IS A CONTRACT SPORT

Ways that agencies can achieve innovative outcomes through acquisitions

FEBRUARY 2016



PARTNERSHIP FOR PUBLIC SERVICE

Booz | Allen | Hamilton

The Partnership for Public Service is a nonpartisan, nonprofit organization that works to revitalize the federal government by inspiring a new generation to serve and by transforming the way government works. The Partnership teams up with federal agencies and other stakeholders to make our government more effective and efficient. We pursue this goal by:

- Providing assistance to federal agencies to improve their management and operations, and to strengthen their leadership capacity
- Conducting outreach to college campuses and job seekers to promote public service
- Identifying and celebrating government's successes so they can be replicated across government
- Advocating for needed legislative and regulatory reforms to strengthen the civil service
- Generating research on, and effective responses to, the workforce challenges facing our federal government
- Enhancing public understanding of the valuable work civil servants perform

Booz Allen Hamilton has been at the forefront of strategy, technology, and engineering for more than 100 years. Booz Allen partners with public and private sector clients across the globe to solve their most difficult challenges. The biggest business assets across civilian and commercial enterprises are data, content, products, and services. Are you using the latest customer insights, delivery methods, and technology platforms to unlock their potential? From engaging with customers via a dynamic website to using an intuitive dashboard to distribute data, applying technology builds trust and drives use within your organization and with the public. Forming a web-savvy workforce can boost productivity, while delivering an engaging customer experience unlocks real economic value. Focused innovation presents the path to new and sustainable business models. The business and technology landscape is constantly evolving—Booz Allen can ensure your organization evolves with it. To learn more, visit www.boozallen.com. (NYSE: BAH).

EXECUTIVE SUMMARY

Innovation in government is a two-way street. Sometimes new inventions or advancements happen inside government and go to the private sector for mass production and distribution. Other times, government identifies a problem and turns to the private sector for solutions. In either case, the nation relies on procuring these innovations to meet critical needs.

A few years ago, an applied physiologist at a Department of Veterans Affairs hospital in New York tested a bionic walking-assistance system—created by an Israeli company—that enables veterans with spinal cord injuries to stand, walk and climb stairs using a wearable robotic exoskeleton. VA recently announced it will make these exoskeleton systems available for all qualifying veterans.

In another example of public-private collaboration, a Department of Energy metallurgist at a federal laboratory in Oregon developed a new type of coronary stent. He then worked with a leading maker of medical devices to create tiny but strong and long-lasting scaffolding that holds open an artery to keep blood flowing—and is visible for X-rays. It has become the leading stent in the world, since being introduced in 2010.

These innovations are just two examples of innovations that arose when federal agencies worked with the private sector. Beyond the medical field, this type of partnership has led to advances such as environmentally friendly buildings and new tools for defending our nation.

For this report, we interviewed dozens of federal officials who are working to form strategic partnerships to achieve life-changing innovations. We learned how they have been successful by collaborating with nongovernmental partners, managing risk, allowing for failure and changing agency culture. We take these lessons and identify ways they can be expanded across government.

Innovation Is a Team Sport: Building the Best Team

Agencies need strategic partnerships with academia, industry and nonprofit research centers to take on special long-term research or development that government cannot undertake as effectively with its own resources.

Innovation Is a Team Sport: Using the Full Playbook

More than 70 percent of our interviewees said agencies that harness innovation view risk-taking and smart failure as necessary elements of their agencies' culture. There are ways to structure procurements that allow for risk-taking, innovation and cost savings. For example, the Air Force's Office of Transformational Innovation uses a "fail fast" strategy, giving each project six months to make the case that it has the potential to improve Air Force operations significantly.

Innovation Is a Team Sport: Calling the Right Plays

Agencies get more innovative when officials transform agency culture to include risk-taking. Risk does not come naturally to the federal government and is particularly difficult for the acquisition community. Agencies can drive a change in culture with leadership support, training and even organizational design—for example, the open-office concept found at a Department of Energy agency, in which program directors, lawyers and acquisition experts sit near one another, allows for easier collaboration.

INTRODUCTION

Government's most profound and innovative technological breakthroughs—everything from the internet to GPS—have resulted from strategic partnerships between agencies, private industry and academic institutions. Building off of past successes and expanding these types of partnerships is vital for increasing the government's collaboration and innovation, and addressing the nation's most pressing challenges.

Strategic partnerships across sectors were vital in 2009, when the nation was facing pandemic influenza for the first time in decades. However, building these partnerships took a concerted effort from individuals in every sector to address both seasonal and pandemic flu. Every year, seasonal flu still kills tens of thousands of people. It spreads easily and can lead to complications—such as pneumonia—in many people. Last year, it was among the top ten leading causes of death in the United States, according to the Centers for Disease Control and Prevention. The seasonal response to flu involves several federal agencies, which are responsible for steps such as forecasting the likely strains of the flu; industry, which makes the vaccines; and state and local government, which distribute the vaccine. These partnerships have been carefully built over time and proved vital in 2009.

In 2009, the H1N1 influenza virus began infecting people. With the rapid spread of the virus, initially called swine flu, the World Health Organization declared it a pandemic. Worried people wondered what they could do to stay safe. Our government is responsible for protecting the nation's public health but there was no vaccine for H1N1, so it had to rely on the same strategic partnerships that it had built for the seasonal flu. Dr. Robin Robinson heads the Biomedical Advanced Research Development Authority, or BARDA. As Dr. Robinson explained, "Our way of thinking and doing business has completely changed. In the past, government and industry were timid. After Katrina, we saw what can happen if you don't

prepare properly for a disaster. We now leave no stone unturned. That approach permeates every aspect of our work, from the stockpiling of vaccines to R&D."

This strategic and collaborative approach to solving problems requires a role for partners in both the public and private sectors, enabling government to achieve innovative outcomes. To do this, government uses tools and flexibilities available through acquisitions to obtain the goods and services needed to achieve agency missions.

The Partnership for Public Service and Booz Allen Hamilton set out to understand the essential ingredients for achieving innovative outcomes in government. Our major focus was on outcomes, not process; although government has made significant strides in creating innovative methods to improving acquisition processes (see Appendix One). Many studies have been done about what is broken in federal acquisitions, but not nearly enough about what is working well and should be replicated. In researching leading practices in acquisition, we saw several common elements that led to success: strategic partnerships between experts in government and private industry; a way for all team members to take risk strategically; and an organizational culture that is supportive of innovation. In this report we provide examples of agencies employing this approach and the outcomes they achieved—or hope to achieve. While we focused on innovative outcomes, our findings and recommendations can be applied to all types of government acquisitions.

METHODOLOGY

The findings in this report are based on dozens of interviews with acquisition professionals from the federal government, industry and academia who are involved in helping federal agencies achieve innovative outcomes. We focused on government’s most innovative agencies that are tackling innovation head-on and finding ways to embrace risk-taking. The primary mission of many of these agencies is to advance science, technology, and research and development; the agencies include the Defense Advanced Research Projects Agency, the Intelligence Advanced Research Projects Activity, the Advanced Research Project Agency-Energy, the Air Force Research Laboratory and the Biomedical Advanced Research and Development Authority.

We found that these agencies are at the forefront when it comes to innovative outcomes. While these agencies

have unique features that apply to their particular research and development work, more often they operate under the same rules and regulations as other federal agencies. We wanted to understand whether other agencies could replicate their practices. The research and development, or R&D, agencies we interviewed are governed by the same acquisition regulations: the Federal Acquisition Regulation, known as FAR. Exploring and highlighting their efforts could provide important lessons for all agencies.

Along with our interview findings, we gathered quantitative data on federal contract spending from the Federal Procurement Data System—the government’s data portal for acquisitions—and on the acquisition workforce from FedScope, the Office of Personnel Management’s human resources database. The data helped us understand the factors affecting the federal ac-

quisition community. We also analyzed responses to the Office of Personnel Management’s 2015 Federal Employee Viewpoint Survey. Of its more than 420,000 respondents, almost 8,000 were contract specialists.

To verify our findings, we convened key leaders from the acquisition field to discuss how the examples from our interviews could be replicated throughout government within existing laws, rules and regulations.

