Introduction to the Innovation Toolkit and Approaches to Increase Awareness, Adoption, and Adaptation in the federal government

*“Innovations arise when people are given a problem to solve instead of being told to implement a known solution.”*—“[Innovation is a Contract Sport](https://ourpublicservice.org/publications/viewcontentdetails.php?id=918),” Partnership for Public Service[[1]](#footnote-1)

*“Innovation in government is not alien to the American tradition. It is the American tradition. [Everyday Americans] deserve a way of thinking that empowers rather than divides, that confronts challenges rather than creating them, that solicits all types of expertise rather than espousing tired approaches. […] Open innovation is about handshakes and handoffs: the handshakes between powerful, enabling entities that allow for the handoffs to those with the hope, ambition, inspiration, and ideas to make our country better, in every conceivable way.”*—Aneesh Chopra, former U.S. Chief Technology Officer[[2]](#footnote-2)

“*A talent for speaking differently, rather than for arguing well, is the chief instrument of cultural change.*" Richard Rorty, philosopher

## Overview

The purpose of this white paper is to provide an overview defining innovation in the federal government and ways to foster innovation through the awareness, adoption, and adaptation of approaches outlined in the Innovation Toolkit. The information in this paper is largely derived from academic journals, news reports, interviews with former and current federal government innovators and leaders. Appendixes describe case studies (), supporting policies (), and additional resources () for readers interested in reading and learning more about the application of innovative approaches at their agencies.

## Introduction

Innovation in the federal government involves encouraging a problem-solving mindset and inspiring a collective culture of experimentation that seeks new and more effective ways of working. The Innovation Toolkit is intended to serve as an online resource for federal innovators at all levels of government: program staff and senior leaders seeking new technologies, methods, approaches, or best practices to improve their agency’s effectiveness.

The approaches featured in the Innovation Toolkit describe how federal employees can introduce, test, and scale innovative projects and programs in their agencies. The Innovation Toolkit delineates a number of innovative approaches developed across agencies, including:

* Establishing a Chief Innovation Officer
* Recruiting talent on a temporary basis through tour of duty approaches
* Crowdsourcing innovative ideas from federal employees and non-federal stakeholders, such as citizen solvers, through participatory frameworks like Grand Challenges
* Engaging with the public and private sectors through public-private and public-public partnerships
* Aligning commitments and resources with non-federal organizations through calls to action
* Introducing evidenced-based or tiered approaches to the design of programs
* Deploying entrepreneurial and design methodologies like human-centered design and lean startup for more effective problem-solving
* Developing an innovation office or physical space to share ideas and support early innovators

The Innovation Toolkit also describes narratives or case studies to help illustrate how federal employees deployed innovative approaches to achieve greater impact, with key insights to help lower the learning curve as readers consider adopting or adapting these practices.

### Why

The Innovation Toolkit is intended as more than just a static repository of knowledge resources. No single person or agency "owns" expertise in innovative methods; context matters, and innovation is not one-size-fits-all. A main goal of the Innovation Toolkit is to create a platform that effectively solicits and captures the vast experience and insights of federal employees engaging in innovative activities. The Innovation Toolkit aims to provide practical guidance and resources on the “how’s” that underline these activities.

The Innovation Toolkit allows federal employees, and others interested, to share knowledge on a set of approaches used to solve problems and to improve the core processes of government, such as

* achieving a government that costs less such as by increasing efficiency and reducing administrative burdens,
* obtaining high-quality government activities and services,
* increasing transparency, publicly accessible information, and citizen input,
* simplifying policies and facilitating compliance with new policies, laws, and regulations, and
* building public support, trust, and encouragement for engagement to improve government activities and services,

### How

The following are five main elements of the innovation process that could be considered in implementing innovations in federal agencies[[3]](#footnote-3):

* Generating possibilities and new ideas—Creating an environment and culture that welcomes potentially disruptive ideas may require instituting systematic mechanisms for the generation of those ideas, such as information collection platforms and techniques.
* Selection of an idea for incubation—Not all innovative ideas may be good ideas. As such, the selection of viable innovative ideas requires the development of processes and criteria for selection and incubation, including plans for its development, likelihood of success, and anticipated outcomes.
* Prototyping and implementing promising ideas—Innovations in the federal government require safe spaces and risk management processes to test and incubate ideas.
* Replicating, scaling-up, and diffusing ideas that work—Prototypes that are successful may be diffused and applied at a larger scale within and across the federal government.
* Analyzing implementation and learning—Throughout the innovation process, evaluations, both informal and formal, help inform the success, outcomes, and feasibility for replicating or diffusing an idea.

## Background on Innovation

### What is Innovation in the Federal Government?

There is no singular understanding of innovation across the federal government. For instance, approaches featured in the Innovation Toolkit span multiple, overlapping communities, tasked with tackling different problems through a multitude of skillsets, time horizons, and contexts.

