



Open Innovation: Prizes, Challenges and Crowdsourcing

Jenn Gustetic

Assistant Director for Open Innovation
Office of Science and Technology Policy
Executive Office of the President

“No matter who you are,
most of the smartest people
work for someone else.”

- **Bill Joy**
Cofounder
Sun Microsystems



Strategy for American Innovation

“The Federal government should ... use high-risk, high-reward policy tools such as prizes and challenges to solve tough problems.”

*-President Barack Obama
August 5, 2009*



America COMPETES Reauthorization Act

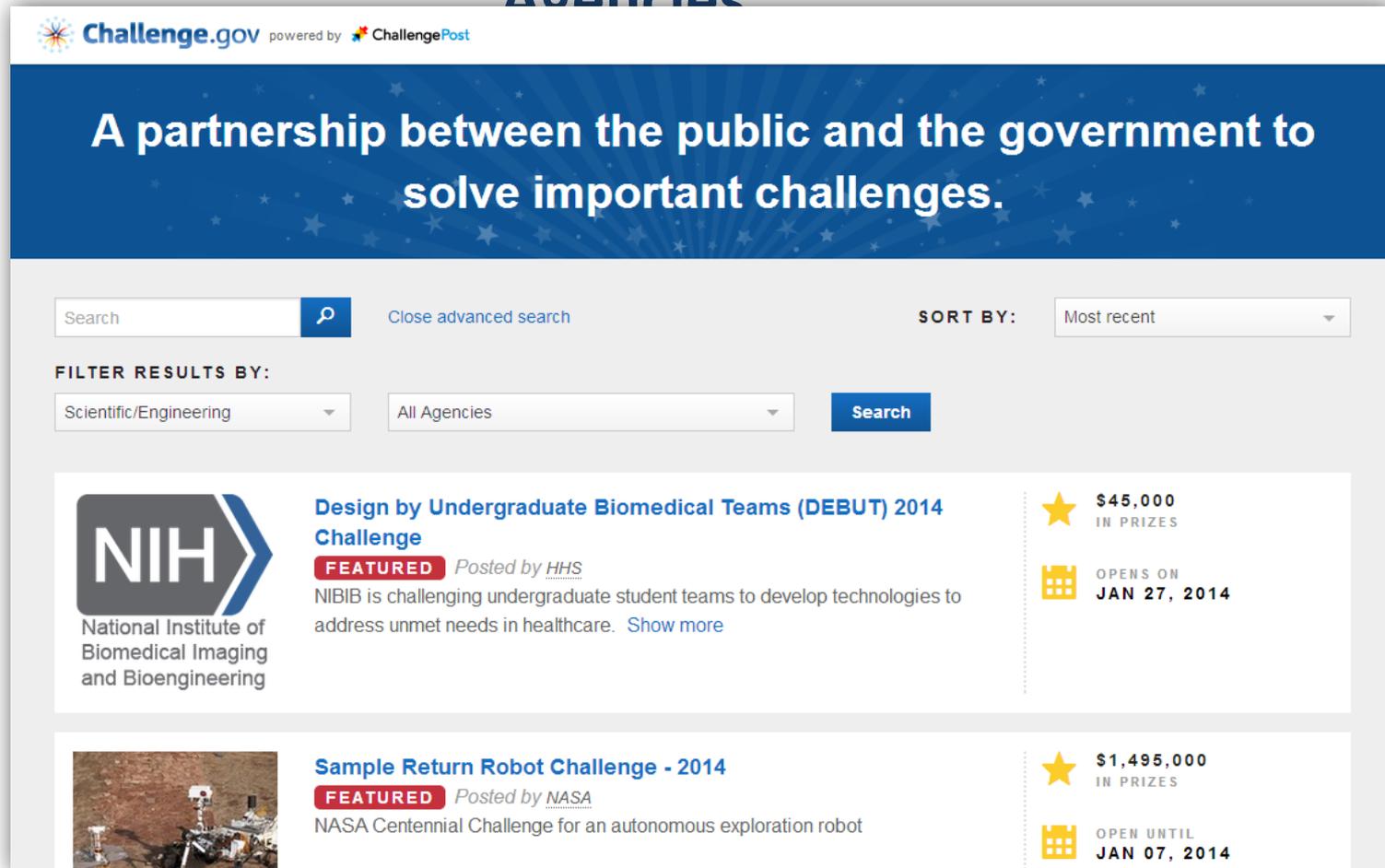
“Each head of an agency, or the heads of multiple agencies in cooperation, may carry out a program to award prizes competitively to stimulate innovation that has the potential to advance the mission of the respective agency.”