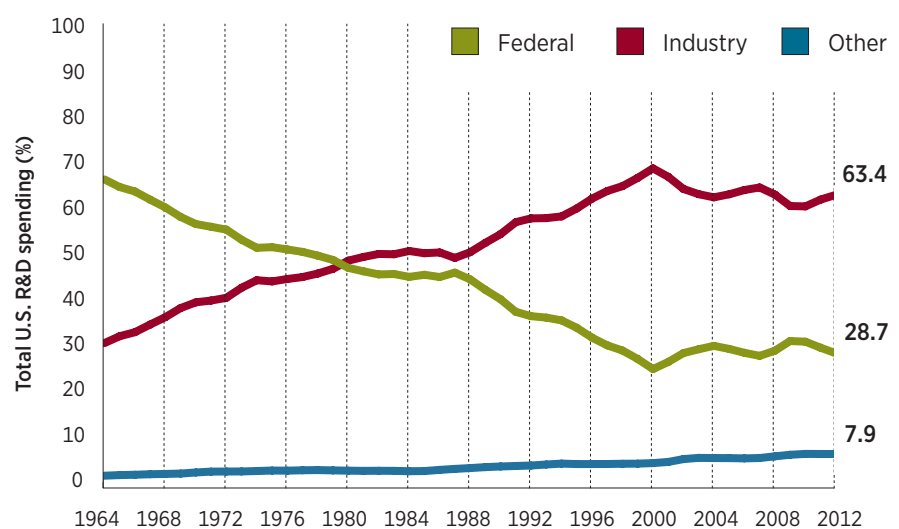
Finally, we conducted an extensive literature review of articles, acquisition legislation and memoranda, and other relevant reports from both governmental and nongovernmental organizations, to map the current state of federal acquisitions. We also reviewed agency-specific supplements to the FAR, such as the Defense Federal Acquisition Regulation Supplement, known as DFARS.

BACKGROUND

The federal government used to be a primary producer of research and development. However, federal R&D funding has dropped 15 percent since 2010. This drop is even more pronounced in defense agencies, where funding has fallen almost 25 percent since 2010.

This creates a need for government to get creative, as it is no longer in the position to drive key innovations without help from other sectors.

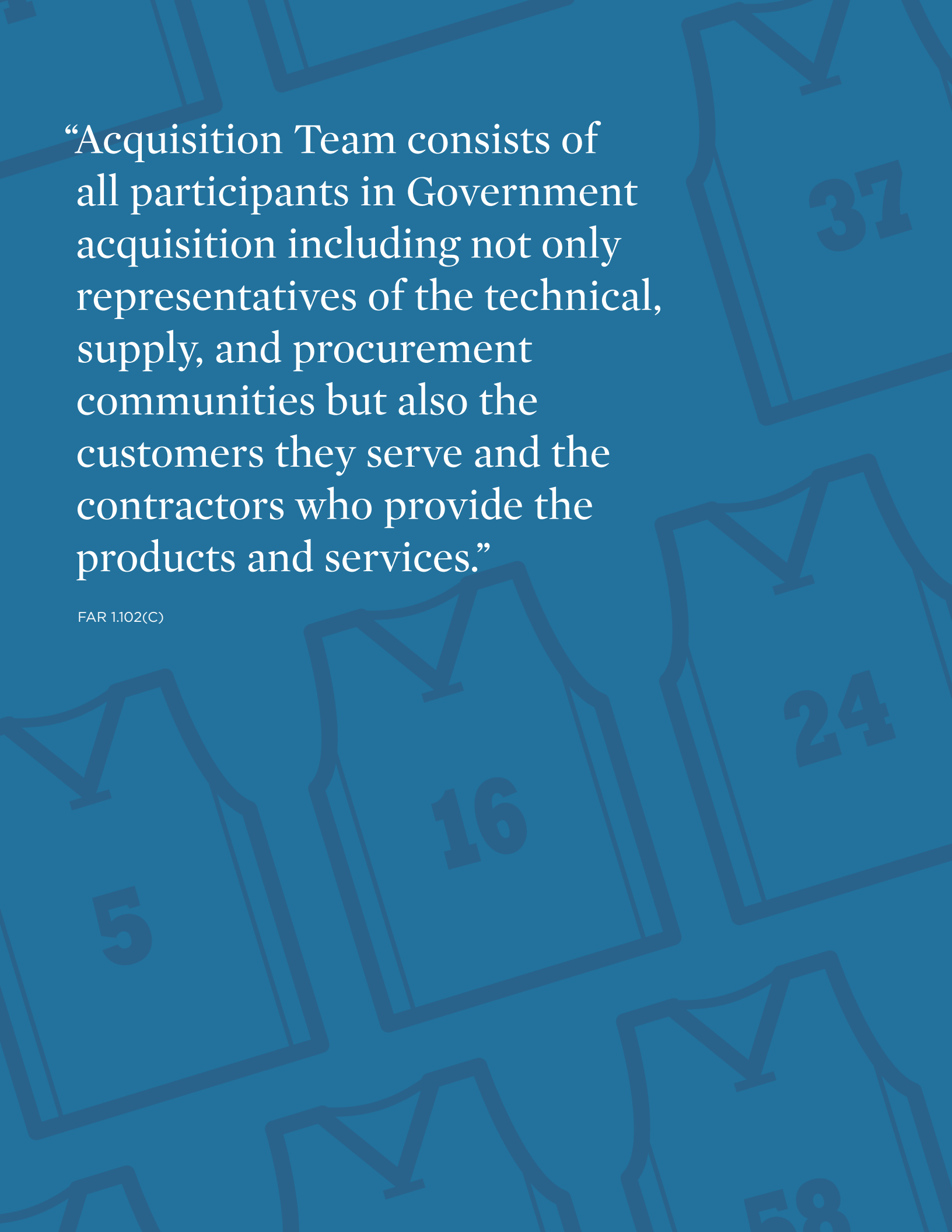
NATIONAL R&D SPENDING BY FUNDER



Source: American Association for the Advancement of Science, "National R&D By Funder (Share of Total)," November 2015. Retrieved from <http://bit.ly/1KNCbUj>

“Acquisition Team consists of all participants in Government acquisition including not only representatives of the technical, supply, and procurement communities but also the customers they serve and the contractors who provide the products and services.”

FAR 1.102(C)



Innovation Is a Team Sport: Building the Best Team

AGENCIES ARE WORKING IN PARTNERSHIP WITH INDUSTRY AND
ACADEMIA TO ACHIEVE LIFE-CHANGING INNOVATIONS

Many organizations and agencies are involved in producing the flu vaccine. The World Health Organization and the Centers for Disease Control and Prevention conduct regular surveillance of flu strains. The Food and Drug Administration is responsible for distributing the identified flu strain(s) to a network of vaccine manufacturers. A range of nonfederal partners, including Texas A&M University and the privately held Novartis Vaccines and Diagnostics, have facilities—partially funded with federal money—that produce the annual flu vaccine and can ramp up for large-scale production in case of a pandemic. Individual physicians and nationwide retail chains are responsible for vaccinating individuals. The point is that no single organization addresses this challenge alone because it's smarter, quicker and more effective to work together. In fact, there is no other choice. No single sector is fully equipped to address the challenges of the flu.

Working side by side, the private and public sectors become partners that cooperate to achieve a common goal. The Federal Acquisition Regulation itself states that “by defining the Federal Acquisition Team in the Guiding Principles is to ensure that ... teamwork, unity of purpose, and open communication among the members of the Team in sharing the vision and achieving the goal of the System are encouraged.”¹ Our interviews highlighted that open communication is critical in these cross-sector relationships.

The Defense Advanced Research Projects Agency, or DARPA, which was established to “make pivotal investments in breakthrough technology for national security,” is one of the best examples of partnerships between sectors.² DARPA was responsible for developing the internet and GPS, which have since generated billion-dollar industries that have changed the world. The U.S. first invested in DARPA following the launch of Sputnik by the Soviet Union in 1957. Program teams at DARPA include

professionals from academia, government and industry. DARPA builds strategic partnerships across sectors in part through its staffing model. DARPA rotates people in to do project work, constantly seeking fresh ideas and new techniques. As DARPA brings in new program directors, these individuals bring with them their networks from other sectors.

Similarly, within the Department of Energy is another Advanced Research Project Agency, or ARPA-E. ARPA-E's mission is to change the way that the United States produces and uses energy. Like DARPA, ARPA-E has three-year term limits for program staff, which agency officials tell us creates a sense of urgency as well as “purpose and drive,” since employees feel like they have to get started and get results quickly. Moreover, this constantly refreshes their perspectives and their ways of thinking, providing the organization with “new blood” from a range of sectors on a continual basis.