Literature on public sector innovation also demonstrates a lack of consensus and standardization. However, there are several common attributes among descriptions of public sector innovation

* creation of new processes, products, services, and methods of delivery
* ideas that are implemented (or at least are in the initial stages of implementation)
* result in improvements in outcomes, efficiency, effectiveness, or quality.

These characteristics strongly align with the OECDs notion of public sector innovation, which includes novelty, implementation, and impact (Resource Box 1).[[4]](#footnote-4)

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| **Resource Box 1. OECD’s Characteristics of Public Sector Innovation**  The OECD’s Observatory of Public Sector Innovation collects public sector innovation practices from around the world. These are featured in country profiles and national governments can update the content displayed on the website.\*  The Observatory suggested the following criterion for the collection of public sector innovation practices:   * Novelty: Though a practice might have been developed by other national governments, novelty includes all practices that are novel in the national context * Implementation: Ideas that have been implemented, or are in the process of being implemented * Impact: Includes the following dimensions – service quality, cost efficiency, and user satisfaction; notably, requires the analysis of impacts and documentation to effectively inform policies, programs, and projects.   \* Currently the United States does not have a country profile; however, the Observatory website features several U.S.-based public sector innovation.  Source: OECD, Observatory of Public Sector Innovation, “Country Profiles,” https://www.oecd.org/governance/observatory-public-sector-innovation/countryprofiles. |

A variety of other attributes used in defining and categorizing public sector innovation include:

* *Organizational:* a new method that improves organizational or administrative practices or ways of organizing or managing activities in the workplace
* *Communication or marketing*: a new method of promoting the organization or its services and goods, new ways of influencing individual behavior.
* *Policy:* new policy directions and initiatives, innovations in the policy-making process, and policies to foster innovation and its scale-up or diffusion
* *Governance:* changes to networks of organizations in which public and private actors participate and interact to solve societal problems, influencing decisions regarding resources and authority
* *Systemic or system interaction:* fundamental changes to an existing system, such as through new organizations or improved ways of interacting with other organizations and knowledge bases
* *Strategic or conceptual*: introduction of new missions, world views, vision, strategies, and concepts into an organization
* *Culture:* the shift of values and world views of employees in an organization

Given the breadth of definitions and to better guide the development of the Innovation Toolkit, the following features of innovation in the federal government could be considered as:

The creation and implementation of new processes, products, services, and methods of delivery that result in significant improvements in outcomes efficiency, effectiveness, or quality.

### How does innovation in the federal government differ from private sector?

Private sector innovation has been well studied for several decades. A commonly agreed upon definition of private sector innovation from OECD is[[5]](#footnote-5)

*The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization, or external relations.*

In contrast to private sector innovation, innovation in the federal government is “mission”-driven (versus market-driven) and modeled on collective choice, the need for resources, openness, and accountability to the public. Generally, the federal government can also manage innovations in important and different ways than the private sector, such as the ability to mobilize significant resources into projects or programs.

## Considerations for Use

Considerations for use of the innovative approaches featured in the Innovation Toolkit and others are organization specific—depending on the context, goals, and resources, among other factors. The strategies for innovation and scope of the approaches—whether starting small with incremental changes—can also vary.

### Thinking Strategically about Innovation

Federal agencies may wish to consider how varied approaches can be tied together through an overarching strategy to avoid innovation efforts becoming a “grab bag of much-touted best practices.”[[6]](#footnote-6) Understanding and articulating how a coherent set of approaches raises the overall capacity of the organization and its workforce to be more innovative may be more difficult than implementing each individual approach. This process may entail thinking about how the effective implementation of innovative approaches may depend on changes occurring in other parts of the organization, e.g., functional offices—human resources, contracting, etc.— technical expertise, and culture.[[7]](#footnote-7) In addition, agencies may consider using one or a combination of several approaches to support their innovation strategy (Resource Box 1: Approaches for Innovative Strategies).

