Effectiveness and Efficiency
Tapping New Sources of Innovation and Ideas Through Crowdsourcing

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The need for innovation within government has never been greater. At a time when agency missions are expanding, budgets are tightening, and large numbers of federal employees are poised to retire, agencies need fresh ideas for working smarter and performing more effectively and efficiently. As the nation’s largest employer and provider of funds for basic research and development (R&D), the federal government also needs to find new ways to sustain competitive R&D and cultivate the ideas of its employees, despite budget constraints.

Recognizing that fresh ideas often come from untapped sources, many government agencies have begun using crowdsourcing to harness the wisdom of the crowd. Through the use of online tools, crowdsourcing has generated ideas for new vehicle technologies, emergency alert improvements, employee retention, and other complex challenges. Because crowdsourcing is an emerging practice, agencies are still learning how to implement its full array of uses. What we do know is that crowdsourcing enables government agencies to generate more ideas and better ideas much more efficiently than traditional means, such as focus groups, test labs, and specialized research contracts.

Crowdsourcing is flexible in addressing a wide range of issues and goals, but also requires careful planning and management to fully exploit its capabilities. In working closely with federal agencies to implement crowdsourcing, Booz Allen Hamilton has found that successful organizations follow four fundamental guidelines:

1. Adapt crowdsourcing’s tools and approaches to your organization’s unique culture, requirements, and goals.

2. Educate your leaders about what crowdsourcing is—and is not. Leaders must show commitment to implementing useful ideas obtained through crowdsourcing.

3. Create a clear statement of the problem you want to solve or feedback you want to receive. Framing the issue properly will increase the quality of responses.

4. Build a strong community of innovators and problem solvers. Proactive communication, recognition, and reward can make crowdsourcing an ongoing source of innovation.

Every crowdsourcing project is different, but organizations that follow these guidelines give themselves the best chance to tap into new and diverse sources of creativity and invention. In this way, crowdsourcing carries a two-fold benefit: First, the process itself can be more efficient than traditional efforts that rely on in-house or contracted experts to generate ideas; second, the crowd could share ideas that help the organization fulfill its mission in a more effective or efficient manner.

The Innovation Challenge
Innovation typically refers to the creation or use of a new idea that leads to a better product, process, or approach. Although people often associate innovation with complex scientific, social, and organizational challenges, everyday work-life provides numerous opportunities for innovation, whether it’s gathering ideas for a training course, a public service program, or a way to save the agency money. In a recent study of innovation in government, the Partnership for Public Service described innovation in government as “creating new ways to improve agency performance, solve problems, accomplish goals and better meet the needs of the American people.”

After surveying federal employees across the government, the Partnership found that employees are constantly looking for ways to do their jobs better, but they often receive little encouragement or reward for offering creative ideas and solutions. The study concluded that federal
leaders must do more to foster a culture of innovation that empowers and inspires workers.

Unfortunately, innovation can face unique obstacles in the public sector, according to a study by the Center for American Progress and The Young Foundation. For example, political leaders often push for ideas or actions that are popular with voters but less effective than other potential solutions. The risks of innovation are high in government, because failure can result in severe political backlash; and so there often is greater incentive to continue activities that are proven and safe rather than try something new. Similarly, government promotions tend to reward people with strong political and bureaucratic skills, not those with a talent for innovation. The study's authors also point out that in business and academia, innovation often occurs through collaboration. In contrast, government organizations tend to be secretive and develop new products in-house.

Government spending for innovation is large but impossible to measure precisely, because many everyday work functions that involve innovation are not necessarily defined as such. Federal budget documents tell us, for example, that federal agencies spend $140 billion annually on research and development for projects related to energy, medical science, weapons development, cybersecurity, and other basic research that is carried out by government employees, academic and scientific institutions, and contractors on behalf of the government. However, within every organization are employees whose job functions require creative thinking and problem solving. Again, think of the many federal employees who participate in developing requirements for technical projects, creating operational plans, redesigning websites, streamlining internal processes, and devising new uses for technology. Innovation also takes place on an ad hoc basis as issues and challenges arise. Sometimes outside experts are hired to address challenges, especially for problems considered too complex or outside the organization's core expertise. Federal agencies actually devote a significant portion of their time and resources, probably more than they realize, to innovation and ideas creation.

The Rise of Crowdsourcing
Crowdsourcing holds great promise in helping government organizations generate new and innovative ideas and solutions. Crowdsourcing is often referred to as Open Innovation because it employs methodologies that open into a wider pool of distributed expertise and knowledge, rather than relying on a narrow range of traditional sources, such as in-house staff or known contractors. Crowdsourcing is made possible by the myriad of Internet and social media technologies, which enable communities of interest to come together quickly and efficiently to collaborate and exchange information on issues of mutual importance. As a result, organizations can reach far and wide to solicit ideas and solutions for pressing problems.