Representatives from the Air Force Research Laboratory—the U.S. Air Force research arm that discovers, develops and integrates warfighting technologies—also said in interviews it cannot meet its mission without the

1 Federal Acquisition Regulation, 48 C.F.R §1.102-3.

2 DARPA, “About DARPA.” <http://bit.ly/1WuWslb>

support of external partners. The Air Force Research Laboratory has relationships with almost 400 businesses and universities. It also works with foreign allies such as Japan and Canada. The idea of close collaboration with non-government partners was echoed by several interviewees both inside and outside of government. Many agency officials told us that they reached better outcomes when they worked closely with industry long before they ever issued a solicitation.

R&D agencies are not the only ones working in strategic partnerships across sectors. The Department of Homeland Security created the Procurement Innovation Lab in 2015 to share acquisition best practices, such as frequent communication with industry, and highlight “the many things the FAR allows but are often overlooked.”³ Chief Procurement Officer Soraya Correa, who leads the DHS initiative, has been quoted as saying, “Let’s see how we can ... get things done a little quicker, a little cheaper and a little smarter.”⁴

Bringing to scale measures that are already in place

Some agencies have taken steps toward these strategic partnerships, but individuals told us these steps can go further. In one instance, many agencies host “industry days,” which have the goal of improving communication between, government and private-sector representatives.⁵ For example, the DHS Strategic Industry Conversation in February 2015 focused on topics such as biometrics and how DHS collects and uses biometric information. Some of the discussions at the event centered on how DHS can continue to improve its data framework, and how R&D drives innovation in the federal government.^{6,7} However, we heard from both agency representatives and contractors that these industry days can be a missed opportunity. They are often a series of presentations, without an opportunity for more meaningful relationship-building and collaboration. One contractor suggested that using these industry days to brainstorm potential responses to government’s toughest challenges could be a better use of these sessions.

A few federal agencies are also experimenting with “reverse industry days,” during which agency personnel have a chance to learn industry representatives’ perspec-

tives on what it is like for them to work with government and how they view government contracts. Government representatives can also hear from industry about their agencies’ acquisitions and acquisition processes. This is a step toward two-way communication between the sectors.

In November 2015, DHS held a reverse industry day during which DHS staff participated in discussions such as “How Industry Decides to Bid (or Not),” “How Access to Information Affects Industry Processes” and “How Industry Views and Reacts to Decisions in the Award and Post-Award Phases.”⁸ At another reverse industry day in January 2015, the Office of Federal Procurement Policy and the U.S. Digital Service, a team of technical experts within the Office of Science and Technology Policy charged with transforming how the federal government works for the American people, gathered industry feedback on a competitive challenge to create training programs in information technology for acquisition professionals.⁹ As a result of their reverse industry day, USDS and OFPP successfully held a challenge for a new digital services training program, which is now in its pilot phase.

Many acquisition professionals operate with the misconception that agency officials need to keep “arm’s length” from a prospective contractor. In fact, the OFPP clarified that government officials can meet one-on-one with a potential vendor as long as no vendor receives preferential treatment.

A March 18, 2015 memo from the OFPP administrator created an “Acquisition 360” process with the goal of getting “timely” and “actionable” feedback from all stakeholders on the acquisition process.¹⁰ The process tries to better involve industry in acquisitions because “successful acquisitions depend on a clear understanding of the market’s capabilities and dynamics, and this requires early and meaningful engagement with industry.”¹¹ This is a step in the right direction, but it waits until the end of a procurement to build in collaboration with industry. Similarly, it is focused on feedback about the process, rather than feedback about the potential outcome.

3 Billy Mitchell, “Buyers Club in the works for all major agencies,” *Fedscoop*, June 9, 2015. Retrieved from <http://bit.ly/1JixSCc>

4 *Ibid.*

5 Department of Homeland Security, “Guidance on Conducting Industry Days,” October 6, 2011. Retrieved from <http://bit.ly/1QeLYE7>

6 Federal Business Opportunities, “DHS Industry Engagement Event – February 25, 2015,” January 2015. Retrieved from <http://1.usa.gov/IPgsxvU>

7 Department of Homeland Security, “Synopsis of The Department of Homeland Security’s “Strategic Industry Conversation,” April 2015. Retrieved from <http://1.usa.gov/1NkBC11>

8 Professional Services Council, “DHS Holds First Reverse Industry Day.” Retrieved from <http://bit.ly/23ffcKf>

9 The Coalition for Government Procurement, “Invitation to Reverse Industry Day: Building Digital IT Expertise in the Federal Government.” Retrieved from <http://bit.ly/1T5AMw9>

10 Office of Federal Procurement Policy, “Acquisition 360 – Improving the Acquisition Process through Timely Feedback from External and Internal Stakeholders,” March 18, 2015. Retrieved from <http://bit.ly/1na1G9O>

11 *Ibid.*

The Acquisition 360 Process directed all CFO Act agencies¹² to “take the additional steps ... to improve how they receive and use industry and internal feedback to strengthen their acquisition function from pre-award activities up to, and including, contract award and

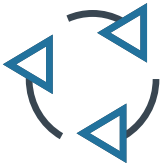
debriefings.”¹³ The Office of Federal Procurement Policy instructs agencies to make use of available survey methods to obtain feedback from external and internal stakeholders on their view of the agency in question’s contracting process.

Within Acquisition 360 is a “Rate the Agency” survey administered to vendors following the debriefing. The survey asks for their thoughts on requirements development, solicitation, award execution and debriefing processes. The results of this rating tool and other surveys are to be submitted to the agency’s chief acquisition officer, senior procurement executive, the Office of Federal Procurement Policy, the point of contact for the company and other pertinent parties to help the agency gain a better understanding of how to improve its acquisition practices.

12 The CFO Act agencies are 24 agencies mentioned in the Chief Financial Officers Act of 1990 (P.L. 101-576). They include: Department of Agriculture, Department of Commerce, Department of Defense, Department of Education, Department of Energy, Department of Health and Human Services, Department of Housing and Urban Development, Department of the Interior, Department of Justice, Department of Labor, Department of State, Department of Transportation, Department of the Treasury, Department of Veterans Affairs, Agency for International Development, Environmental Protection Agency, Federal Emergency Management Agency, General Services Administration, National Aeronautics and Space Administration, National Science Foundation, Nuclear Regulatory Commission, Office of Personnel Management and Small Business Administration.

13 Office of Federal Procurement Policy, “Acquisition 360 – Improving the Acquisition Process through Timely Feedback from External and Internal Stakeholders,” March 18, 2015. Retrieved from <http://bit.ly/1S4WeAS>

RECOMMENDATIONS



Agencies can benefit from cross-functional teams with diverse representation from the public and private sector

Agencies should involve these partners as early as possible to allow for the most innovative solution possible. This level of collaboration is not only allowed by the FAR, it is also encouraged by the Office of Federal Procurement Policy. In order to reinforce these strategic partnerships, agencies should update or adapt agency-level policies, guidance and training.



“Industry days” should be expanded to include partnership-building across sectors

Agencies currently host industry days, but as these days are currently structured, staff miss the opportunity to build partnerships across sectors.



To foster a better partnership across sectors, the Office of Federal Procurement Policy should expand the Acquisition 360 process to include iterative reviews and checkpoints through the entire acquisition process. Outcomes of the acquisition should be measured and reviewed by different sector representatives

The Office of Federal Procurement Policy launched the Acquisition 360 process to gather feedback from the contractor on its interactions with government, including both the pre- and post-contract award process. This is a first step in improving communication between buyer and seller, but contractors only provide feedback at the end of the contract. Agency officials lose the opportunity to receive real-time feedback. Soraya Correa at DHS makes wide use of the Acquisition 360 process, but said it would be more helpful if it could be done at multiple times throughout the acquisition process.

“Reasonable risk-taking is appropriate as long as risks are controlled and mitigated.”

FAR 39.102(A)



Innovation is a Team Sport: Using the Full Playbook

AGENCIES THAT BALANCE RISK FOR ALL STAKEHOLDERS ACHIEVE MORE INNOVATIVE OUTCOMES AND CAN SAVE MONEY IN THE PROCESS

To develop the flu vaccine each year, organizations must take multiple risks. The World Health Organization and the Centers for Disease Control and Prevention make a calculated guess about the flu strains they expect will circulate. Manufacturers must assess the expected demand for the vaccine, which can vary greatly from year to year (if manufacturers miscalculate, either the supply runs short or the manufacturer plows money into an oversupply). The Department of Health and Human Services relies on three manufacturers to produce a vaccine for the annual flu season and in the case of a flu pandemic. Even though these manufacturers are all developing a product to prevent the same disease, they are free to use whatever approved method it takes to get there. These typically range from growing a culture in a chicken egg to adding substances to a vaccine to reduce the amount needed.

