



2014 Open Government Awards

Submission of The United States of America

Collaboration and Innovation
through Prizes, Crowdsourcing,
and Citizen Science

June 2014



The 2014 Open Government Awards United States Submission

Initiative Name

Collaboration and Innovation through Prizes, Crowdsourcing, and Citizen Science

The Nomination

The United States selected this initiative because it is an element of President Barack Obama's *Strategy for American Innovation*, an effort to advance national priorities by collaborating with civil society, including companies, universities, foundations, philanthropists, organizations, and everyday Americans. In completing the U.S. entry, the Administration consulted with experts on the subject from inside and outside of government, as well as with civil society through an in-person Open Government Working Group meeting, the online U.S. Open Government Discussion Group, and outreach to members of the public.

Government Point of Contact

The United States Government point of contact for this entry is U.S. Chief Technology Officer Todd Park. Mr. Park is best reached through U.S. Deputy CTO Nick Sinai. The physical address is:

Todd Park

U.S. Chief Technology Officer
Office of Science and Technology Policy
Executive Office of the President
1650 Pennsylvania Avenue, N.W.
Washington, DC 20502
Tel: +1-202-456-4444
opengov@ostp.eop.gov

Civil Society Points of Contact

James Anderson

Director, Government
Innovation Programs
Bloomberg Philanthropies
james@bloomberg.org

Sarah Koch

Director, Social Innovation
Case Foundation
sarahk@casefoundation.org

John Bracken

Director, Media Innovation
John S. and James L. Knight
Foundation
bracken@knightfoundation.org

Participants

This entry involves collaborative projects across many U.S. Federal agencies, as well as civil society.

- More than 50 U.S. Federal agencies have offered more than 330 prizes [totaling \\$64 million from 2010-2014](#) to engage citizen solvers on [Challenge.gov](#), a government-wide platform hosted by the U.S. General Services Administration (GSA). The White House Office of Science and Technology Policy, GSA, and the National Aeronautics and Space Administration (NASA) [provide training](#) to government employees on prize design and administration.
- The National Archives and Records Administration is working with researchers, genealogists, historians, Wikipedians, and members of the public to make more of the 12 billion pages of permanent government records available online. Contributions include tags, transcriptions, indexes, images, articles, and comments.
- The Federal Communications Commission (FCC) relies on citizen Internet users to measure their broadband performance and share that data. Mobile users download easy-to-navigate apps which provide data to the FCC to share, analyze, and report on for interested stakeholders and the public.
- Since 2011, NASA has worked with more than 20,000 volunteers in dozens of countries around the world to create thousands of web and mobile applications to spark innovation in future space missions and to improve life on Earth.
- The U.S. Geological Survey (USGS) is the lead sponsor of the U.S.A. National Phenology Network which monitors the impact of climate change on plants and animals across the nation. Since 2009, citizens and professionals have contributed more than 3.5 million data points to the Network that are freely shared with the public.



Collaboration and Innovation through Prizes, Crowdsourcing, and Citizen Science

Problem Definition

By harnessing the knowledge of the public, government can leverage crowd-sourced solutions to tough or seemingly intractable problems, yielding new insights and innovative solutions. In a 2009 speech, President Obama emphasized the importance of more inclusive and open government, directing the Administration to “find new ways of tapping the knowledge and experience of ordinary Americans.”

In response to the President’s call to action, a number of Federal agencies have launched open innovation efforts, offering citizens a way to participate in policy-making, improve government services, and offer solutions to tough problems. Such initiatives have harnessed the expertise, ingenuity, and creativity of the American public much more effectively today than ever before. Through prizes, crowdsourcing, and citizen science, Americans have greater opportunities to be active contributors in making their government more efficient and effective.

Target Population

Innovative efforts to solve problems through prizes, crowdsourcing, and citizen science allow the United States to engage a wide range of participants—including those across government, specific communities of practice, and the general public.

These initiatives are an important part of how the United States is incorporating the public as meaningful participants in the innovation engine of the United States. Foundations, universities, research institutions, and organizations collaborate alongside historians, scientists, consumers, and ordinary citizens to play an active role in solving problems, improving government services, and informing and creating policy. These projects are examples of how the United States is reaching beyond traditional participants to increase the number of solvers tackling a problem as well as to identify novel approaches without bearing high levels of risk or creating redundancies.

Through administrative and legislative actions, the Obama Administration and Congress have enabled Federal agencies to harness the ideas and expertise of the American people to solve pressing societal and policy issues, improve the effectiveness of government, and stimulate economic growth. The Administration has worked to institutionalize these innovative methods across all government agencies, making them an integral part of delivering agency missions.

Initiative Design

In the spirit of open and collaborative government, Federal agencies launched a wide range of initiatives using prizes, crowdsourcing, and citizen science to engage with the public. The [America COMPETES Reauthorization Act of 2010](#) provided broad authority to all U.S. Federal agencies to use [prizes and competitions](#) to spur innovation in creating solutions to problems including [improving vehicle safety](#) and [building homes to withstand hurricanes](#).