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| **Resource Box 1. Approaches for Innovative Strategies**  There are a range of innovation strategies, including implementing approaches top-down, middle-out, bottom-up, or some combination thereof.  **All of the Above**—“You have to understand how to balance your portfolio of change strategies,” says Joshua Marcuse, Executive Director of the Defense Innovation Board. “And it's usually the case that you're doing a blend of several in a portfolio of change management initiatives.” It’s rarely an either/or dichotomy; top-down and bottom-up strategies may happen simultaneously on different projects. For different audiences, “pick your internal or external tone and carefully calibrate the dial,” advises Michael Edson, former Director of Web and New Media Strategy at the Smithsonian. Avoid using language that unnecessarily antagonizes skeptics or backs them into a corner.  **Top-Down**—High-level leadership support and buy-in within organizations is a critical component of innovative activities. However, relying only on direction from senior-most leaders is rarely sufficient to drive lasting change. Joshua Marcuse cautioned against pursuing only a top-down approach: “Top-down strategies often require significant time to implement, very strong leadership support—meaning political capital—in the face of opposition, and its own funding allocation dedicated to implementation.”  **Bottom-Up**—“Agency leaders can encourage and support a flourishing culture of innovation, but organizations may be limited in implementing innovative approaches if front-line employees are not encouraged and enabled to be innovative,” shared Carol Lundquist of the National Security Agency (NSA). She says “a culture of innovation should allow for a diversity of execution approaches so organizations can choose the approach most likely to achieve their desired outcome based on their particular situation at that time.” Lundquist recommends structuring centralized support at the lowest level that can effectively task and allocate funding and personnel resources but with distributed and grassroots decision making for assessment, selection, and execution.  **Middle-Out**—A “middle-out” strategy emphasizes peer-to-peer mentoring and support that can effectively spread new practices. Todd Park, formerly at the Department of Health and Human Services (HHS) and former U.S. Chief Technology Officer, recommends taking a team approach, stating that when he had a new idea to drive innovation, he’d go to three to five people who previously had the idea and enlist them for help. Virginia Hamilton, regional administrator at the Department of Labor, organically grew support for innovative approaches over time from the bottom-out by reaching out to regional staff and cultivating peer champions. “People who learn the process are your biggest advocates for the approach,” she notes. “The more they used the methods, the more interest it sparked. People are naturally curious and want to be part of something; they’ll begin to ask questions and want to do what their peers are doing.” To encourage change through “bottom-out” approaches, Hamilton views the following as important considerations:   * Identifying people that are trained and experienced in the innovation you want to introduce. Someone with credibility and experience can help you communicate the ideas. * Finding allies that will give you cover and support and allowing them to help. * Not underestimating the microstructures; the little things matter the most. For instance, knowing how to effectively run a meeting can be instrumental. * Seeking buy-in understand how approaches impact the work and to foster culture change. * Using mentors to encourage accountability, help bring people along in the process, and develop a community that increases engagement and shares ideas.   Sources: Rich, S., “[U.S. CTO Todd Park: 3 Ingredients for a Private-Sector Mentality in government](http://www.govtech.com/pcio/US-CTO-Todd-Park-3-Ingredients-for-a-Private-Sector-Mentality-in-Government-.html)”, government Technology, October 4, 2012; Marcuse, J., phone interview, December 21, 2016; Edson, M., phone interview, July 2016; Hamilton, V., phone interview, December 2, 2016; Lundquist, C., email communication, February 2016. |

### Building on Incremental Innovations

To be innovative can mean to implement a radical or breakthrough transformation, but that is also not a prerequisite for realizing innovative change within the federal government. Starting small and building upon incremental improvements can also lead to significant progress (Resource Box 2: Moon Landing: Transformative Progress Through Incremental Learning). Many radical innovations depend on the incremental improvements that are made to refine the solution and may require developing complementary changes necessary for these innovations to be successfully implemented.

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| **Resource Box 2. Moon Landing: Transformative Progress Through Incremental Learning**  “The analogy I like to use is the moon landing,” says Chris Gerdes, former U.S. Department of Transportation’s (DOT) Chief Innovation Officer. “That was huge. In fact, it’s become shorthand notation for everything innovative: ‘I’m doing a moon shot.’”  “But if you look at the distance between any two [NASA] missions, it‘s pretty small. What they do is pick one point on the horizon, but keep moving forward and learning. And so as opposed to trying to say, “How do I get the Moon?” What you need to say is, “What’s the next Mercury mission? What is Gemini?”  For the original moon landing, transformative accomplishment came from incremental, additive progress. At multiple stages, new knowledge was generated and additional resources were added to continue progressing to achieve NASA’s milestones. The perspective from NASA employees was never ‘Something I’m doing,’ it was ‘Something that we’re doing,” Gerdes observes.  President Kennedy had publicly set a clear mission and time frame for putting a man on the moon. “The temptation then, is to say, ‘The President says we need to get to the moon! What do we need to build to go to the moon?’ [NASA] had the discipline to say, ;It’s too early to build something to go to the moon. We need to build an entire series of missions that have no hope of getting to the moon, but will make us smart. […]There’s a fear of failure that holds would-be innovators back,” Gerdes argues, “but if the purpose of the prototype is to learn, it’s only failure if learning fails to occur.”  Source: Gerdes, C., phone interview, July 1, 2016. |

ADD CONTENT on risks of an incremental mindset

## Implementation Guidelines

The innovation process can be viewed across five elements: (1) generation of ideas, (2) selecting ideas for incubation, (3) prototyping and implementation, (4) replication and diffusion, and (5).

Innovations in the federal government may require implementation of cross-cutting activities, including creating safe spaces and risk management processes to test and incubate ideas. Fostering an enabling environment for innovations to occur and be implemented may also include supporting innovators institutionally and incentivizing and rewarding experimentation. Cross-cutting areas for institutional development of innovation capacity include: (1) supporting change seekers institutionally, (2) creating enabling environments, and (3) incentivizing and rewarding experimentation.