More than 70 percent of our interviewees said that agencies that harness innovation view risk-taking and smart failure as necessary elements of their agencies' culture. Specifically, DHS interviewees said failure is part of the process of achieving innovative outcomes. We found the same to be true at the Intelligence Advanced Research Projects Activity in the Office of the Director of National Intelligence, which was created to coordinate research for the intelligence community and invests in "high-risk, high-payoff research programs to tackle some of the most difficult challenges of the agencies and disciplines in the Intelligence Community." The work is so experimental that projects often fail, according to IARPA Director Jason Matheny (these projects have a "less than 50 percent probability of success," he said). To mitigate the risk and still meet ambitious goals, IARPA acquisition professionals build what are called "incremental gates" into contracts to be able to reassess performance periodically.

IARPA also does a full technical review of a project's progress and finances every six months and reevaluates

project goals at that time. If a review finds the contract is not performing or the risks are too high—for example, the research is not progressing or the project has a 2 percent chance of success—IARPA acquisition professionals are not afraid to end the contracts early, even if the organization loses money. These contracts, which allow for rapid prototyping of technology, build on existing Federal Acquisition Regulation contracting vehicles, such as the R&D contracts described in FAR Subpart 35. They allow groups such as IARPA to "develop prototypes applying the new technology to relevant demonstration scenarios within a defined timeframe," and are particularly useful for projects that are unproven.¹⁴

Innovations arise when people are given a problem to solve instead of being told to implement a known solution. Indeed, many of our nation's breakthrough innovations came from a challenge that did not have a clearly defined solution. It would have been impossible to con-

¹⁴ The White House, "Innovative Contracting Case Studies," August 2014. Retrieved from <http://1.usa.gov/1ZMUxxL>

tract for Velcro or GPS technology—products that did not exist—yet these and other inventions have become essential tools for agencies and the world.

The FAR actually states that innovation is welcome—if not expected. It specifically charges contracting officers to encourage business process innovations, according to Subpart 1.102-4(e):

“If a policy or procedure, or a particular strategy or practice, is in the best interest of the Government and is not specifically addressed in the FAR, nor prohibited by law (statute or case law), Executive order or other regulation, Government members of the Team should not assume it is prohibited ... Contracting officers should take the lead in encouraging business process innovations and ensuring that business decisions are sound.”¹⁵

However, despite this language, government often acts in favor of risk avoidance rather than innovation.

Government is much more likely than industry to make long-term investments in experimental technology because government has a different set of expectations, said Jay Harrison, director of the National Security Technology Accelerator in the National Defense University. Industry is expected to make a profit from investments. Successful government project leaders find ways to mitigate the risk held by all stakeholders, not just government agencies, according to a summit of federal and nonfederal acquisition professionals. There are ways to structure private–public arrangements so they support the risks taken by team members. For successful outcomes, many of these methods necessitate government acting in a new role, that of “champion for innovation and gate keeper against bureaucracy.”¹⁶

This concern about the government’s aversion to risk was echoed by private-sector partners as well. One private-sector contractor said that agencies create disincentives for innovation and even cost-savings in the way that contracts are structured. He described an agency’s contract that stated the specific outcome and the way that the contractor would achieve the outcome. This particular contract even listed the number of contractors that would be required to complete the work. In this case, the contractor argued he could do the project for a lower price than the one established by the contract. He ultimately lost the bid; he was told that he “did not understand the needs of the agency.” The agency contracting officers did not appear to consider that he had a less expensive and more innovative alternative.

15 Federal Acquisition Regulation, 48 C.F.R. §1.102.

16 MITRE Corporation, “Challenge-Based Acquisition: Using challenges to communicate needed capability, encourage innovation in a minimally prescriptive environment, assess candidate offerings, and purchase solutions.” Retrieved from: <http://bit.ly/1Jiy58z>

“Fail fast” with modular contracting

Several organizations already use the “fail fast” mentality. The Advanced Research Projects Agency-Energy builds quarterly reviews into its projects, giving itself opportunities to reevaluate whether the project will continue to receive funding, based on whether it is meeting set goals and targets. If the project is not performing, ARPA-E usually gives project teams another quarter to demonstrate progress before discontinuing funding.

The FAR provides a way to build this process into information technology contracts, referred to as “modular contracting” in FAR 39.103.¹⁷ In fact, FAR encourages agencies to use this type of process for IT contracts by breaking them into increments. The contractor can only move on to the next project phase by meeting certain performance requirements. Interviewees said that this type of review would be helpful for other types of acquisitions as well.

Increasing the odds for success with parallel contracts

The Intelligence Advanced Research Projects Activity, or IARPA, sometimes uses “research tournaments” to charge several industry or academic teams with solving the same problem. IARPA has used this method for predicting future geopolitical events, and to develop technologies for speech recognition, facial/image recognition or full-motion video analysis. Once IARPA receives the results from all the contracts, it will proceed with the project that gets the better outcome, said Director Jason Matheny. Although participants at the Partnership/Booz Allen summit cautioned that these types of parallel contracts are too expensive or time-intensive for non-research and development agencies, they can be a useful way to get the best ideas from a broader pool of applicants.

Allow agencies to test the outcome before investing money with challenge-based acquisitions

Challenges are “try before you buy” acquisitions that allow government to experiment with small-scale purchases instead of large-scale, expensive acquisitions, according to a White House report.¹⁸ According to a study by the MITRE Corporation, challenge-based acquisitions are “based on the proposition that acquisitions are best performed if the thing to be acquired is presented as

17 Federal Acquisition Regulation, 48 C.F.R. §39.103.

18 The White House, “Innovative Contracting Case Studies,” August 2014. Retrieved from <http://1.usa.gov/1ZMUxxL>. (These should not be confused with the “challenges” listed on Challenge.gov—which are actually incentive prizes—agencies use challenge-based acquisitions to spur innovation.)

a need (the challenge) and potential providers are free to propose innovative solutions that fill the need.”¹⁹

In challenge-based acquisitions, agencies put forward a specific problem that they want bidders to help solve, said Elizabeth Prescott, deputy director and chief technology officer at the National Security Technology Accelerator. By defining a problem and seeking a solution, without specifics on how to proceed, nongovernment organizations can be as creative or unique as they would like. These challenge-based acquisitions frequently expand the range of potential partners to include industry and other nonfederal organizations.

Bringing it back to basics with staged contracts

A staged contract limits the number of full proposals that an agency will consider and prevents nonfederal partners from investing in lengthy contracts that an agency isn't going to consider. A staged contract uses a three-phase evaluation process that includes a short concept paper, an invitation-only full proposal and a one-to-two year pilot evaluation phase, according to the U.S. Digital Service.

The National Security Agency uses staged contracts to help identify new technology for pursuing its intelligence mission for scientific study and experimentation. Under its Innovations program, the NSA tailors proposal submission and source selection so that NSA leadership can make highly informed and evidence-based investments when selecting and funding new technologies.

The NSA uses a three-phase technology selection process “to minimize resources required from both the government and the companies,” said NSA interviewees. In phase one, bidders submit a five-page technical white paper describing the technology for mission personnel to review. If NSA is interested in the technology, the agency invites the company to participate in phase two—a visit to NSA to demonstrate the technology and give an oral presentation. This gives mission personnel an opportunity to observe the company's demonstrations and ask questions, and program managers can assess the viability and maturity of the technology. If mission personnel remain interested, the process moves into phase three. NSA prepares a statement of objectives for the company describing how the agency could use its technology and invites the company to submit a proposal. If a contract is awarded it is a firm fixed-price contract, limited to 12 months with varying amounts of funding.