Crowdsourcing can be implemented through a variety of techniques and approaches, depending on an organization’s needs. For example, an organization interested in gathering ideas for a public service program could post a topic on a transparent crowdsourcing site, where ideas are open for everyone to read, as well as comment and vote on. Another organization might be interested in a more complex or proprietary solution, which would require a level of protection for the idea. Ideas submitted to these challenges, sometimes known as “grand challenges,” are not available for public view and comment. Organizations sponsoring a “grand challenge” typically offer a large cash prize to anyone who can provide a solution to a specific problem. Multiple prizes can be offered. Agencies can direct crowdsourcing efforts internally toward their own employees or externally, either toward an identified set of experts or to all interested citizens. In essence, crowdsourcing outsources the innovation function to organizations and people who are not reached—and, in many instances, cannot be reached—through traditional innovation methods.

2 Jitinder Kohli and Geoff Mulgan, Capital Ideas: How to Generate Innovation in the Public Sector, July 2010, pp. 6-8
Exhibit 1 | Capturing the Wisdom of Crowds

Source: Adapted from InnoCentive

Sparking Innovation in Government
The federal government’s embrace of open and transparent government, as exemplified in the Open Government Initiative, Challenge.gov, and similar efforts, has spurred agencies to boost innovation through crowdsourcing programs. For example, more than 30 federal agencies have used the Challenge.gov online platform to launch more than 100 challenges. The growing number of successes has demonstrated crowdsourcing’s potential for producing innovative solutions and improving government effectiveness and efficiency. Among the federal crowdsourcing projects:

- The Defense Advanced Research Projects Agency (DARPA) sponsored an Urban Challenge in which teams competed to build autonomous vehicles that could drive in traffic and perform complex maneuvers, including merging, passing, parking, and negotiating intersections. Of the 89 teams that applied, DARPA invited 35 teams to test their vehicles in a rigorous eight-day event. Eleven of those vehicles then competed in final test event, and cash prizes of $2 million, $1 million, and $500,000 were awarded to the first, second, and third place winners.3

- The Transportation Security Administration’s (TSA) online IdeaFactory enables the agency’s 50,000 employees at airports and offices across the United States to share ideas and recommendations for improving operations, work life, and performance. The transparent, collaborative IdeaFactory allows TSA employees to submit ideas, comment on ideas submitted by others, and rate the ideas. Thus far, TSA has implemented more than 85 ideas, such as the TSO Referral Bonus providing incentives for recruiting Transportation Security Officers (TSOs) and a Job Swap website allowing TSOs that meet certain criteria to post their interest in swapping job locations. Five years after its launch, support for IdeaFactory remains strong as TSA receives an average of 300 ideas each month.4

- The General Services Administration (GSA) launched The Great Ideas Hunt asking employees to submit ideas for improving the agency’s efficiency and performance. In a period of less than six weeks,

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3 DARPA has provided information about the Urban Challenge on a DARPA archived web page at http://archive.darpa.mil/grandchallenge
4 TSA has provided information about the IdeaFactory on the agency’s website at www.tsa.gov/research/idea_factory/index.shtm
GSA has provided information about The Great Ideas Hunt in a GSA news release issued August 22, 2012, www.gsa.gov/portal/content/141687

GSA received 632 ideas from across the country through an online portal. GSA employees then voted for their favorite ideas, casting nearly 20,000 votes. Less than three months later, GSA announced plans to implement the top five suggestions, which agency officials estimated would save more than $5 million.5

These crowdsourcing initiatives contained important benefits for their agency sponsors. In each case, at relatively low costs, these organizations garnered numerous valuable ideas and solutions from all over the world. Many were unexpected, creative solutions that likely would not have come through traditional means. Many ideas for improving agency operations and performance generated measurable cost savings.

The benefits last beyond the single challenge or project. These crowdsourcing initiatives helped build a broad and diverse community of problem solvers that agencies can call upon as new issues and challenges arise. Many of these efforts also enhanced the agencies’ branding through positive media coverage and the participants’ enthusiasm, thus boosting support for the agencies within the administration, Congress, and the public. Today, DARPA continues holding grand challenges that excite the imagination of engineers, scientists, inventors, and students throughout the world; GSA is currently reviewing 40 other ideas submitted through The Great Ideas Hunt and intends to implement them on a rolling basis; TSA’s IdeaFactory provides continuous opportunities for employees to contribute creative, useful recommendations to their leaders; and other agencies are using crowdsourcing to solicit ideas and solutions for a multitude of challenges, such as creating health monitoring applications, streamlining the installation of solar panels, redesigning agency websites, improving network visualization tools, and strengthening the science, technology, engineering, and math (STEM) skills of US students.