### Elements of the Innovation Process

#### Generating Possibilities and New Ideas

How to generate new ideas is a skill that can be learned and institutionalized via practice and process. As Jennifer Pahlka, CEO of Code for America, observed: “User-centered, iterative, data-driven practices are not something young people in jeans do. They are not a gift bestowed on people from a certain place who look a certain way or speak a certain way or who come from certain companies. They are simply skills one learns, a bit like French or programming or origami. Government happens to need more of these skills in order to serve the public better, but the best way to spread those skills is to see them as ordinary.”[[8]](#footnote-8) (Refer to Resource Box 3. Considerations for Creative Thinking)

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| **Resource Box 3. Considerations for Creative Thinking**  Tina Seelig, professor at the Department of Management Science and Engineering at Stanford University, and her Inventure Cycle is one of many ways to think about teaching and representing learning about innovation to others. Seelig’s Inventure Cycle is a four-step process that represents the life cycle of an innovative idea:   1. Imagination—envisioning things that do not exist 2. Creativity—applying imagination to address a challenge 3. Innovation—applying creativity to generate unique solutions 4. Entrepreneurship—applying innovation, bringing ideas to fruition, by inspiring others’ imagination   “There is an insatiable demand for innovation and entrepreneurship. These skills are required to help individuals and ventures thrive in a competitive and dynamic marketplace. However, many people don’t know where to start. There isn’t a well-charted course from inspiration to implementation. Other fields — such as physics, biology, math, and music — have a huge advantage when it comes to teaching those topics. They have clearly defined terms and a taxonomy of relationships that provide a structured approach for mastering these skills…Without it, there’s dogged belief that these skills can’t be taught or learned.”  Source: Seelig, T. and Blank, S., [“How to Think Like an Entrepreneur: The Inventure Cycle”](https://steveblank.com/2014/09/09/how-to-think-like-an-entrepreneur-the-inventure-cycle/), SteveBlank.com, September 9, 2014, https://steveblank.com/2014/09/09/how-to-think-like-an-entrepreneur-the-inventure-cycle. |

Agencies may use two methods to solicit ideas, or a combination of them: (1) an open call for ideas and (2) challenges to specific concerns in the agency. The difficulty in the open call for ideas is that ideas often do not have a home and managers may need to engage with interested offices that would commit to implementing the idea. A targeted challenge is designed to generate diverse range of potential solutions to a specific problem from across the organization. The challenge may be generated by the office that identified the problem. In soliciting ideas for solutions, Read Holman, XXXX, advises that agencies seeking out solutions identify ways to “understand the root problem via problem definition frameworks (root cause analysis, systems mapping, etc.) To solve the right problem, you need to ask the right question.” He adds: “Source ideas from unexpected places; good ideas can come from anywhere.”[[9]](#footnote-9) To attract and motivate individuals to generate ideas, Hamilton advises: “Orient your language toward the problem you want to help people solve. Don’t sell it as a process. Break it into individual pieces and keep the focus on solving the problem for the customer. Scale back the evangelizing, and think about how people within the agency will generate and access the idea.”

Creating an environment and culture that welcomes potentially disruptive ideas may require instituting systematic mechanisms for the generation of those ideas, such as information collection platforms and techniques (Refer to Resource Box 4. Innovation Platforms).

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| **Resource Box 4. Innovation (Idea Generation) Platforms**  Innovation platforms are typically internal tools that allow agencies to crowdsource ideas from their employees to improve an organization’s processes and activities. An innovation platform allows an organization’s leadership to receive feedback and select the most promising ideas to implement. In some innovation platforms, employees can provide comments and rate the feasibility and potential impact of the ideas. Typically, these ratings are part of the selection criteria and inform leadership’s decisions on which ideas to pursue (see Selection of an Idea for Incubation).  Examples of two innovation platforms at the Consumer Financial Protection Bureau ([IdeaBox](#ideabox)) and the Transportation Security Administration (TSA) ([IdeaFactory](#ideafactory)) are described below.   * CFPB’s IdeaBox is an internal ideation platform for employees to share and build ideas on how to further the agency’s mission of improving the financial lives of consumers and to enhance the CFPB’s operations. A part-time team supporting IdeaBox reviews and incubates the ideas for possible implementation, navigates these ideas through decision-making channels, and posts responses on their outcomes. * The TSA IdeaFactory is an internal ideation platform that allows employees to submit ideas and collaborate on the development of innovative solutions to advance TSA’s mission to keep the nation’s transportation systems secure. The tool empowers TSA employees, comprising 60,000 employees that staff more than 450 airports and other offices throughout the country, to submit ideas and rate and comment on other ideas.   Both agencies sought to create more easily accessible opportunities for collaboration among employees across the country. Through the CFPB’s [IdeaBox](#ideabox) and the TSA’s [IdeaFactory](#ideafactory) innovation platforms, these agencies are able to engage their dispersed workforce in the process of improving their respective organizations operations and services. The ideation platform empowers employees by providing an additional channel to submit their ideas for consideration by the leadership or relevant staff in the organization.  Source: M. Desai, interview; T. Cariola, interview. |

#### Selection of an Idea for Incubation

Not all innovative ideas may be good ideas. As such, the selection of viable innovative ideas requires the development of processes and criteria for selection and incubation, including plans for its development, likelihood of success, and anticipated outcomes. Innovation platforms could integrate features that allow for crowdsourced selection of innovative ideas. (Refer to Resource Box 5. Selection Features in Innovation Platforms).

