

HOW TO FINANCE OUTCOMES/RESULTS THROUGH GOVERNMENT PRIZE COMPETITIONS

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Many of us know the frustration of sitting down for dinner and having the phone ring with an illegal, pre-recorded message marketing a scam.¹ The U.S. Federal Trade Commission (FTC) receives between 125,000 and 200,000 complaints each month regarding these harassing calls. As of May 2016, the FTC had brought more than a hundred lawsuits against over 600 companies and individuals responsible for billions of illegal robocalls and other Do Not Call violations.² The FTC also has tried another innovative approach: It has supported a series of prize competitions to develop technology-based solutions to reduce the number of illegal robocalls.

In 2013, the first FTC Robocall Challenge offered a \$50,000 prize purse for the creation of innovative solutions to block illegal commercial robocalls. The FTC, the “seeker,” received nearly 800 eligible submissions from individual solvers and teams. All of the developers and engineers who created the winning solutions were new to this problem—a powerful example of how prize competitions can attract out-of-discipline experts to unlock innovative solutions to vexing problems. One of the winning solutions, “Nomorobo,” developed by Aaron Foss, is a free technology service that routes incoming robocalls to a second telephone line that can identify and hang up on these calls. Nomorobo has blocked more than 80

million robocalls to date.³ Compared with lawsuits and enforcement, this prize competition was a remarkably cost-effective approach to reducing the amount of illegal robocalls and driving meaningful change for citizens.

Engaging the public through incentive prizes offers a revolutionary way to bring in new groups of people to address important societal problems. Moving beyond traditional contracts and grants, incentive prizes harness the public’s ingenuity to solve tough challenges, drive outcomes, and address societal needs, while paying only for solutions. These prize competitions are one approach that federal agencies can take to encourage innovation and better outcomes—whether technical, economic, or social. They allow the seeker to: 1) define the outcomes it wants to see and fund the best solutions to deliver those outcomes; and 2) establish an important goal without having to pre-select the approach or the team it anticipates as most likely to succeed. Prize competitions often stimulate private-sector investment that is many times greater than the cash value of the prize.

Incentive prizes have an established track record of spurring innovation in the public, private, and philanthropic sectors, including the 1714 Longitude Prize, which stimulated the development of the world’s first practical method to determine a ship’s longitude, and the Orteig Prize, which motivated Charles Lindbergh to fly nonstop from New York to Paris. The Obama administration took important steps early on to accelerate public-sector adoption of these innovative tools.⁴ In his “Strategy for American Innovation,” President Obama called on all agencies to increase their use of prizes to address some of our nation’s most pressing challenges.⁵ Subsequently, the White House Office of Management and Budget (OMB) issued a formal policy framework to guide agencies in using prizes to mobilize American ingenuity and advance their respective core missions.⁶ Soon thereafter, in December 2010, Congress passed the America COMPETES Reauthorization Act, providing all federal agencies

1 Office of Science and Technology Policy, “Implementation of Federal Prize Authority: Fiscal Year 2013 Progress Report” (2014), available at https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/competes_prizesreport_fy13_final.pdf.

2 Federal Trade Commission Consumer Information, “Robocalls,” available at <https://www.consumer.ftc.gov/features/feature-0025-robocalls>.

3 For information on robocalls see <https://www.nomorobo.com>.

4 Office of Science and Technology Policy, “Implementation of Federal Prize Authority” (2014).

5 Executive Office of President Barack Obama, “Strategy for American Innovation: Executive Summary,” available at <https://obamawhitehouse.archives.gov/innovation/strategy/executive-summary>.

6 Executive Office of The President, Office of Management and Budget, “Guidance on the Use of Challenges and Prizes to Promote Open Government” (March 2010), available at https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/memoranda_2010/m10-11.pdf.

broad authority to conduct prizes. As a result of these key policy actions, the use of public-sector prizes has been increasing steadily, with progressively more ambitious outcomes being sought. Since the U.S. General Services Administration (GSA) started the Challenge.gov program to provide a one-stop-shop for all federal prizes in 2010, more than 80 federal agencies have engaged 200,000 Americans through over 700 challenges with more than \$220 million in prizes. Harvard recognized the Challenge.gov program with the Innovations in American Government Award in 2013.