- The National Archives engages citizens to help unlock historical government records through crowdsourcing projects on the [Citizen Archivist Dashboard](#). With more than 12 billion pages of paper records alone, there is no shortage of records to digitize or transcribe in the National Archives. The Archives is leveraging the power of crowds and external communities to contribute through online tools and in-person events.
- The FCC works collaboratively with industry, academia, public interest organizations, and others to develop open and transparent platforms for measuring broadband performance through its [Measuring Broadband America](#) program. The program's [FCC Speed Test App](#), a crowd-sourced smartphone application, measures volunteers' mobile broadband performance throughout the United States. Participants share information about their handsets and operating systems as well as speed and performance characteristics of the broadband connection measured by the app.
- NASA's [International Space Apps Challenge](#) is an annual, international mass collaboration over a 48-hour period each year in cities around the world. The Challenge pairs openly available data supplied through NASA missions and technology with the talent and skill of passionate volunteers from around the planet in order to advance space exploration and improve the quality of life on Earth.
- Thousands of citizen and professional scientists are working together through [Nature's Notebook](#), a project of the U.S.A. [National Phenology Network](#), which is funded primarily by USGS. *Nature's Notebook* collects biodiversity information to advance science, inform decisions, and communicate with the public about the changing environment. This information, on the timing of life cycle events such as tree-leafing and bird migration, is critical to manage wildlife, invasive species, and agricultural pests; to understand drought and wildfire risk; and to manage risks to human health and welfare, including allergies, asthma, and vector-borne diseases.

Initiative Outcomes

While U.S. Government open innovation initiatives have benefited both citizens and government in countless ways, some concrete outcomes are highlighted below.

- [Citizen Archivist Dashboard](#): Since 2012, citizens have contributed millions of tags, metadata, transcriptions, video subtitles, and digital images to the project. More than

200,000 volunteers transcribed 132 million names from the recently released 1940 U.S. Census to enable the public's ability to search these records and find their ancestors.

- **Measuring Broadband America:** More than 250,000 members of the public have been engaged throughout the project to provide speed testing data, comments, and feedback on improving Internet connectivity. The data, reports, and other products [have benefited consumers](#) as Internet service providers improved performance.
- **International Space Apps Challenge:** In the third-annual challenge this year, more than 8,000 volunteers in 95 cities across 46 countries participated in 40 challenges supporting NASA's mission. In three years, more than 2,000 crowd-sourced solutions have resulted in methods to monitor [air](#), [water](#), and [urban](#) pollution, track [environmental mishaps](#), alert citizens of [health](#) or [weather-related disasters](#), and [track the stars](#).
- **Nature's Notebook:** Since 2009, citizens and professionals have contributed more than 3.5 million data points to [Nature's Notebook](#), an application that makes data freely available to anyone. In 2013, data from the Network were used to improve models predicting seasonal activity of tree species in the United States, which has implications for local activities and economies, such as maple syrup production, honey production, allergy seasons, bird migrations, and harvesting native herbs.

Initiative Sustainability

The United States continues to expand upon open innovation efforts by [providing training](#) to government employees on best practices and implementation of such programs. An "[innovation toolkit](#)" documents and promotes the use of tools available to agencies to drive innovative results.

Additionally, many efforts have turned into lasting working relationships between government and civil society. For example, through the National Archives' collaboration with Wikipedia, Archives' records have already been incorporated into more than 4,000 Wikipedia articles. The Space Apps Challenge has spurred innovation on an international scale, creating new open source apps and catalyzing new job opportunities, start-ups, and funding. Finally, the USGS is working to leverage the protocols and systems in *Nature's Notebook* for other government agencies such as the National Park Service, the U.S. Forest Service, and the U.S. Fish and Wildlife Service, as well as non-governmental organizations, to manage their own projects.

Validation of Claims

Included with this application are letters from the following individuals and organizations discussing United States efforts on these projects.

- James Hare, President, Wikimedia District of Columbia, on behalf of the Citizen Archivist Dashboard

- Steven Bauer, Researcher, and William Lehr, Economist, Massachusetts Institute of Technology Computer Science and Artificial Intelligence Laboratory, on behalf of Measuring Broadband America
- Mike Caprio, Founding Organizer, New York City Space Apps, on behalf of the International Space Apps Challenge
- Cathlyn D. Stylinski, Senior Agent, University of Maryland Center for Environmental Science, Appalachian Laboratory

Best Case

The 2011 [Strategy for American Innovation](#) reminds us that “Great ideas can come from many corners.” Government can harness American ingenuity and creativity by providing ways for civil society to be active participants in public-private collaborations and open innovation methods such as incentive prizes, crowdsourcing, and citizen science.

U.S. Federal agencies have long worked to harness the ideas and expertise of the American people to solve pressing societal problems, improve the effectiveness of government, and stimulate economic growth by institutionalizing the use of innovative methods including prizes, crowdsourcing, and citizen science. While this entry features only a few examples, Federal agencies have connected with various dimensions of civil society including businesses, academics, foundations, and philanthropists to design and offer programs for collaboration with the public to achieve results that the government alone cannot.

These efforts pursue compelling and audacious yet achievable goals that harness science, technology, and innovation to solve important problems in areas of national priority including energy, health, infrastructure, agriculture, education and workforce development, and food and nutrition. The successful outcomes resulting from these efforts have led to commitments by government and civil society to expand their use of open innovation approaches. For example, Federal agencies offered [85 percent more prizes](#) to solve challenges in fiscal year 2013 than in the year before, solidifying the United States a leader in this space.

Video Submission

Included with this application is a brief video that highlights United States efforts of collaboration and innovation through prizes, crowdsourcing, and citizen science. The video includes footage of specific events and efforts and discusses the United States approach to institutionalize these innovative approaches to engage citizens.