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| **Resource Box 5. Selection Criteria in Innovatoin Platforms**  Innovation platforms may also provide some features that help managers select ideas for incubation. Similar to ways popular social media websites identify the most important topics, platforms may ask employees to rate posted material and provide feedback. For instance,   * [CFPB’s IdeaBox](#ideabox) uses a system similar to Facebook that allows employees to “like” submitted ideas. * [TSA’s IdeaFactory](#ideafactory) uses a 1 to 5 star rating system similar to Yelp that allows employees to rate and review contributed ideas. * The [U.S. Coast Guard’s Enterprise Common Ideation Platform](https://www.fbo.gov/index?s=opportunity&mode=form&id=2dfc7e307dd4f942698e4ca3141131ba&tab=core&tabmode=list&=) (under development) will feature an agree and disagree option similar to [Reddit](http://www.reddit.com/), a social media and news aggregator, in which important ideas move up or down a scale relative to other content.   Source: M. Desai, interview; T. Cariola, interview; T. Weinert, interview. |

#### Prototyping and Implementing Promising Ideas

The conditions that facilitate successful prototyping and implementation of promising ideas vary by organizational context. Read Holman emphasizes the need to “iterate early and often,” recommending “starting small with pilots or prototypes before investing significant resources in expensive and time-consuming development phases.”[[10]](#footnote-10) Establishing an innovation accelerator is one option that can provide opportunities to further test ideas. In addition, it may be important to identify possible end-users, andtalk to them as part of the planning process to better understand steps towards implementation and their impacts.

##### *Establishing Accelerators*

Internal innovation accelerators provide a space for the exploration and testing of new ideas, wrapped in a structure of training, coaching, and support and access to resources. They can provide a trusted platform to grow new solutions in a low-risk, supportive environment. The accelerator model can help agencies identify paths for overcoming systems-level challenges. Accelerators also propagate an agency’s innovation ecosystem by equipping internal innovators with tools to realize new ideas. Many variations of accelerators are possible. Similar to startup accelerators in the private sector, accelerators may contain the following common elements:[[11]](#footnote-11)

* Small teams (typically of 3 to 5 people)
* Competitive application process
* Some resources are given to selected teams (seed-funding, tools, leadership time, infrastructure resources, etc). Start small, and let success build on itself. Start with well-documented early “wins” (i.e. *evidence*, rather than simply inspiration, provided by small piloted successes.)
* Fixed time frame (typically 3-6 months)
* Training sprint where the practices of customer-discovery, prototyping, and product testing are introduced and acted on (typically in a 3 to 5 day “boot camp” at the beginning of the program)
* Ongoing coaching and mentorship to reinforce the methodologies (typically through weekly check-ins)
* A culminating event at the end where each team presents their results to senior leadership. Teams describe what they built, what they learned, and pitch for support to take their idea to the next level. (typically this a “Demo Day” or a “Shark Tank”-like event.)

Using guidance from past accelerator models, it is important to take time to adequately plan the accelerator. At the same time, cautions Read Holman, many new accelerator programs are tempted to create at the outset a highly-functioning (and complicated) accelerator program with all of the bells and whistles (teaching, coaching, dinners, webinars, funding, boot camps, shark tanks, tech tools, etc.).[[12]](#footnote-12) He advises, “It’s best to start small with just the basics, launch a test pilot for a year, and then refine and scale based on learnings.”[[13]](#footnote-13)

##### *Engagement with End-Users*

There are various ways to create touchpoints to engage with employees or a targeted community of users or implementers of innovative ideas. Leadership can use a public platform to spotlight an issue, but it’s often important to have a concurrent “bottom-out” strategy. When prototyping and implementing promising ideas, Lynn Buquo, manager for the National Aeronautics and Space Administration (NASA) Center of Excellence for Collaborative Innovation suggests “empowering front-line staff – getting information directly into users’ hands, and facilitating a collaborative dialogue to create an empowering environment where it’s okay to develop and use new ideas. It can take a concerted effort and management to move from teaching the status quo (an emphasis on how to program manage, or how to write program requirements) to an emphasis on how to identify, break down, and frame problems. Reframing the culture is very much a multi-part, collaborative process.”[[14]](#footnote-14)

