

**NPD 1090.1**Effective Date: February 12, 2014  
Expiration Date: February 12, 2019**COMPLIANCE IS MANDATORY**[Printable Format \(PDF\)](#)

Request Notification of Change (NASA Only)

**Subject: Challenges, Prize Competitions and Crowdsourcing Activities****Responsible Office: Office of the Chief Technologist****1. POLICY**

a. It is NASA's policy:

(1) To encourage the use of challenge activities (challenges), including prize competitions and crowdsourcing activities, to further the Agency's mission at all levels of the NASA organization. The Federal Government has been encouraged to use prizes and challenges as tools to solve problems and drive innovation for specific needs. Challenges use a focused problem-statement approach to obtain solutions and/or stimulate innovation from a broad, sometimes undefined, public rather than a specific named group or individual. Prize competitions and crowdsourcing are two specific techniques for implementing challenges.

(a) A challenge implemented as a prize competition is intended to stimulate innovation in a manner that has the potential to advance NASA's mission through the offer of a competitive award.

(b) A challenge implemented through crowdsourcing is intended to solicit products, services, ideas, or content contributions from many people, often (but not necessarily) through the Internet, and may result in the making of award(s).

(c) An award can be any form of recognition provided to a participant in a challenge, including a cash payment, value other than cash (e.g., payment of travel expenses, accommodation on a launch vehicle) and other forms of reward (e.g., recognition, invitation to an event).

(2) That all NASA challenges be designed and implemented to:

(a) Advance defined, measurable objectives that relate to NASA's mission.

(b) Encourage broad participation and engagement by external solvers.

(c) Publicly provide clear rules for participation, including any eligibility requirements.

(d) Publicly provide clear solution performance and/or judging criteria.

(e) Measure outputs and outcomes of the challenge to evaluate performance.

(3) To use all available legal authorities to conduct challenge activities. All challenge activities shall be fully compliant with all applicable laws and regulations. Often the challenge implementation approach and the availability of an award will be determined by the legal authority used for the challenge.

(4) To develop and maintain Agency-level strategy, best practices, and effective implementation guidance for NASA challenges as a whole, including processes for NASA Headquarters' awareness of challenge activities across the Agency, and to ensure that NASA's challenge activities are non-duplicative and pursued in a consistent and efficient manner.

(5) To report internally all NASA challenge activities to ensure timely required external reporting and accurate performance reporting.

## 2. APPLICABILITY

- a. This NPD applies to NASA Headquarters and NASA Centers, including Component Facilities and Technical and Service Support Centers. This language applies to JPL (a Federally Funded Research and Development Center), other contractors, grant recipients, or parties to agreements only to the extent specified or referenced in the appropriate contracts, grants, or agreements.
- b. This policy does not apply to Grand Challenges. However, where individual challenges (prize competitions or crowdsourcing activities) contribute to a Grand Challenge, those individual activities are covered by this policy.
- c. In this NPD, all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms "may" or "can" denote discretionary privilege or permission, "should" denotes a good practice and is recommended, but not required, "will" denotes expected outcome, and "are or is" denote descriptive material.
- d. In this NPD, all document citations are assumed to be the latest version unless otherwise noted.

## 3. AUTHORITY

- a. Stevenson Wydler Act, 15 U.S.C. § 3701, et seq.
- b. Chiles Act, 31 U.S.C. § 6301, et seq.
- c. The National Aeronautics and Space Act, 51 U.S.C. § 20101, et seq.

## 4. APPLICABLE DOCUMENTS AND FORMS

None.

## 5. RESPONSIBILITY

- a. The Chief Technologist shall:
  - (1) Provide leadership, coordination, and Agency-level strategy for Agency challenge activities as a whole.
  - (2) Develop and maintain policy direction, implementation guidance, and reporting requirements for Agency challenge activities as a whole.
  - (3) Review Agency-wide requested prize funds in the annual budget request to ensure consistency with statutory and other external requirements.
  - (4) Report externally on NASA challenge activities as required by Congress, the Office of Management and Budget, and other external bodies.
- b. The Mission Directorate Associate Administrators, the Officials-in-Charge of Headquarters Offices, and the Directors of NASA Centers are responsible for the coordination, design, implementation, measurement and internal reporting of NASA challenge activities, other than challenges conducted under the authority of 51 U.S.C. § 20144, consistent with this policy.
- c. The Associate Administrator for the Space Technology Mission Directorate is responsible for the coordination, design, implementation, measurement, and internal reporting of NASA challenge activities conducted under the authority of 51 U.S.C. § 20144 consistent with this policy.
- d. The NASA General Counsel is responsible for reviewing all Headquarters challenge activities to ensure compliance with applicable statutes, regulations, and policies. The Center Chief Counsel is responsible for reviewing all Center challenge activities to ensure compliance with applicable statutes, regulations, and policies.

## 6. DELEGATION OF AUTHORITY

None.

## 7. MEASUREMENT/VERIFICATION

Compliance will be measured through the reporting activities as described in this policy.

## 8. CANCELLATION

None.

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**/s/ Charles F. Bolden, Jr.**  
**Administrator**

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### ATTACHMENT A: DEFINITIONS:

Challenges use a focused problem-statement approach to obtain solutions and/or stimulate innovation from a broad, sometimes undefined, public rather than a specific, named group or individual.

Prize Competitions competitively award prizes to stimulate innovation in a manner that has the potential to advance the mission of NASA. Benefits to sponsors of prize competitions include paying only for results, exploring a wide breadth and depth of potential solutions, targeting an ambitious goal without predicting which team or approach is most likely to succeed, reaching beyond usual sources to tap top talent, and bringing out-of-discipline perspectives to bear. Prize competitions also can encourage the development of new companies and products.

Crowdsourcing solicits products, services, ideas, or content contributions from many people, usually (but not necessarily) through the Internet and may result in the making of award(s). Crowdsourcing is different from ordinary outsourcing because a task or problem is outsourced to an undefined public rather than to a specific, named group or individual. Challenges can focus crowdsourcing efforts on addressing a particular problem.

Grand Challenges are ambitious, but achievable, goals that harness science, technology, and innovation to solve important national or global problems and that have the potential to capture the public's imagination. They serve as a "North Star" for high-impact, multi-disciplinary collaborations and public-private partnerships in areas where the Government cannot likely achieve the outcome alone. A Grand Challenge is not a single, "big" prize competition; it is broader in scope than a single challenge conducted as a crowdsourcing activity or prize competition. A Grand Challenge will consist of both NASA organized and non-NASA organized activities, potentially including a number of challenges, to make progress toward the goal.

### ATTACHMENT B: REFERENCES

- B.1 Federal Acquisition Regulations, 48 CFR Chapter 1.
- B.2 Bayh Dole Act, 35 U.S.C. § 200-212.
- B.3 Guidance on the Use of Challenges and Prizes to Promote Open Government, OMB Memorandum M 10-11.
- B.4 The White House, A Strategy for American Innovation, February 2011.
- B.5 NASA Grant and Cooperative Agreements Handbook, 14 CFR pt. 1260.
- B.6 Cooperative Agreements with Commercial Firms, 14 CFR pt. 1274.
- B.7 NPD 1050.1, Authority to enter into Space Act Agreements.
- B.8 NAII 1050-1C, Space Act Agreements Guide.
- B.9 NPR 1000.3, The NASA Organization.

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