



Crowdsourced Innovation

Introduction to DHS Prizes and Challenges



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Challenges and Prizes

A competition that offers participants a monetary or non-monetary award for successfully solving a defined goal within a defined time period.

The level of creativity we get from [contracting] is very limited. We are missing 99.999 percent of the population's great ideas. The idea of these challenges is really to figure out how do we tap into the ingenuity" The work I have seen come out of challenges is every bit as good as what the government has pulled in from contractors , and at a prize that's better for cash-strapped feds. Ann Mei Chang, Exec. Dir. USAID



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History of Prizes in DHS

- **America COMPETES Act of 2010**
- **Delegation of “Head of Agency” to USST in 2014**
 - Approvals under \$1M prize purse
- **TSA Challenges in 2014**
- **Established InnoPrize Program**
 - DHS Directive 112-07 (Prize Competitions)
 - DHS Instruction 112-07-001 (Prize Competitions)
- **Conducted 3 prize competitions under America COMPETES Act authority Jan 2015-Mar 2016**



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Program Goals

- Inspire the use of ground-breaking and technical approaches and solutions to Homeland Security challenges and R&D interests
- Inspire entrepreneurs, innovators, students and the private sector to take risk and leverage their resources to submit innovative ideas, approaches, and prototypes to prize competitions
- Reach non-traditional performers by lowering the barrier for participation and entry



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Reach New Innovators

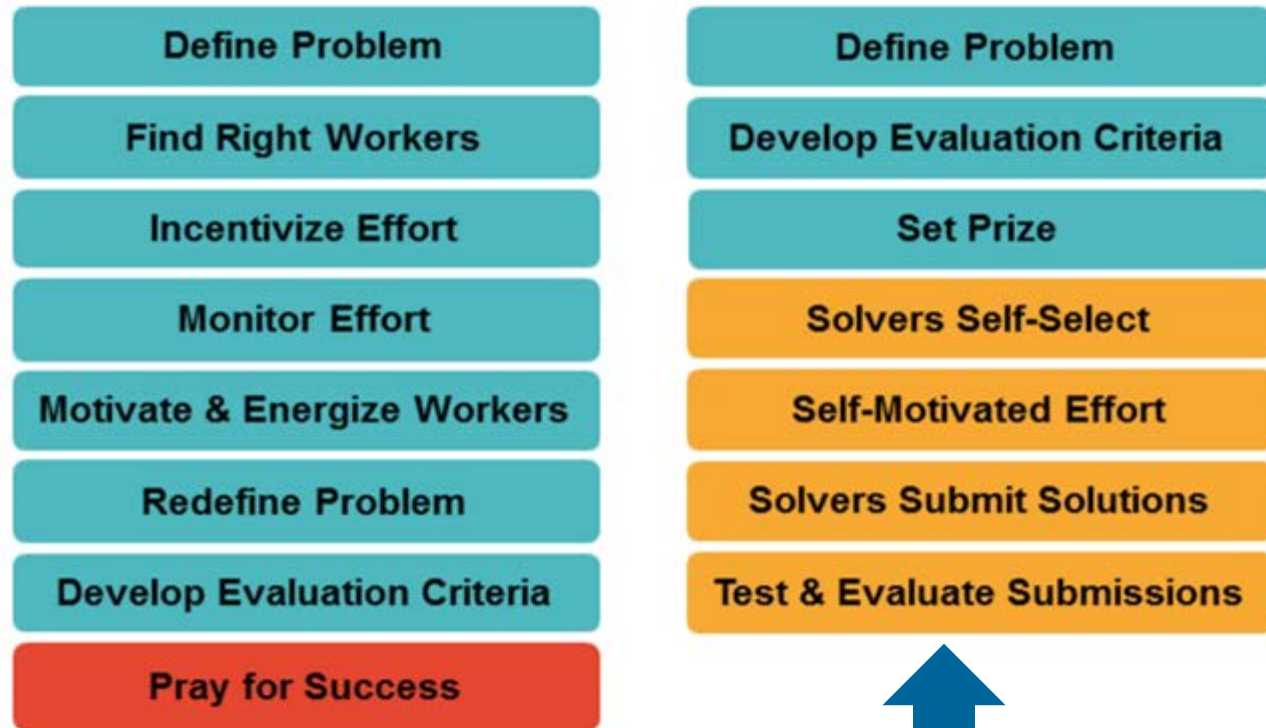
- New Sources of Innovation
 - Innovation start-up companies too small for large gov't contracts
 - Hackerspace, Makerspace, Tech Shop Communities
 - Universities not receiving gov't grants/non-DHS COEs
 - Amateurs and Enthusiasts
 - Risk-takers
- Popular with General Public
 - Prizes have public relations built-in
 - Social media interest is huge
 - Traditional media follow the money
 - Must market and scope audiences
 - 2014 TSA Example



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Contracts and Prizes



**Source: Professor Karim Lakhani, Harvard Business School*

Pay Only for Success



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Comparison Factors

| ITEM | CONTRACTS & GRANTS | PRIZES |
|---------------------|---|---|
| Target Technologies | Available in market or via a contract/grant. | Not available in market or by contract/grant. |
| Selection Process | "Crystal Ball"-Prejudges which competitor has best chance of success. | "Darwinism"-All competitors compete until end of contest. |
| Results. | One Possible. (per specific solution) | Many possible |
| Delivery | Depends on the ability to select best competitor. | Depends on the ability to formulate achievable rules. |
| Open to... | Companies able to navigate contracting regulations. | All U.S. citizens, non-Federal employees. |
| Cost to Execute | Rarely less, and often more than 100% of costs. | A fraction of the total cost. |
| Payment of Funds | Most funding paid out before delivery of hardware or service. | Payment ONLY after successful demonstration of hardware or service. |

Source: NASA Center for Innovation Excellence "Prizes, Contracts & Grants, What Should I Do?"