Prizes can be designed in an almost infinite number of ways, for a variety of different outcomes. The Deloitte University Press studied more than 400 challenges that have been conducted since 2009 and identified six outcomes the U.S. Government is seeking through prizes, falling along two dimensions:⁷

- Developing ideas, technologies, products, or services to:
 - Attract new ideas
 - Build prototypes and launch pilots
 - Stimulate markets
- Engaging people, organizations, and communities to:
 - Raise awareness
 - Mobilize action
 - Inspire transformation

An example of a public-sector prize that seeks to both stimulate markets and mobilize action is the U.S. Department of Energy's Sunshot Catalyst Prize. Catalyst is an open innovation program that aims to encourage the rapid creation and development of products and solutions that address near-term challenges in the U.S. solar and energy efficiency marketplaces. This \$2 million prize has backed 36 early-stage teams developing prototypes and supported five teams with more extensive funding through two rounds of incubation. All five incubation teams are still in business and growing as they bring their energy services and products to market. The

7 Kwasi Mitchell et al., "The Craft of Incentive Prize Design," Deloitte University Press (June 18, 2014), available at <http://dupress.com/articles/the-craft-of-incentive-prize-design/>.

five companies collectively raised \$1 million in 2015 from private investors and created 20 to 25 new jobs.

A very different example sought to attract new ideas and inspire transformation in how public spaces were designed and built in the wake of Hurricane Sandy. The U.S. Department of Housing and Urban Development (HUD), in collaboration with the Hurricane Sandy Task Force, launched Rebuild by Design, a multistage regional design competition to promote resilience for the Sandy-affected region.⁸ The competition aimed to attract world-class talent, promote innovation, and develop projects that would actually be built. The \$2 million prize purse was funded entirely by HUD's philanthropic partners, led by The Rockefeller Foundation. Approximately 148 teams from more than 15 countries submitted proposals; ten teams were selected as finalists. These finalists each received \$200,000 in awards and provided their unique insights to community leaders and stakeholders through public meetings, facilitated field visits, and one-on-one discussions. According to an evaluation released by the Urban Institute, finalist design teams contributed work effort between three and six times the amount of the cash prize awards they received in the competition.⁹ Of these ten finalists, HUD incentivized the implementation of seven of the winning designs by committing \$930 million through the Community Development Block Grant Disaster Recovery (CDBG-DR) program to leverage other public and private funds.

According to HUD's reporting on this prize, "The use of a prize competition was selected to help provide solutions to problems that are larger or more complex than individual jurisdictions have the capacity to solve independently."¹⁰ This challenge was innovative in a number of ways but had a substantial impact because it combined the tools available to the federal government to stimulate and support innovation. Rebuild by Design leveraged a prize competition approach—a public-private partnership to bring new ideas into a pipeline for more traditional, discretionary,

8 The author joined the board of trustees of the Van Alen Institute, one of the implementing partners of the Rebuild by Design Challenge, in January 2017, after the challenge was completed.

9 Carlos Martin et al., "Evaluation: Rebuild by Design Phase I," Urban Institute (October 13, 2014), available at <http://www.urban.org/research/publication/evaluation-rebuild-design-phase-i>.

10 Office of Science and Technology Policy, "Implementation of Federal Prize Authority: Fiscal Year 2014 Progress Report" (May 2015), available at https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/NSTC/fy14_competes_prizes_-_may_2015.pdf.

federal grant funding. According to the Urban Institute, this combination of support vehicles was critical to the competition's success. "Leadership among the core partners and the magnitude of the \$1 billion in CDBG-DR funding for awards motivated all of the key stakeholders in spite of an expedited timeframe and daunting requirements."¹¹

The flexibility of this tool can drive diversity in federal prize designs and outcomes. However, it can also paralyze some federal decision-makers, since there isn't yet a clear understanding of how to identify which portions of a portfolio would benefit most from this approach. Additionally, even though the federal government has conducted more than 700 prize competitions, most program managers are not aware that this approach is available to them. Building decision-maker awareness of this new tool is crucial to expanding adoption. But since these tools do not have uniform step-by-step guidance, significant learning must happen each time a new program or office attempts to use this approach. GSA's Challenge.gov program and NASA's Center of Excellence for Collaborative Innovation¹² are working to address the knowledge-management and scaling issues through federal-wide communities of practice, training, mentoring programs, the development of a toolkit,¹³ and government-wide shared services for prize design and implementation.