Build community and networks: “Even if it’s just lunch with someone in a different division, you have to start practices that break out of silos. Build communities of practice in your own agency and eventually you’ll be able to move up and go to Congress to discuss modifying regulations,” explained [Sarah Heck](https://www.nextgengovt.com/speakers/sarah-heck), Chief of Staff for the Bureau of Educational and Cultural Affairs and the State Department.[[15]](#footnote-15)

#### Replicating, Scaling-Up, and Diffusing Ideas That Work

Prototypes that are successful may be diffused and applied at a larger scale within and across the federal government. However, it is important to avoid the "replication trap,” advises Bob Sutton, Stanford professor and co-author of *Scaling Up Excellence*.[[16]](#footnote-16)Sutton uses an analogy to compare the scaling pathways of high-fidelity reproduction of methods and interpreted versions that retain a general shared vision.[[17]](#footnote-17) Sutton and his co-author, Huggy Rao, argue that the choice between replicating best practices versus adapting and modifying them to fit local conditions is the key choice that determines success or failure.[[18]](#footnote-18)

Diffusing innovations is about understanding how individuals take up new ideas and how change spreads across organizational systems. Sociologists, economists, businesses and communications specialists have long studied how innovations diffuse and spread throughout systems and society.[[19]](#footnote-19) In each case, adoption is driven by the conditions of the system or organization, the willingness to change, and the institutional scaffolding that helps push it forward.

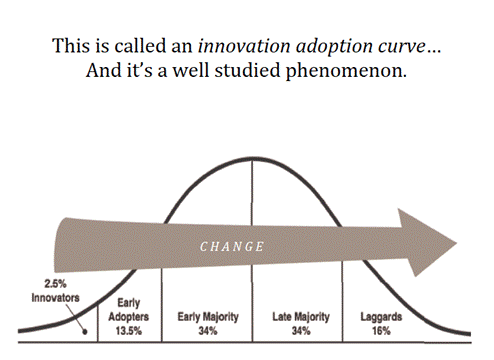


Figure . Innovation Adoption Curve

[[Image Source](http://www.slideshare.net/edsonm/how-change-happens/) – image licensed under creative commons]

According to Everett Rogers in *Diffusion of Innovation*, the transfer of ideas follows a distinct pattern from innovators and early adopters to followers (Figure 1).[[20]](#footnote-20) First, champions create awareness of an innovative approach. This knowledge is then channeled to and through other individuals within a system. Supported by evidence of its effectiveness, agents in the system are then persuaded to adopt the innovation into their work. Michael Edson, former Director of Web and New Media Strategy remarks, “When the early majority sees what the early adopters are doing, they are much more likely to jump. Once you’ve got early adopters and the early majority, you got half of all the players committed and lasting change is more possible.”[[21]](#footnote-21) As adoption increases, a multiplier effect kicks in, and the network grows, eventually reaching a point where widespread adoption is reached. “The big, hard thing is getting early adopters to commit,” observes Edson.[[22]](#footnote-22) “Late adopters are somewhat more wary, but glad to step in once a reliable proof-of-concept exists. The early majority seeks the comfort of numbers and initial precedent. The late majority will resist until the widespread diffusion of an innovation has been achieved.”

#### Analyzing Implementation and Learning

Throughout the innovation process, evaluations, both informal and formal, help inform the success, outcomes, and feasibility for replicating or diffusing an idea.

Read Holman, recommends “using feedback loops; incorporating early feedback into your work to make it better. Gathering evidence to support the decision-making process is useful in scaling only what works.”[[23]](#footnote-23)

* Foster an empowering culture of learning
* Use experiential learning in professional training and development
* Foster Communities of Practice – MOVE TO ANALYSIS AND LEARNING

## Cross-Cutting Institutional Elements

* Support change seekers institutionally
* Become or garner high-level champions and advocates
* Use policy guidance to empower
* Create different types of infrastructure that make new approaches easy
* Link broader performance management agenda with specific innovative tools – move to incentives?
* Create enabling environments
* Create new organizations and centers of excellence
* Charter an Innovation Council to build capacity and consensus
* Incentivize and reward experimentation
* Formally recognize innovators through awards and acknowledgement
* Create incentives for adoption that cascade through the organization
* Link individual performance plans with agency strategic plans and broad federal-wide goals

## Challenges and Lessons Learned

### Challenges

Limitations to implementing and scaling innovations in the federal government include[[24]](#footnote-24):

* a lack of incentives for innovation
* weakness in rapid decision-making processes,
* uncertainty in future resources that limit long-term and strategic planning.

Only 37 percent of federal employees feel creativity and innovation are rewarded by their agency, according to OPM’s 2015 federal Employee Viewpoint Survey.[[25]](#footnote-25) Josh Marcuse observes, “You have to make it comfortable and safe for your change agents and provide a support system, or one of 2 things will happen: They will be co-opted by the forces of inertia, or they will leave your department and go somewhere where they can make bigger difference faster.” Recognize the psychological and professional costs that the system imposes on the change agent, and figure out how to protect and reward innovators for risk-taking, he advise**s**.