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Prize Purse, Results & IP

- Ideation
 - High level subjective question; Non-exclusive rights to all submissions
 - Low payout (\$5-25K)
- Theoretical
 - Discreet criteria and problem statement; Detailed white papers
 - \$20-50K payout
 - IP transfer for period of time or non-exclusive license
- Reduction to Practice
 - Discreet criteria and problem; Working prototypes/proof of concepts
 - \$40K-1M
 - IP transfer for a period of time or non-exclusive license



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TITAN

- TITAN is composed of the below tools:

| Discover and Engage- Identify People and Possibilities and Build Relationships | |
|--|---|
| Tech Scouting and Market Analysis | Maintain awareness of technologies and markets |
| Industry Outreach | Coordinate communication with industry |
| Silicon Valley | Engage with innovative private sector partners |
| PIONEER | Embed with operators to identify needs |
| OpEx | Link innovators, operators, and technologies |
| Influence and Incentivize – Further Concept, Prototype and Product Development | |
| Center of Innovation | Survey and shape emerging disruptive technology |
| LRBAA | Solicit novel solutions to broad problems |
| SBIR | Develop proof-of-concept solutions |
| In-Q-Tel | Identify, adapt and field promising capabilities |
| SAFETY Act | Provide risk and litigation management and liability protections for products |
| Prize | Crowdsource difficult problems |
| Accelerators | Engage and influence innovative start-ups |
| Facilitate Transition – Deliver Sustainable and Marketable Solutions | |
| Tech Transition | Design formal transfer agreements |
| Commercialization | Guide and expedite solutions to the commercial market |

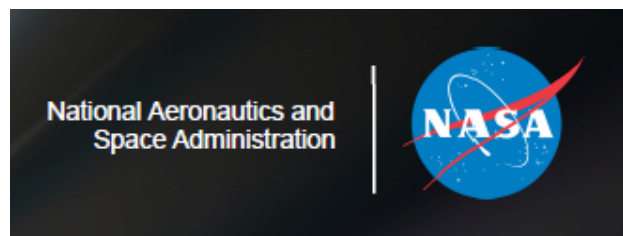


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Process Overview

Partnership



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PRIZE COMPETITIONS

FRAMEWORK FOR OBTAINING ANSWERS TO PROBLEMS THAT MATTER



INNOPRIZE

Contact the DHS S&T InnoPrize Program Office
Email address: prizeauthority@hq.dhs.gov
Website: <https://costcenter.us.dhs.gov/rfp/ppp/s/default.aspx>

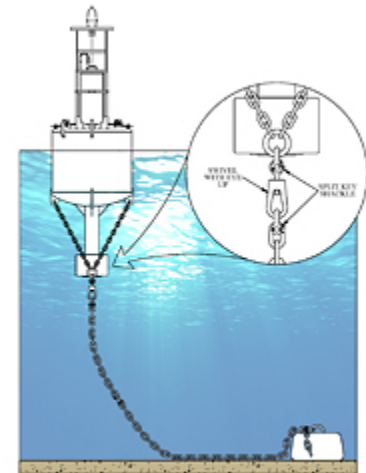
Challenges to Date & Limitations



Where Am I, Where is My Team?



NBAF-Think and Do Challenge



Environmentally Friendly
Buoy Mooring



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Challenge Future

- OMB M-10-11 (March 2010)
 - Direct prize authorities-e.g., the America COMPETES Act;
 - Discretionary competitive grants where the grantee's proposed way of addressing the aim of the grant funding is to conduct a competition.
 - The Necessary Expense Doctrine to conduct a contest and/or offer a prize if doing so bears a direct relationship on the agency's statutorily authorized mission;
 - As part of an agency's already authorized outreach and education activities;
 - Procurement for a contract (under FAR Chapter 1) to provide a particular solution where that solution is obtained through a prize competition or challenge process. The solution obtained could be for the direct use or benefit of the federal government and Component research and development (R&D) projects; and
 - Other transaction authorities.
- Could We/Should We?



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Contacts

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<https://collaborate.st.dhs.gov/rdp/ppp/ip/default.aspx>



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DHS Prize Competitions InnoPrize Program

**Competitions to
Engage the Community
and Stimulate Innovation**



**Crowdsourcing
Collaboration
Innovation
Open Data
Open
Government**

prizeauthority@hq.dhs.gov

Department of Homeland Security, Science & Technology Directorate
Prize and Small Business Innovation Office