These forums and documentation efforts to capture lessons learned are critical as the art of designing prizes is further developed. Several parts of prize design and implementation are notoriously difficult, including:

- Defining your problem in a way that thoroughly considers and challenges the assumptions made in prior problem-solving approaches. Prizes seek to discover new solutions and pay only for the best performance against measurable outcomes. These outcomes should be tied to a clear understanding of the desired future state that could be achieved through a prize. Designing a prize requires the prize designer to think about *what* should be accomplished through a prize, articulating the starting line (point A) and the finish line (point B), and not *how* to best get from point A to point B. Focusing on the what instead of the

how can be unnatural and difficult for people accustomed to solving problems (how), rather than defining them (what). It also forces people to question prior assumptions about what's possible.

- Balancing the need to create an open-solution space when defining the problem that encourages entirely new thinking while ensuring that promising solutions can be reintegrated into your program. This requires a delicate compromise in the way requirements are written—not so specific that they constrain innovation, but not so broad that there is no way to reintegrate resulting solutions.
- Setting the prize purse and suite of incentives to attract the right types of solvers to your problem. There are at least four core rewards that drive participants to compete for prizes: "goal, glory, guts, and gold," according to Ken Davidian, formerly of NASA's Centennial Challenges Program.¹⁴ These incentives should be customized to incentivize your target solver communities.¹⁵
- Creating communications and engagement strategies that get solvers' attention beyond the "usual suspects." Often breakthroughs in one domain come from practices that are commonplace in other domains, but not yet applied to the domain in question. Engaging diverse viewpoints, both from other domains and sectors of the population that might have a more difficult time accessing traditional channels, expands the seekers access to innovative approaches to solving their problem.
- Setting expectations up front between the seeker and solver, and more clearly and definitively articulating the time and resources necessary to participate in the full process.

Despite these challenges, government incentive prizes, when used the right way on the right problems, can be transformative (and cost-effective) in driving outcomes. These approaches should be considered alongside more traditional approaches, such as contracting and grantmaking, to encourage innovation and increase participation to solve national problems. As awareness of this approach increases across sectors and as more experienced prize designers are available to support implementation,

11 Martin, "Evaluation: Rebuild by Design Phase I" (2014).

12 For more information on the NASA Center for Excellence see <https://www.nasa.gov/offices/COE/CI/>.

13 For more information on the Challenges and Prizes Toolkit see <http://www.challenge.gov/toolkit>.

14 McKinsey & Company, "And the Winner is'...:Philanthropists and Governments Make Prizes Count" (July 2009), available at <http://mckinseysociety.com/capturing-the-promise-of-philanthropic-prizes/>.

15 The White House Office of Social Innovation and Civic Participation, "Prizes and Challenges," available at <https://obamawhitehouse.archives.gov/administration/eop/sicp/initiatives/prizes-challenges>.

managers will begin to identify opportunities to build this type of outcome-driven approach into their own program planning. There is immense promise for ambitious and high-impact prizes in such important societal areas as clean energy, education, and public health. Prize initiatives in these national priority areas will have a higher likelihood for sustained support, impact, and reach if they are conducted through cross-sector collaborations, as some of the most ambitious prizes conducted recently have been.

Finally, the increased use of prizes within the government is also encouraging broad discussions of outcome-driven procurement approaches.¹⁶ This is not surprising, as designing prizes forces seekers to focus on outcomes in order to establish a transparent judging process. Prize designers are adept at focusing on outcomes, and their experience should be part of broader discussions within government about buying outcomes and paying for success. The lessons learned from more than 700 pay-for-performance prizes are critical data points to drive a more outcome-focused government.

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¹⁶ Partnership for Public Service, "Innovation is a Contract Sport: Ways that Agencies Can Achieve Innovative Outcomes Through Acquisitions" (February 6, 2016), available at <http://ourpublicservice.org/publications/viewcontentdetails.php?id=918>.