19 MITRE Corporation, “Challenge-Based Acquisition: Using challenges to communicate needed capability, encourage innovation in a minimally prescriptive environment, assess candidate offerings, and purchase solutions.” Retrieved from: <http://bit.ly/1Jiy58z>

Government and industry share the financial risk with incentive-based contracts

Two types of related authorities have helped government and industry share the financial risk: share-in-savings and incentive-based contracts. The difference is with share-in-savings contracts, contractors are paid through the savings from efficiencies they achieve. With incentive-based contracts, contractors are paid from the profit earned from the new process. Incentive-based contracts are defined in FAR Subpart 16.4:

“Required supplies or services can be acquired at lower costs and, in certain instances, with improved delivery or technical performance, by relating the amount of profit or fee payable under the contract to the contractor's performance. Incentive contracts are designed to obtain specific acquisition objectives by:

- Establishing reasonable and attainable targets that are clearly communicated to the contractor; and
- Including appropriate incentive arrangements designed to-
 - Motivate contractor efforts that might not otherwise be emphasized; and
 - Discourage contractor inefficiency and waste.”²⁰

In 2005, Congress declined to renew the authority for share-in-savings contracts because agencies had to cover all the costs of contract termination and cancellation. As a result of the concerns about termination costs, government never actually used the share-in-savings approach, despite having identified over a dozen contracts that would have been good candidates.²¹ Additionally, contractors did not find the return on investment from share-in-savings contracts high enough to make them worthwhile, according to the Government Accountability Office. Many have argued that incentive-based contracts provide the same benefits without the downsides of share-in-savings contracts.

“Other Transactions” and Cooperative Research and Development Agreements

Agencies that work in R&D have two additional ways to work with industry: “Other Transactions” and Cooperative Research and Development Agreements, or CRADAs.

When NASA discontinued its space shuttle program, it used its “Other Transaction” authority with milestone payments to develop new commercial solutions for supplying cargo to the International Space Station, including the SpaceX Falcon 9 rocket. NASA's ability to use “Other Transactions” was granted under the Space Act

20 Federal Acquisition Regulation, 48 C.F.R. §16.4.

21 Government Accountability Office, “Federal Contracting: Share-in-Savings Initiative Not Yet Tested,” July 2005. Retrieved from <http://1.usa.gov/1lwhnXP>

of 1958, and are called Space Act Agreements. Through these agreements, the agency helped stimulate the commercial space industry to develop and demonstrate space transportation capabilities. The agreements allowed the companies to keep the intellectual property for their designs and vehicles. The agency could only terminate the contracts if the companies did not perform, the agency did not get the necessary appropriations, or there was mutual agreement to cancel the contract.

Once contracts were signed, NASA established a series of payment milestones every three months. The agency paid for successful contractor performance and the work completed. NASA's own cost analysis suggests that the agency would have spent 10 times more money under a traditional contract model, that is, \$4 billion instead of the actual cost of \$400 million.

The Biomedical Advanced Research and Development Authority uses its "Other Transaction" authority to work with pharmaceutical companies. Due to the flexibility in these partnerships, and the variety of drugs being developed, BARDA is more responsive to outbreaks and emergencies.

In response to the president's National Action Plan for Combating Antibiotic-Resistant Bacteria, BARDA partnered with pharmaceutical companies AstraZeneca and GlaxoSmithKline.²² Other transaction agreements are organized around portfolios—for example, the flu, malaria and bioterrorism threats. Within each disease area, BARDA and the pharmaceutical companies work to share costs, the decision-making and the risks of developing a number of potential vaccines. With more than one potential drug in each portfolio, a drug can be swapped out if it is underperforming, the trials are unsuccessful, or if the need or risks change.

The portfolio approach allows BARDA, AstraZeneca and GlaxoSmithKline to work with other partners, including other drug companies and academic and research institutions. If these companies or institutions have promising drug candidates, they can either license or co-develop them with BARDA support. Moreover, portfolios under "Other Transactions" make government–industry relations simpler and easier: Through traditional contracting, BARDA would have to enter into different contracts with each company and for each product; "Other Transactions" provide greater flexibility to engage industry.

One other tool available only to federal laboratories is Cooperative Research and Development Agreements, established by the Federal Technology Transfer Act of 1986.²³ These are agreements between federal laboratories and nonfederal organizations, under which the government and contractors provide and share support with

one another in the form of financing, personnel, services, facilities or equipment to serve a specific R&D effort. Both parties share in the intellectual property developed under the effort.²⁴ The Air Force Research Laboratory uses these agreements, taking advantage of the latest information from academia to help lab personnel pursue innovative technologies.

Bring in new ideas and partners using incentive prizes

Incentive prizes do not involve contracts, at least initially, and they bring in innovations from nontraditional partners including individuals, small businesses and startups. The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science (COMPETES) Act of 2007 was designed to ensure American superiority in STEM fields. The America COMPETES Reauthorization Act in 2010, established prize and challenge authorities, and allows government agencies to offer prizes and run competitions "to stimulate innovation that has the potential to advance the mission of the respective agency."²⁵ This approach stimulates innovation by seeking solutions from individuals, institutions, nonprofit organizations and private companies that do not typically work with government agencies.

According to an OMB memo, the types of prizes range from "point solution prizes," which encourage solutions for a well-defined problem, to "market stimulation prizes," which are used to try to identify a new commercial market among other factors needed to jumpstart the development of a new industry.²⁶ Many agencies have additional prize authority, including the departments of Defense and Transportation.

One example of an incentive prize is the Design by Biomedical Undergraduate Teams challenge.²⁷ For the 2012 challenge, students created a low-cost device that helps diagnose and monitor respiratory diseases such as asthma. The prototype device cost less than \$10, compared with the typical cost of \$1,000–\$2,000 for similar devices, "without compromising accuracy or precision."²⁸ A product derived from the prototype is now in the FDA approval process.²⁹

The Intelligence Advanced Research Projects Activity has used incentive prizes to solicit

22 Christopher Houchens, PhD, "Innovative partnerships support antibiotic development," Public Health Emergency ASPR blog, September 23, 2015. Retrieved from <http://1.usa.gov/1nyvVYm>

23 Federal Technology Transfer Act of 1986, 63 U.S.C. § 3701

24 Air Force Technology Transfer Program, "Technology Transfer Cooperative Research and Development Agreements (CRADAs)." Retrieved from: <http://1.usa.gov/1nyvZaE>

25 Stevenson-Wydler Technology Innovation Act of 1980, 15 U.S.C §3179.

26 Jeffrey D. Zients, "Guidance on the Use of Challenges and Prizes to Promote Open Government," Office of Management and Budget, March 8, 2010. Retrieved from: <http://1.usa.gov/IP6gAIV>

27 White House, "The People and Teams that Power High-Impact Incentive Prizes." <http://1.usa.gov/1PhWbTn>

28 Challenge.gov, "Success Stories." <http://1.usa.gov/1PhWbTn>

29 Aaron Heinrich, "Wing lung monitor aimed at letting asthmatics breathe easier," Gizmag, October 27, 2015. Retrieved from <http://bit.ly/23fjZLF>

high-risk, high-value research, said IARPA Director Jason Matheny. Through a project called INSTINCT, or the Investigating Novel Statistical Techniques to Identify Neurophysiological Correlates of Trustworthiness project, the agency sought algorithms to determine who can be trusted under conditions such as stress or deception.³⁰ IARPA awarded the \$25,000 prize to JEDI MIND, or the Joint Estimation of Deception Intent via Multisource Integration of Neuropsychological Discriminators, which improved trustworthiness predictions by 15 percent.^{31,32} Through ASPIRE, or the Automatic Speech Recognition In Reverberant Environments, IARPA sought software that recognizes speech in a variety of environments, regardless of background noise and reverberation.³³ Applicants had to submit a description of the software and test whether their software could recognize the speech of an IARPA recording. In the announcement, IARPA said it did not want rights or

30 IARPA, “Prize Challenges: INSTINCT—IARPA’s Trustworthiness Challenge.” <http://1.usa.gov/1OGwOVt>

31 Ibid.

32 Office of the Director of National Intelligence, “JEDI MIND Wins IARPA’s INSTINCT Challenge,” October 9, 2014. Retrieved from <http://1.usa.gov/1pW6t9F>

33 IARPA, “Prize Challenges: Automatic Speech recognition In Reverberant Environments (ASPIRE) Challenge.” <http://1.usa.gov/1OGwMgk>

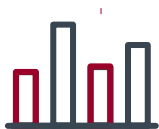
a license to the technology, but simply to see what technologies were available.³⁴ Through this program, IARPA advanced its understanding and developed capabilities for aiding the Intelligence Community.