Internal bureaucratic resistance, external skepticism, and resource constraints are key obstacles to public sector innovation, according to a 2014 study of award-wining public innovations. Dr. Sanford Borins suggests: “As much as innovators should be planning the theoretical basis, structure, oversight, and delivery of their innovation, they should also be conceiving a defensive implementation strategy for gathering support and neutralizing opposition.”[[26]](#footnote-26)

### Lessons Learned

In addition, Joshua Marcuse advises that “in assessing the value of innovative efforts, it is important to articulate the costs of inaction or the status quo. Action is not the only risk; inaction has risk. We rarely articulate the risk of *not* taking an action. This cognitive bias is the leading cause of the inertia in our system.”[[27]](#footnote-27)

#### Face Skepticism Head On With Evidence

Many among the most experienced and committed civil servants may be predisposed to suspicion about any agency-wide effort to support innovation, if only because their prior experience has been that many changes to processes within government may have been unsuccessful or successful temporarily. Use evidence to differentiate between real value creation and hype or buzzwords.

#### Understand Others’ Institutional Contexts

No one size fits all; innovations must be adapted to best fit your agency. Frame the question around the problem to solve and the resources or talent needed. New practices can't be replicated across agencies if their implementation does not reflect the agency-specific contexts. For transformative change, champions must teach colleagues *how* to get things done, using storytelling to illustrate and salesmanship to persuade.[[28]](#footnote-28)

#### Identify Actual Barriers

Learn exactly where genuine barriers are situated with respect to compliance with federal statutes, and educate others within agencies about actual versus perceived boundaries.

#### Resilience May Be Required

As Jennifer Pahlka notes, “When you go where you are rare, you realize you’re working from a set of assumptions that most of your colleagues don’t share, and you have to step back–sometimes way back–and try to justify, explain, convince, win over dozens or hundreds of people in order to do what you came to do. […] It’s hard.”[[29]](#footnote-29) Be persistent, but understand that change may come incrementally. Progress toward a goal is still progress, even if the result is a down payment for future transformation. “There is no change without resistance,” adds Josh Marcuse – “And resistance takes time to overcome."[[30]](#footnote-30)

#### Clear Communication Focused On Outcomes

Everyone must have a shared understanding of the purpose for the work, or why the innovation is important. This means that a clear and well-documented pathway should exist from a novel practice to the specific, mission-relevant outcomes that result from adoption.

#### Access to Tools

Innovators may focus on the mid- to longer-term benefits of change, where modal managers focus on near-term change-related risks. Both viewpoints are valid. The divergence between them should be recognized, but it should not be confused with a fundamental difference in capabilities among individuals within an organization to participate in change processes.

“The people who own the operations that government leaders would like to see ‘innovated’ aren’t measured by innovation,” writes Jennifer Pahlka.[[31]](#footnote-31) They may be “measured by (or perceive themselves to be measured by) stability, reliability, and compliance with a wide range of policies, laws, and regulations. And they retain the authority and resources to get those results in the face of any number of innovation initiatives imposed upon them.”[[32]](#footnote-32)

Many career staff were drawn to public service by a strong internal motivation to make a difference; and, thus, may be less interested in listening to arguments about *why* they should be innovative. Instead, they operate day to day in an environment that can be naturally inhibitive. With varying appetites for risk-taking and openness for change – they’re looking for tools and capabilities to do their jobs better. Would-be innovators benefit from recognition, support, and access to these tools and capabilities for initiating and diffusing. Innovation may require some degree of institutionalization in order to be successful in the long term.

## Future Considerations

Innovation is not a process with a fixed beginning and ending. Innovation is a dynamic process responding to continuously changing needs and outcomes. An innovative method today may be the widely adopted status quo ten years from now.[[33]](#footnote-33) New methods will continue to emerge. It’s not a question of big or small government; it’s a matter of *smart* government.[[34]](#footnote-34) When government works better, lives are improved and civic confidence grows. In order for government to work better, the practices of government must continually improve and evolve.

Participants and users of the Innovation Toolkit could ask themselves what a next-generation toolkit looks like. What innovative methods are missing or should be made more visible to the federal community that are currently not? How do agencies identify the innovations within their agencies and find ways to raise their awareness to a federal-wide community of implementers? What other methods and mechanisms are complementary to the Innovation Toolkit that could be developed or to promote institutionalization of innovative capacity across the government? How can federal employees spread learning, such as through gathering evidence and lessons learned, regarding implementation of innovative approaches and practices?

**Next steps: Questions for agency leadership to consider:** [Kalil, T. and Miller, J., Building and Using the Innovation Toolkit, Unpublished memo, January 13, 2015.]