-Congress

December 21, 2010



375+ Prize Competitions, 70+ Agencies



The screenshot shows the Challenge.gov website interface. At the top left is the Challenge.gov logo with the tagline "Government Challenges, Your Solutions". Below it, the text "Challenge.gov powered by ChallengePost" is visible. A large blue banner contains the text "A partnership between the public and the government to solve important challenges." Below the banner is a search bar with a magnifying glass icon and a "Close advanced search" link. To the right of the search bar is a "SORT BY:" dropdown menu set to "Most recent". Below the search bar is a "FILTER RESULTS BY:" section with two dropdown menus: "Scientific/Engineering" and "All Agencies", followed by a blue "Search" button. The main content area displays two challenge cards. The first card is for the "Design by Undergraduate Biomedical Teams (DEBUT) 2014 Challenge" from the NIH, featuring a "FEATURED" badge, a star icon indicating "\$45,000 IN PRIZES", and a calendar icon indicating it "OPENS ON JAN 27, 2014". The second card is for the "Sample Return Robot Challenge - 2014" from NASA, also featuring a "FEATURED" badge, a star icon indicating "\$1,495,000 IN PRIZES", and a calendar icon indicating it is "OPEN UNTIL JAN 07, 2014".

*Winner of the Harvard Ash Center
"Innovations in American Government" Award*

Benefits of Prizes

1. Shine a spotlight on a problem or opportunity
2. Pay only for results
3. Target an ambitious goal without predicting which team or approach is most likely to succeed
4. Reach beyond usual suspects to tap top talent
5. Stimulate private sector investment many times greater than the prize purse
6. Bring out-of-discipline perspectives to bear
7. Inspire risk-taking by offering a level playing field
8. Establish clear target metrics and validation protocols



Prize Types and Prize Outcomes

Prize Types¹

1. Exemplar (recognition)
2. Point-solution
3. Exposition
4. Participation
5. Network
6. Market stimulation

Possible Outcomes²

Develop ideas, products or services

1. Attract new ideas
2. Build prototypes/launch pilots
3. Stimulate markets

Engage people and communities

1. Raise awareness
2. Mobilize action
3. Inspire transformation

¹ “And the winner is...” McKinsey, 2009

² “The Craft of Prize Design” Deloitte University Press, 2014



Challenges for Software and IT

- A March 8, 2010 OMB Memorandum ([Guidance on the Use of Challenges and Prizes to Promote Open Government](#)) outlines several authorities under which federal agencies could implement prizes and challenges. These include:
 - Direct Prize Authority through COMPETES: Nearly half of the 41 prizes conducted in FY 2013 under the authority provided by COMPETES sought software solutions such as applications (apps), data visualization tools, and predictive models and algorithms.
 - Procurement Authority: The Center of Excellence for Collaborative Innovation (COECI) at NASA has conducted numerous software development challenges under the FAR, to develop solutions that meet government needs/ requirements and are intended for open source or government-use.





NSF's Mozilla Ignite Challenge



- The Administration-supported US Ignite initiative sought to spark the development of next generation applications in health, education, energy, advanced manufacturing, transportation, and public safety – for a future network which is ultra high-speed, deeply programmable, and sliceable.
- The Mozilla Ignite Challenge was a \$500,000 two-stage competition.
- The second stage was multi-round application development competition that challenged developers, over a period of several months and a number of community events, to develop these ideas and to demonstrate their novelty, feasibility, and societal benefit.
 - 300 submissions received in Stage I: Ideation. (\$15k available)
 - 22 apps won at various points in Stage II (\$85k, \$150k, \$250k). Winning apps would aid emergency responders, enable three-dimensional video conferencing, provide real-time health monitoring, and inform connected traffic control systems, among other ideas.



Medicaid Provider Portal Screening Challenge

“The “Challenge” approach would allow us to articulate a set of goals and objectives rather than specifying a particular approach or predicting, based on a proposal, which of the multiple competing approaches would produce the best business result.”

--Chip Garner, CMS Challenge Manager

- A series of software development challenges to develop an open source multi-state, multi-program provider screening shared-service software program:
 - Capable of risk scoring, credential validation, identity authentication, and sanction checks,
 - While lowering the burden on providers and
 - While reducing administrative and infrastructure expenses for states and Federal programs
- Total budget of ~\$1,500,000 of which \$500,000 was offered in prizes
- Estimated cost of designing and building the portal through crowdsourcing was ***one-sixth of what the effort would have cost using traditional software development methods.***
- The State of Minnesota is working on full deployment of the software.



Open Innovation Toolkit

“The Federal government will “convene an interagency group to develop an “open innovation toolkit” for Federal agencies that will include best practices, training, policies, and guidance on authorities related to open innovation, including approaches such as incentive prizes, crowdsourcing, and citizen science.”

--National Action Plan for Open Government

- OSTP is partnering with two COPs to develop a prizes and challenges toolkit as well as a citizen science and crowdsourcing toolkit.
- For more information:
<http://www.whitehouse.gov/blog/2014/12/02/designing-citizen-science-and-crowdsourcing-toolkit-federal-government>
- To get involved: challenges@ostp.gov



Resources

- GSA's Challenge.gov program and community of practice:
<https://www.challenge.gov/about/>
- The Federal Community of Practice for Crowdsourcing and Citizen Science: <http://www2.epa.gov/innovation/federal-community-practice-crowdsourcing-and-citizen-science>
- NASA's Center of Excellence for Collaborative Innovation:
<http://www.nasa.gov/offices/COECI/>
- At the end of the event today, the leads for the two Communities of Practice mentioned above will be available for questions.



Thank You

challenges@ostp.gov
jgustetic@ostp.eop.gov