Incentive prizes are more frequently used for small projects because they can be difficult to design for larger, more complex projects and contracts, according to Steve Kelman, former administrator of the Office of Federal Procurement Policy. In a blog post, he wrote that prizes, which he called challenges, “are not appropriate for any sort of major system design, for starters because no company will invest the kind of money required to see if a solution works without being paid anything at all until the effort succeeds.”³⁵ According to officials from the Office of Science and Technology Policy, incentive prizes can and should be used in conjunction with more traditional acquisition contracts to maintain the momentum necessary to create innovative solutions. For example, incentive prizes can be used within a staged contract.

34 InnoCentive, “ASPIRE – IARPA Automatic Speech recognition in Reverberant Environments Challenge,” November 17, 2014. Retrieved from <http://bit.ly/1V98xvk>

35 Steve Kelman, “Challenge.gov and change in government,” FCW, October 13, 2015. Retrieved from <http://bit.ly/1PtW89I>

RECOMMENDATIONS



Agencies should recognize that failing fast can lead to innovative outcomes. As such, they should seek ways to quickly pivot or move on building milestone reviews and sunset clauses throughout the contract lifecycle

We found that agencies that review their contracts regularly can more easily identify and end underperforming contracts, saving the agency time and taxpayers’ money. However, these agencies also recognize that some contracts will inevitably fail and see them not as hindrances, but as learning opportunities.



Where useful, contracts should include some type of staged, or modular contracting, so agencies can assess contract performance and make adjustments if necessary

The Office of Federal Procurement Policy should work with agencies and industry to refine how underperforming contracts can be ended in a more efficient, effective and less costly manner, or modified to increase the chances of success.



Congress and OMB should help agencies by expanding existing authorities

FAR and other agency authorities specify a range of tools government can use such as “Other Transaction” authorities, CRADAs and modular contracting, but these authorities are not available to all agencies. If these authorities were expanded, more agencies could stimulate innovation through acquisitions.

“Rather, absence of direction should be interpreted as permitting the Team to innovate and use sound business judgment.”

FAR 1.102-4(E)



Innovation is a Team Sport: Calling the Right Plays

AGENCIES NEED TO CREATE A CULTURE OF INNOVATION

The development of the flu vaccine is not an easy task, and BARDA relies on a culture of innovation and collaboration to accomplish it. Its strategic plan calls on BARDA to promote innovation in its work of fighting biomedical threats such as the flu. At the same time, project teams at BARDA are expected to work with others outside their agency, including other government entities and partners in the private sector. Even the head of BARDA, Dr. Robin Robinson, began his career outside government, working in the pharmaceutical industry. He said that this makes him better understand the entire pharmaceutical life cycle, from research and development and supply-chain management to production and disbursement. BARDA often recruits its other team members from industry as well, looking for technical expertise and devotion to BARDA's mission in prospective employees. This makes BARDA able to see beyond its day-to-day activities and connect ideas and people to achieve the end goal of protecting the American public from the flu.

If acquisition professionals are expected to seek innovation, the agency has a greater likelihood of success. This is a big change for most agencies and requires a culture shift. If agencies want to innovate, acquisitions need to be seen as a means to an end, according to participants in our summit, who agreed that agencies achieve better outcomes when they focus on a goal, not on implementing a process.

Agencies that “chart their course ... towards outcomes supporting the missions of their agency,” and plan with the outcomes in mind are able to deliver on their missions better, said John Higbee, executive director for Mission Assistance at the Defense Acquisition University. Michael Fischetti, former component acquisition executive for the Military Healthcare System in the Department of Defense and now executive director of the National Contract Management Association, said the men and women in the DOD understand they are all “on

the same team.” Even those involved in the acquisition office are aware of the role they play in ensuring uniformed soldiers and civilians have the goods and services they need to fulfill their mission of protecting and defending the United States.

Innovation comes with risk, yet risk-taking does not come naturally to the federal government and is particularly difficult for the acquisition community, according to interviewees. Every year, federal employees are asked to complete OPM's Federal Employee Viewpoint Survey, or FEVS, which asks questions about employees' work experiences. In 2015, more than 420,000 employees completed it; almost 8,000 of these employees were contract specialists, defined by OPM as those workers belonging to the 1102 Contracting Series. Analyzing these data give us insight into issues that may be particularly pronounced among contract specialists. The survey asks two critical questions related to risk-taking behaviors.

The response to the question of whether creativity and innovation are awarded is alarmingly low both for contract specialists and government-wide. And contract specialists' responses to whether they feel encouraged to come up with new and better ways of doing things are more than a point below the government-wide average.

More than two-thirds of respondents to a DHS survey said the major reasons they are not innovating is "fear and cultural resistance." According to one of our interviewees, "If an employee makes a mistake when dealing with the FAR and acquisitions, the worst that can happen is bad, and the best thing is not all that big—maybe a pat on the back."

Leadership can drive this change

At the Department of Homeland Security, Soraya Correa said, as chief procurement officer she is ultimately accountable for the agency's acquisitions. She sends a representative to project meetings to signal that she is invested in the team's success. The acquisition and project teams know she will take responsibility if something fails, and protect them from the possible political or legal backlash, she said. This illustrates her outlook that failure can occur when people take risks, but it is an integral part of the discovery process. Melissa Starinsky from the Federal Acquisition Institute made the same point and emphasized the importance of leadership providing the support for this cultural change, saying that "leadership can provide 'top cover' to clear out unnecessary bureaucracy."

Another interviewee said that agency procurement leadership positions, such as the position of the chief procurement officer or senior procurement executive, should be filled by people who know acquisition laws and processes, but are also creative, can handle risky situations well, and aren't afraid to do what is necessary to address issues that arise. The leaders that have been the most successful in coming up with innovations in acquisition have been passionate about the mission and willing to take risks for it to succeed, they continued. The U.S. Agency for International

Development, for example, created a Chief Innovation Officer position to help support innovation in the agency.³⁶ This approach to institutionalizing innovation in one particular job warrants further study, as many times simply adding innovation as another expectation of an existing employees' job duties does not work.

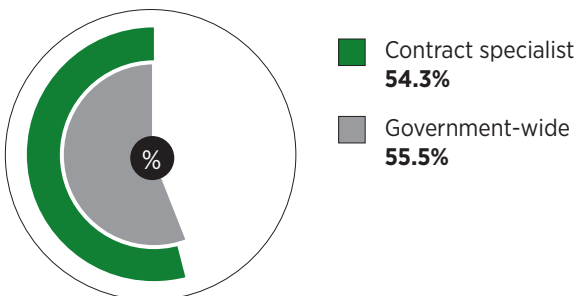
Leaders can embrace risk by facing it head-on. That is what the Air Force is attempting to do with its Office of Transformational Innovation, an office for innovation in acquisitions that seeks to identify and make sweeping changes in the acquisition process so the Air Force can get what it needs better, faster and cheaper. Director Camron Gorguinpour requires the office's acquisition leaders to identify projects that are not meeting program goals and end them after six months. The Office of Transformational Innovation posts failed ideas prominently on its website under the image of a huge and humorous red button labeled "not easy."

Training

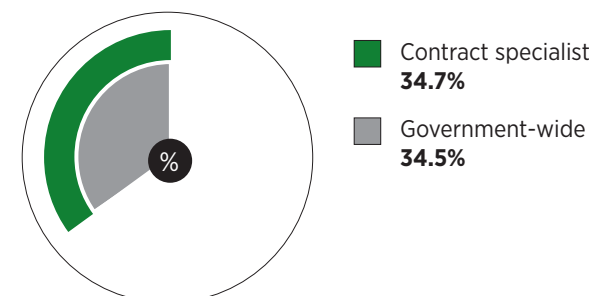
The acquisition community relies heavily on training. This professional development infrastructure could be repurposed to focus on building a culture of innovation. Acquisition professionals need to have the right training for innovation, which includes leadership and strategic planning. Instead, most acquisition professionals apply a "checking off the boxes ... assembly line" mentality, said Mark Nagggar from the Department of Health and Human Services Buyers Club. By this he means that they concentrate on their own duties without considering the larger picture: the agency's mission. Nearly a dozen of the acquisition professionals we interviewed echoed the notion that there is an assumption that if something is not specifically

36 Rahim Kanani, "Chief Innovation Officer of USAID on Development and Social Entrepreneurship," Forbes, March 27, 2012. Retrieved from <http://onforb.es/1K7ePLt>

I FEEL ENCOURAGED TO COME UP WITH NEW AND BETTER WAYS OF DOING THINGS



CREATIVITY AND INNOVATION ARE REWARDED



allowed by rules or regulations, it is prohibited. Steve Kelman has written about a similar concept.³⁷

The acquisition workforce has to meet strict certification standards, training and educational requirements. Accordingly, both the Federal Acquisition Institute and the Defense Acquisition University were founded to provide cross-agency training to their workforces. Acquisition professionals have to obtain one, if not more, of the following certifications: the Federal Acquisition Certification in Contracting (FAC-C), Federal Acquisition Certification in Contracting for Program and Project Managers (FAC-P/PM), and the Federal Acquisition Certification Contracting Officer's Representatives (FAC-COR) programs. All are multi-year professional certifications specifically designed for acquisition professionals based on the skills they need to do their jobs in accordance with the Federal Acquisition Regulation, and are required upon entrance to government acquisition jobs. However, as one leader responded in the Professional Services Council's 2014 survey of the acquisition workforce, "Some certifications are a joke; you can study a few weekends and get certified."³⁸

Despite those certifications, the PSC survey of the acquisition workforce found that "a significant portion of federal acquisition leaders listed their workforce's skills as the most significant inhibitor to their agency's ability to obtain innovative solutions—more than any other single factor."³⁹ A major way to improve needed skills is to provide acquisition professionals with rotational opportunities to supplement the existing requirements and enable these professionals to build business acumen and other leadership skills.

