OI Strategy Proposal

USGS Open Innovation Strategy for Crowdsourcing, Citizen Science, & Competitions

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USGS Open Innovation Strategy

The Problem: The USGS has a long history of enhancing our science through crowdsourcing and citizen science techniques. Current efforts are *ad hoc* and developed in response to specific science needs. While there is growing interest in using these techniques including the prize competitions, there is no unified strategy for effective use across the bureau. A strategy is needed to provide guidance to USGS scientists and managers on when and how to use these techniques most effectively and to evaluate their effectiveness.

Proposed Strategy and Products: The USGS strategy will include the collaborative development of USGS-specific **Guidance**, **Toolkit**, and **Policies**.

The **Guidance** will address four principal topics:

1. An operational definition of crowdsourcing, citizen science, and challenge competition techniques for USGS;
2. The circumstances under which it is most appropriate and inappropriate to use these techniques;
3. Clearly stated processes for effective implementation of these techniques to address quality assurance, cost, and sustainability issues; and
4. Metrics for recognizing success and evaluating effectiveness.

The **Toolkit** will consist of two components:

1. A **Project Catalog** of current and past USGS projects that use crowdsourcing, citizen science, and challenge competition techniques. The catalog will provide an up-to-date, comprehensive, and searchable means to meet internal and external project reporting requirements and to provide USGS scientists and managers with successful examples; and

2. A curated **Knowledge Base** of existing legal, policy, and technical resources relating to implementation and evaluation of these techniques.

The **Policies** will consist of (1) a **USGS Policy Directive** to provide compliance standards for implementing and integrating projects using crowdsourcing, citizen science, and competition techniques, and (2) a **DOI Generic Information Collection Request (ICR)** for crowdsourcing and citizen science projects across Department of Interior and its bureaus to reduce the Paperwork Reduction Act approval process from as long as 9 months to as short as 2 weeks.

Project Teams: Three teams will be established to develop, complete, and sustain the guidelines, supplemental toolkit, and policies**:**

1. **Core Working Team** (7-10 people each working time in total for FY20) will develop the strategy and coordinate with advisory teams to have the products reviewed and published;
2. **Internal Advisory Team** will provide input and expert review of the guidelines, toolkit, and policies to ensure it is tailored to USGS; and
3. **External Advisory Team** will provide input and expert review from a non-USGS perspective.

Team Compositions and Roles:

- For the **Core and Internal Advisory Teams**, appropriate representatives from USGS Mission Areas, Offices, Regions, Programs, Science Centers, and internal advisory committees will be identified to ensure the strategy is effective and relevant to USGS priorities (e.g., EarthMAP). Both experts in these techniques and experts in USGS science will be engaged to elicit and address the broadest possible range of perspectives

and concerns.

- For the **External Advisory Team**, representatives from federal agencies (e.g., NPS, FWS, USBR, EPA, USFS, NOAA, NASA, NSF, FEMA) that have developed similar strategies will be identified to provide feedback. Other organizations and experts in crowdsourcing, citizen science, and prize competitions will also be identified to ensure this strategy includes existing resources and strengthens partnerships with key stakeholders.

Product Team of Teams: Three teams will be established to focus on the **Guidance**, **Toolkit**, and **Policies:**

1. *Guidance Team*
2. *Toolkit Team*
3. *Policy Team*