**Guidelines for Crowdsourcing Success**

Crowdsourcing has proven to be a flexible tool that can be used by virtually any government agency or organization, not just a select few. It can achieve significant results—if done right. But crowdsourcing is more than tool that plugs into an agency’s systems. It requires careful planning, communication, and management. The experiences of crowdsourcing projects have demonstrated the importance of following four important guidelines for getting the best results:

1. **Adapt crowdsourcing’s tools and approaches to your organization’s unique culture, requirements, and goals.** Crowdsourcing is not a “one-size-fits-all” solution. Consideration must be given to the overall scope, target audience, and online tool features that are most appropriate for the innovation needs. Crowdsourcing efforts, for example, could be open to the general public, agency employees, or targeted to a specific group of invited participants.

2. **Educate your leaders about what crowdsourcing is—and is not.** When introducing crowdsourcing to your leaders, discuss all of its potential benefits and help them identify opportunities to integrate crowdsourcing techniques into the organization’s processes. Make clear that crowdsourcing is more than social media. Crowdsourcing will require them to make a number of strategic decisions setting the course for the project, such as whether to adopt a challenge or offer a prize and, if so, how much. Getting these decisions right is crucial to attracting a broad spectrum of participants. A well understood view of an organization’s business processes and decision models can significantly help optimize where crowdsourcing might have the best value or impact. Once the project is underway, leaders must remain engaged and informed, so they can support project leaders in their day-to-day management of the projects. Most importantly, leaders must show commitment to implementing useful ideas obtained.

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5 GSA has provided information about The Great Ideas Hunt in a GSA news release issued August 22, 2012, www.gsa.gov/portal/content/141687
through crowdsourcing. This will build the trust and buy-in of participants.

3. Create a clear statement of the problem you want to solve or feedback you want to receive. Crowdsourcing, at its core, is about asking the right question. One of the most critical aspects of developing a successful crowdsourcing initiative is a clear statement of the objective coupled with a well thought-out plan outlining how the project will be run and how participants can engage with the agency to achieve success. This includes a solid analytical framework for "grand challenge" crowdsourcing efforts, and a structured process for soliciting ideas so that feedback can be easily evaluated and prioritized by leaders. Effective planning that frames the issue properly will increase the quality of responses. Lack of planning can lead to questions and confusion, more work, increased costs, and possibly public criticism.

4. Build a strong community of innovators and problem solvers. Proactive communication, recognition, and reward can make crowdsourcing an ongoing source of innovation. Constant communication and effective outreach—before, during, and after the effort—are crucial to success. The goal is to generate interest and enthusiasm among the widest range of people with the right knowledge and skills, and then keep them involved. For example, DARPA’s challenges have gained a large international following of creative engineers, scientists, and inventors eager to participate in the competitions. In addition, crowdsourcing challenges can attract groups of non-traditional parties who are not familiar with US government policies and procedures, and so they must understand the rules of participation. But even in-house crowdsourcing initiatives require communication to induce meaningful participation and feedback. Create a communications plan to achieve these goals.

**Conclusion**

With tight budgets continuing into the foreseeable future, agencies need to find new ways to boost mission effectiveness and operational efficiency. Crowdsourcing offers a valuable means for achieving these goals by lowering the cost and increasing the productivity of government’s innovation efforts. Crowdsourcing can supplement traditional government R&D programs and stretch scarce dollars by enabling agencies to tap diverse sources of expertise and expand the number of research projects they pursue. Similarly, crowdsourcing has a multiplying effect on the number of productive ideas government receives for improving performance. Lessons learned from past projects can help agencies implement crowdsourcing effectively and guide their efforts to target the right groups, offer the appropriate incentives, build a community of problem solvers, and adapt crowdsourcing’s different tools and approaches to their precise circumstances and needs.

Over the long run, crowdsourcing can play an important role in fostering a culture of innovation within agencies. As studies and surveys have noted, federal employees want to contribute new ideas and help their organizations improve operations and performance, but they often lack sufficient opportunities or encouragement. However, crowdsourcing overcomes many of the hurdles to innovation in the public sector. It reduces the risk of failure (due to its relatively low cost). It promotes collaboration. It generates enthusiasm and loyalty among its problem solvers. It strengthens the sponsoring agency’s brand with Congress and the public. Overall, crowdsourcing supports ongoing efforts to increase government transparency, information sharing, and participation in government, and provides a proven path for improving government effectiveness and efficiency through innovation.
Booz Allen's Ideas Festival: Using Crowdsourcing to Spark Innovation

Booz Allen Hamilton’s annual Ideas Festival taps into the “wisdom of employees” to generate some of the firm’s best ideas. The program uses crowdsourcing techniques to reach deep into the organization to solicit, explore, and reward innovative ideas for new service offerings to assist Booz Allen customers.