The Federal Acquisition Institute recognizes this need and is offering a few new courses to help spur innovation. The director, Melissa Starinsky, starts with a basic approach, stating "often with innovation the best solution is the most simple." Thus they are starting a Back to Basics series to re-educate acquisition professionals about the fundamentals. With a particular focus on lean acquisition management, they encourage workers and leaders to do away with any unnecessary processes or bureaucratic steps that are not actually required in the FAR. She said that acquisition professionals need "confidence and competence. They should never be afraid to pick up the phone and have a productive conversation."

37 Steven Kelman, "FAR Part I: 'If it's not prohibited, it's allowed,'" FCW, May 6, 2014. Retrieved from <http://bit.ly/1nmTNym>

38 Professional Services Council, "A Closing Window: Are We Missing the Opportunity for Change? Professional Services Council 2014 Acquisition Policy Survey," January 2015. Retrieved from <http://bit.ly/1ZBY5Ob>

39 Ibid.

According to a majority of our interviewees, the most commonly missing skillset from acquisition training is business acumen skills. Another agency respondent said, "On-the-job training is required to fully train ... you can't teach experience."⁴⁰ Stan Soloway, former CEO of the Professional Services Council, supported that view, writing in a recent article, "The acquisition workforce, which today and into the future must be able to support the full array of government missions, must have an equally broad understanding of the operations of the institution(s) they are supporting. To accomplish that, functional rotations—taking the workforce outside of their silos and across other key functional areas—are absolutely necessary."⁴¹

Agencies are currently looking at revamping their training. In one instance, the Veterans Affairs Acquisition Academy, which began as an apprenticeship program for students to learn contracting through real-world simulations and VA internship assignments, was one of the first organizations to emphasize experiential training as a critical training component. This training has allowed the academy's students, which include program managers, lawyers and industry representatives, to gain experience from day one, according to Paul Gregory, the academy's deputy chancellor. The program also trains staff, including project managers, facility managers and supply-chain logisticians. A recently created Performance Excellence Program within the academy's Program Management School was designed to address issues of working across government silos. Melissa Starinsky also told us that the Federal Acquisition Institute is reexamining its training curriculum. In one instance, they are studying how they can develop more personalized training.

Workplace design and organizational structure

Agencies can also build this culture of innovation in how they design the office. Interviewees from six organizations told us that the most painful part of the acquisition process was the lack of collaboration between program officers, legal departments, inspectors general and other internal stakeholder groups about the level of risk acceptable in new ventures. Acquisition officers told us that getting people in these offices to collaborate with each other would help organizations have a better shared understanding of risk.

An agency within the Department of Energy has taken the integration of internal teams literally. The Advanced Research Projects Agency-Energy, or ARPA-

40 Ibid.

41 Stan Soloway, "Rethinking the Workforce Dilemma," *Contract Management*, December 2014. Retrieved from <http://bit.ly/1qAmPuA>

E—an agency that invests in research projects to advance high-potential energy technologies that are too early for private sector investment—houses its program directors, lawyers and acquisition experts with the rest of the team in an open floor plan. “It’s hard to ignore someone’s request or question about a contract if they sit right next to you,” Shane Kosinski, deputy director for operations, said. Team members understand that they need to develop a culture of innovation, and that their acquisition contracts must be for inventions or technologies that completely change the way the U.S. produces and uses energy, he added. They are encouraged to take risks but must make sure their contracts are fair and proper, and that their conduct is ethical and allowed by rules and regulations.

ARPA-E has a relatively flat organizational structure,

which inspires openness. If team members believe something is not going well at the agency, they have direct access to the top levels of the organization to voice their concerns or disagreements. Kosinski said this culture of accessibility is necessary for success.

This collaboration can also be virtual when it is difficult to physically co-locate. The Office of Federal Procurement Policy is working with the General Services Administration to further develop the “Acquisition Gateway,” which is the online portal for acquisition professionals, among other things. Part of the Acquisition Gateway is a newly designed Innovation Hub, which is meant to be an online space to share best practices, case studies and other market information so that the government can leverage successful innovations.

RECOMMENDATIONS



Acquisition professionals need to be trained in partnership building and other skills that foster innovation

Acquisition professionals should supplement their existing training with “soft skills” training that emphasizes critical thinking, business acumen, teamwork and leadership skills.⁴² For this training, classroom lessons should be supplemented with rotations, internships and apprentice programs.



Agency leaders should prioritize filling the position of chief procurement officer and hold that person accountable for establishing a culture of innovation

Agency leaders should fill any vacant chief procurement officer or senior procurement executive positions to establish clear lines of accountability for acquisition. These officials should also be evaluated on the extent to which they enable a culture of innovation within their organization, which can be measured through the Best Places to Work Innovation index scores.



Leaders should encourage employees to take risks and find innovative ways to meet mission requirements

The 2015 Federal Employee Viewpoint Survey showed that federal employees and contract specialists do not think that creativity and innovation are rewarded. Employees will not take risks and seek out new and better ways of doing their jobs without knowing that they have their supervisors’ support. Throughout our discussions with agencies, we found there are leaders who communicate to their workforce that innovation is rewarded and risk-taking is necessary, and that failure is a natural part of innovation and experimentation. The agencies that have been most successful in coming up with innovation in acquisition have been willing to take risks to achieve a mission they are passionate about. Agency leaders should make it clear they accept, encourage and reward risk-taking for finding new ways to better serve citizens.

⁴² In the interest of full disclosure, the Partnership for Public Service offers one such leadership program.

CONCLUSION

On June 26, 1993, the U.S. Air Force launched a 4,000-pound satellite to orbit our planet at a distance of over 12,500 miles. That satellite, Navstar 39, developed hand-in-hand by the Department of Defense and the private sector, completed a network of satellites known as the Global Positioning System. From giving exact location information to all of us when we are on a road trip, to delivering rescuers vital information for saving lives in the most secluded areas of Earth, to providing precise timing that is vital for the functioning of financial markets or telecommunications, this government innovation has become an indispensable part of our everyday lives. The opportunities for such innovation, through acquisitions, are endless still.

The nation depends on innovation, but it cannot be done by the government alone. Agency officials need to cultivate relationships with partners in the private and nonprofit sectors, as well as in state and local government. These partnerships can be strengthened by treating everyone as members of the team and balancing risk for all involved.

APPENDIX ONE

GIVING CREDIT: AGENCIES HAVE TAKEN KEY STEPS IN INNOVATION ACQUISITION PROCESSES

This report focuses on acquisitions that led to innovative outcomes, but agencies and the administration have taken key steps toward innovating the acquisition process as well. Some key efforts are detailed below.

In March 2009, not even two months after President Obama took office, the White House issued a memorandum that started the push to innovate in acquisitions to achieve better outcomes. The memo directed the Office of Management and Budget to help agencies review contracts and identify ones “that are wasteful, inefficient, or not otherwise likely to meet the agency’s needs.”⁴³ An administration report later declared that the administration has:

- “Ended unnecessary or unaffordable contracts”
- Used “smarter buying practices, such as strategic sourcing”
- Reduced the number of high-risk contracts “by competing contracts that, in the past, were awarded for higher prices on a sole-source or “no-bid” basis”
- “Used innovative techniques [...] to obtain greater economy and efficiency [...], such as electronic reverse auctions”
- “Strengthened the acquisition workforce”⁴⁴

The U.S. Digital Services playbook helps government build effective digital services. It contains 13 “plays” drawn from successful public and private digital practices.

