

OPEN INNOVATION

Strategies the federal government can use to gather ideas and expertise from the public

AN OVERVIEW OF GAO-17-14

What is open innovation?

Open innovation uses activities and technologies to engage with citizens, organizations, and experts, and to harness the **ideas, expertise, and resources** they offer.

Federal agencies need to **engage and collaborate** with all sectors of society.



Online technologies have enhanced their ability to make these connections.

What can it achieve?

Agencies can use open innovation strategies to achieve **one or more** of the following high-level purposes:

- Collect information and perspectives.
- Develop and test new ideas, solutions, or products.
- Enhance agency capacity.
- Build or expand community.
- Increase public awareness.

What strategies are agencies using?

Agencies have used one or more of these strategies:



Crowdsourcing and Citizen Science

Agencies submit an open call for voluntary assistance from a large group of individuals to complete defined tasks, or assist with specific science-related tasks, which can include collecting and analyzing data and interpreting and reporting results.

Example: Asteroid Data Hunter (NASA)

In March 2015, NASA launched the Asteroid Data Hunter application. The app was built through a NASA challenge and is designed to allow citizen scientists to detect asteroids, contributing to and supplementing the efforts of professional astronomers.



Idea Generation (Ideation)

Agencies ask participants to submit ideas to address a specific issue or problem, and may allow them to comment on ideas submitted by other participants, and vote to express their support for an idea.

Example: Every Day Counts (DOT)

Every 2 years since 2009, DOT's Federal Highway Administration has used Every Day Counts to identify innovations that would improve highway project delivery. Teams of federal, state, local, and industry experts implement the ideas chosen through this ideation process.



Open Data Collaboration

Agencies mobilize participants to share, explore, and analyze publicly-available data sets, using the data to conduct research, design data visualizations, or create applications and websites that help people access and use the data.

Example: OpenFDA

Launched in 2014, OpenFDA is an open data platform that FDA uses to make available several key datasets in a format that allows researchers and developers to more easily use the data.



Open Dialogue

Agencies collect and respond to information, observations, and perspectives from a range of citizens, experts, and stakeholders.

Example: Air Pollution Sensor Workshops (EPA)

In 2012, 70 people attended EPA's first workshop to engage with governments, community groups, and others that use air pollution sensors, and by 2015, the pool of online and in-person attendees grew to more than 800. Since then, EPA has used a variety of approaches to sustain this community.



Prize Competition or Challenge

Agencies identify a problem to solve or a specific goal to achieve and ask participants to submit potential solutions. The agency evaluates these proposals, and provides a reward for selected winners.

Example: Wave Energy Prize (DOE)

DOE's Wave Energy Prize, which is scheduled to be awarded at the end of 2016, encouraged the development of more efficient devices that capture energy from ocean waves. These devices could reduce the cost of using waves as an energy source, making it more competitive with traditional energy solutions.



How can they be the most effective?

We have identified the following practices that facilitate the effective implementation of open innovation initiatives, and can serve as a framework for evaluating projects.



DESIGN

What is the primary purpose?

Knowing the primary purpose or purposes of an initiative can help agencies choose the most appropriate strategy or combination of strategies.

Do we have what we need to make it work?

Consider agency's capability to implement a strategy, including leadership support, and the availability of:

- legal authority
- resources
- capacity

What will success look like?

Set goals and determine how success will be measured.

This can help agencies ensure that their open innovation initiatives are clearly directed at meeting agency needs and goals.

Who can help?

Identifying and engaging external stakeholders and partner organizations can increase an agency's reach in a community.

It can also help provide additional:

- staff
- advice
- resources
- expertise

How will we work together?

Agencies should plan out how they will implement the initiative with their stakeholders and partner organizations, and how they are going to engage participants before, during, and after the initiative.



IMPLEMENTATION

Do the work

1. Agencies should announce the initiative. Use various media to generate interest and reach the right participants.

2. Then, communicate consistently with partner organizations and participants while the initiative is under way. Help to ensure that participants get what they need to succeed and agencies and their partner organizations track progress and make key decisions.



FOLLOW-UP

How did it go?

After the initiative (or at regular intervals), agencies should collect data and assess whether the initiative achieved its goals.

Reporting on results and lessons can help sustain collaboration with partner organizations and participants and build momentum for future efforts.

How can we move forward together?

Sustaining a community of interested organizations and individuals can help agencies implement the results of open innovation...

...and give agencies a ready-made support network for future initiatives.