The Ideas Festival begins each year when employees, both individuals and teams, submit ideas for new services that Booz Allen can offer customers. The ideas stem from pressing, but perhaps, unmet needs employees see among customers, as well as from emerging technologies and capabilities that can be crafted into innovative solutions. Every year, the Ideas Festival generates the submission of hundreds of ideas from employees representing every one of Booz Allen’s capabilities and operating units across the globe.

Teams of Booz Allen experts and leaders review each of the submitted ideas, rate them, and then select 10 to 12 ideas for presentation by their creators at the annual Ideas Summit held in Washington. Booz Allen consultants from a variety of specialties and all levels of the firm attend the Ideas Summit, asking questions and offering advice to the presenters. The lively interactions spark unexpected insights and innovative thinking.

Following the Ideas Summit, Booz Allen leaders select the most promising ideas to receive investment funding for further development within the firm.

The value of the Ideas Festival goes well beyond the proposals selected for future investment. The contest generates stimulating conversations throughout the firm as the ideas are developed, reviewed, and selected for presentation at the Ideas Summit. And the Ideas Summit gives presenters and attendees an opportunity to brainstorm with colleagues whose experience and expertise offer new ways to view and tackle shared challenges and issues.

“You discover that a lot of smart people are dealing with problems similar to yours but who see those problems from a different perspective,” said one participant. “So you find out who you might want to reach out to for help you when you are stuck.”

Presenters and attendees return to their offices with a contagious enthusiasm for innovation that spreads among colleagues. Booz Allen’s Ideas Festival gets ideas flowing from the bottom up, top down, and across the firm.
Contact Information
Booz Allen has worked closely with federal agencies to implement numerous crowdsourcing solutions for generating innovative ideas to advance scientific research, solve pressing problems, and improve government performance. We also practice crowdsourcing within the firm through its annual Ideas Festival, which gathers hundreds of employee ideas for new service offerings to assist our customers. To see how Booz Allen can help you use crowdsourcing to spur innovation in your organization, please contact one of our consultants:

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**Jonathan Bennett** is a Booz Allen Hamilton Senior Associate and has 9 years of experience working on-site with senior government leaders developing and managing advanced research and development programs for the US Department of Defense. Bennett is the lead for the firm’s Acquisition, Program Management and Logistics (APML) team in the Defense Advanced Research Projects agency market. He is a leader in the firm’s Challenge Driven Innovation service offering where he established and currently manages the firm’s strategic alliance with Open Innovation service provider InnoCentive.

**Jon Judah** is a Booz Allen Hamilton Senior Associate and has more than 13 years of professional experience providing IT strategy and investment management insight to various US federal and commercial organizations. Judah is a leader of the firm’s Enterprise Efficiency and Effectiveness (E3) initiative, which focuses on helping organizations reduce costs and improve service through the strategic use of technology. He is also a senior leader in the firm’s Strategic Technology & Innovation Center of Excellence, serving clients in the financial services and homeland security markets on topics including governance, portfolio management, and IT strategic planning.

**Anne Glenzer** is a Booz Allen Hamilton Associate on the firm’s Strategy & Organization team and brings 15 years of strategic communications expertise to her clients in the US federal homeland security and law enforcement market. As a leader for the firm’s innovation management/crowdsourcing services, she helped develop the initial concept for innovation through social media, and wrote the team’s successful entry for the 2011 Booz Allen Ideas Festival, placing as a top 12 finalist out of 522 entries worldwide.
About Booz Allen

Booz Allen Hamilton has been at the forefront of strategy and technology consulting for nearly a century. Today, Booz Allen is a leading provider of management and technology consulting services to the US government in defense, intelligence, and civil markets, and to major corporations, institutions, and not-for-profit organizations. In the commercial sector, the firm focuses on leveraging its existing expertise for clients in the financial services, healthcare, and energy markets, and to international clients in the Middle East. Booz Allen offers clients deep functional knowledge spanning strategy and organization, engineering and operations, technology, and analytics—which it combines with specialized expertise in clients’ mission and domain areas to help solve their toughest problems.

The firm’s management consulting heritage is the basis for its unique collaborative culture and operating model, enabling Booz Allen to anticipate needs and opportunities, rapidly deploy talent and resources, and deliver enduring results. By combining a consultant’s problem-solving orientation with deep technical knowledge and strong execution, Booz Allen helps clients achieve success in their most critical missions—as evidenced by the firm’s many client relationships that span decades. Booz Allen helps shape thinking and prepare for future developments in areas of national importance, including cybersecurity, homeland security, healthcare, and information technology.

Booz Allen is headquartered in McLean, Virginia, employs approximately 25,000 people, and had revenue of $5.86 billion for the 12 months ended March 31, 2012. Fortune has named Booz Allen one of its “100 Best Companies to Work For” for eight consecutive years. Working Mother has ranked the firm among its “100 Best Companies for Working Mothers” annually since 1999. More information is available at www.boozallen.com. (NYSE: BAH)

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