The TechFAR, an online handbook that highlights how the Federal Acquisition Regulation can help agencies implement the playbook, with support from acquisition professionals—focusing on how to use contractors to support a customer-driven process for developing software, a practice the private sector often uses. It was designed to improve how the government gets digital services such as public-facing websites or smartphone apps. The public document highlights how agencies can obtain more innovative digital technology goods and services. Both the digital playbook and the TechFAR handbook have helped agencies understand what they’re allowed to do under FAR rules.

Innovative Contracting Case Studies is an evolving document from the Office of Science and Technology Policy and OMB’s Office of Federal Procurement Policy that describes how federal agencies are now getting “more innovation per taxpayer dollar” under existing laws and regulations that some agencies think restrict them from doing so. It’s a collection of case studies that highlight different models agencies have tested successfully and that met their needs for research, prototyping and market testing.

Buyers Clubs are “a community of practice around innovative acquisition.”⁴⁵ The first Buyers Club was started at the Department of Health and Human Services, and it has since been recognized as a model of acquisition innovation by other government agencies and endorsed by the Office of Federal Procurement Policy. Official goals of the HHS Buyers Club are:

- “To ensure greater success for every IT service acquisition by providing the best tools and resources for every stakeholder.
- To shift toward a collaborative, collective acquisition process where all stakeholders are involved early in an agile-oriented service implementation model.
- To mitigate risk and increase success by:
 - Understanding that the traditional reliance on text-based proposals leads to an increased risk of failure on large IT service acquisitions.
 - Utilizing more innovative, productive, and rarely used procurement methods such as functional prototypes, staged contracts, and incentive prize tools/challenges.”⁴⁶

43 The White House, “Memorandum for the Heads of Executive Departments and Agencies—Subject: Contracting,” March 4, 2009. Retrieved from <http://1.usa.gov/1ILFXE6>

44 The White House, “Obama Administration Succeeds in Reducing Contract Spending for First Time in 13 Years.” Retrieved from <http://1.usa.gov/1JzhBJf>

45 Mark Naggar, “HHS Buyers Club Strategy,” Department of Health and Human Services, last modified November 4, 2014. <http://1.usa.gov/1S4ZAnd>

46 Ibid.

APPENDIX TWO
CONTRIBUTORS LIST

DEPARTMENT OF DEFENSE

Defense Acquisition University

John Higbee
Executive Director, Mission Assistance/Knowledge
Repository

Defense Advanced Research Projects Agency

Douglas Gelbach
XDATA, SETA Contractor

Department of the Air Force

Kevin Geiss, Ph.D.
Director, Human Effectiveness Directorate, 711th Human
Performance Wing, Air Force Research Laboratory

Camron Gorguinpour, Ph.D.
Director of Transformational Innovation, Office of the
Assistant Secretary of the Air Force for Acquisition

Department of the Navy

Elliott Branch
Deputy Assistant Secretary, Acquisition and Procurement

Shirley Franko
Acting Director for Services Acquisition, Assistant
Secretary of the Navy for Research, Development
and Acquisition

Francis Tisak
Senior Program Analyst, Assistant Secretary of the Navy
for Research, Development and Acquisition

National Defense University

Adam “Jay” Harrison
Director, National Security Technology Accelerator

Elizabeth Prescott, Ph.D.
Deputy Director and Chief Technology Officer, National
Security Technology Accelerator

DEPARTMENT OF ENERGY

Shane Kosinski
Deputy Director for Operations, Advanced Research
Projects Agency-Energy

DEPARTMENT OF HOMELAND SECURITY

Kenneth Buck, Ph.D.
Former Executive Director for Management Integration,
Office of the Secretary

Eric Cho
Procurement Analyst, Procurement Innovation Lab

Soraya Correa
Chief Procurement Officer

Gibson Kerr
Former Deputy Director, Acquisition Support and
Operations Analysis, Science and Technology Directorate

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Mark Naggar
Project Manager, HHS Buyers Club

Robin Robinson, Ph.D.
Director, Biomedical Advanced Research and
Development Authority
Deputy Assistant Secretary for Preparedness and
Response, Office of the Assistant Secretary for
Preparedness and Response

DEPARTMENT OF VETERANS AFFAIRS

Laura Edwards
Public Affairs Specialist, Veterans Affairs Acquisition
Academy

Paul Gregory
Deputy Chancellor and Senior Technical Advisor, Veterans
Affairs Acquisition Academy

GENERAL SERVICES ADMINISTRATION

Jeffrey Birch
Deputy Director, Federal Acquisition Institute

Warren Blankenship
Division Director, Office of IT Schedule Operations,
Federal Acquisition Service

Maynard Crum
Acting Director, Office of Strategic Programs, Federal
Acquisition Service

Martha Dorris
Former Director, Office of Strategic Programs, Federal
Acquisition Service

Steve Krauss
Director, Category Management Strategic Execution,
Federal Acquisition Service

Jeffrey McMullan
Contract Specialist

Melissa Starinsky
Director, Federal Acquisition Institute

NATIONAL SECURITY AGENCY

NSA Public Affairs Office

OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE

Jason Matheny, Ph.D.
Director, Intelligence Advanced Research Projects
Activity

OFFICE OF MANAGEMENT AND BUDGET

Lesley Field
Deputy Administrator, Office of Federal Procurement
Policy

Joanie Newhart
Associate Administrator of Acquisition Workforce
Programs, Office of Federal Procurement Policy

Anne Rung
Administrator, Office of Federal Procurement Policy

UNITED STATES DIGITAL SERVICE

Traci Walker
Acquisition Strategist

PRIVATE SECTOR AND NONPROFIT CONTRIBUTORS

Michael P. Fischetti
Executive Director, National Contract Management
Association
Former Component Acquisition Executive, Military
Healthcare System, Department of Defense

Steven Kelman, Ph.D.
Albert J. Weatherhead III and Richard W. Weatherhead
Professor of Public Management, John F. Kennedy School
of Government, Harvard University
Former Administrator, Office of Federal
Procurement Policy

Kimberly McCabe
CEO, Value Storm Growth Partners

Frank McDonough
Associate Professor, University of Texas, Austin
Former Deputy Associate Administrator, Office
of Intergovernmental Solutions, General Services
Administration

Stan Soloway
Former President and CEO, Professional Services Council

Roger Waldron
President, Coalition for Government Procurement

Jim Williams
Partner, Schambach & Williams Consulting, LLC
Former Commissioner, Federal Acquisition Service,
General Services Administration

APPENDIX THREE
PROJECT TEAM

PARTNERSHIP FOR PUBLIC SERVICE

Beth Schill, Research Manager and Project Lead

Peter Kamocsai, Research Associate

Mallory Barg Bulman, Director of Research and Evaluation

Emily Connelly, Research Associate Manager

Nicole Keler, Research Fellow

Ellen Perlman, Writer/Editor

Bevin Johnson, Creative Director

Audrey Pfund, Associate Design Manager

Lexi Quinn, Research Fellow

Max Stier, President and CEO

BOOZ ALLEN HAMILTON

Principal Contributors

Ronald Sanders, Vice President and Fellow

Ben Marglin, Principal

Colin Walsh, Senior Consultant and Project Lead

Mathias Bombardi, Senior Associate

Zarak Khan, Associate

Adam Porter-Price, Lead Associate

Executive Sponsors

Judi Dotson, Executive Vice President

Lloyd Howell, Executive Vice President and Group Lead

The Partnership for Public Service's work, including this report, would not be possible without the generous support of corporations, foundations and individuals who share our commitment to more effective government. Organizations that support our research and thought leadership provide financial support and valuable expertise on a wide array of government management issues. By enlisting a diverse group of donors, the Partnership ensures that no single person, entity or industry can unduly influence our organizational body of research. The Partnership is actively committed to transparency about all of our funding relationships and retains editorial control over all its thought leadership.



**PARTNERSHIP
FOR PUBLIC SERVICE**

1100 New York Avenue NW
Suite 200 East
Washington DC 20005

(202) 775-9111
ourpublicservice.org
CFC# 12110

Booz | Allen | Hamilton

13200 Woodland Park Road
Herndon VA 20171

(703) 984-1000
boozallen.com