* ***Focus***: What are specific agency problems where Innovation Toolkit approaches could generate some initial wins? How will you identify “early adopters” within your agency that are intrinsically motivated to adopt specific tools and just need permission or small amounts of time, training and funding?
* ***Leadership*:** How can we develop a strategy to identify and/or recruit innovation leaders, like Chief Innovation Officers or functional roles like Chief Innovation Counsel?
* ***Incentives*:** What are meaningful incentives and forms of recognition exist to promote broader adoption? From your employees’ perspective, what would have an impact on their ability and willingness to use these approaches?
* ***Performance*:** How can program performance be tied to the use of specific tools? How can we collaborate with budget and performance offices to enable the incorporation of these tools into performance management and budget processes?
* ***Professional development*:** How can we most effectively expand opportunities for training, professional development and experiential learning to support these approaches? How do we mainstream innovation approaches in the knowledge, skills and experiences needed for federal employees to advance to mid and senior level roles?
* ***government-wide approaches*:** What are opportunities for government-wide approaches, such as SES onboarding?
* ***External collaborations*:** What are potential external collaborators such as universities, foundations, non-profits, professional societies, private sector experts and training providers?

## 

###### Evidence of Impact

### Support change seekers institutionally

#### Become or garner high-level champions and advocates

Senior leadership need to clearly and consistently message that use of new innovative approaches is not allowed but actively encouraged, and that staff will not be penalized for intelligent risk-taking.

Champions at different levels can also play this role of encouraging and supporting experimentation. [Kalil, T., in-person interview, Washington DC, December 6, 2016.]

**Why:** In dozens of interviews spanning every approach in the Innovation Toolkit, innovators repeatedly emphasized the critical importance of high-level leadership support. **"**The job of leaders is to figure out how to surface, encourage and foster the staff’s talent to solve the problems that need to be solved**.** Most of the time, the answers are within the room itself. It’s just about *how you create the environment to share or think in different ways,*" shares Jim Macrae of the [Health Resources and Services Administration](https://www.hrsa.gov/index.html). [Sekhar, M., “[Operationalizing Innovation: A Q&A with Jim Macrae](https://www.hhs.gov/idealab/2015/11/25/operationalizing-innovation-qa-jim-macrae/)”, HHS Idea Lab, November 25, 2015.]

**How:** Beyond firm and visible expressions of support, leaders can demonstrate that they value and support new efforts. Reorganizing structures and reallocating funding are larger, long-term changes that take effort to achieve. More immediately, leaders can use access and facetime as signals that reinforce the sincerity of their commitment. “When leaders at any level, whether a frontline supervisor or agency head, put into place mechanisms for benchmarking progress on a project, ask questions about, or ask to meet the people working on it – they signal that innovative work is valued and create psychological safety for other aspiring innovators,” explains Josh Marcuse, executive director of the Defense Innovation Board. [Marcuse, J., phone interview, December 21, 2016].

**Considerations:** It’s not enough to express support for innovative work; support must be demonstrated through visible actions that continually reinforce that support. It’s important that leaders assess and understand their own commitment to new methods and initiatives, and make sure that their appetite for change rhetoric does not exceed their appetite for actual change implementation.

**Case snapshot**

Innovations often requires a strong internal champion who understands the value of the efforts, is willing to put their name and position behind them, allocates appropriate resources, and uses a very hands-off management style. Bryan Sivak, former HHS CTO remarks that the HHS Deputy Secretary “…was always there for advice, for help connecting with various parts of the bureaucracy (political or career), available to show up at an event, give remarks and praise, and just generally be a good leader. But he always let us execute, which is the main reason we were successful.” [Sivak, B., personal communication, January 19, 2017.]

**Learn more**

* Harvard Business Review on [leadership](https://hbr.org/topic/leadership) styles
* TED Talks on [leadership](https://www.ted.com/topics/leadership)

#### Use policy guidance to empower

Offering policy guidance to officials and staff at various levels within agencies is a key support for encouraging the greater adoption of innovative tools.

**Why:** Communicating how to apply the tool to a given setting, and what mechanisms are available to help support adoption, has been a key ingredient to deployment. Delegation and decentralization of authority can facilitate the use of new methods by lowering the difficulty for deployment. [Kalil, T., in-person interview, Washington DC, December 6, 2016.]

**Caution:** Approach the development of policy guidance with the understanding that it may be an iterative process. Initial efforts to develop policy guidance may require further refinement to make sure the guidance is explicitly clear and actionable. Before firm guidance is issued, additional experimentation may be needed to answer questions or address potential obstacles. Agencies should remain open to revisiting and revising policy guidance as practices evolve. [Nelson, C., personal communication, January 19, 2017.]

**How (with illustrative case snapshot):** [Nelson, C., phone interview, December 20, 2016; Nelson, C., personal communication, January 19, 2017.]

Leaders within agencies are not always aware of the specific legislative authorities at their disposal.

To increase awareness of use and overcome barriers to entry, policy guides may target three levels:

* Level 1: Communicating policy guidance across the government.

An official with cross-governmental authority may refer back to the statutory language to provide clarity on legislation. For example, the Office of Management and Budget (OMB) regularly issues memos clarifying how statutory language can be interpreted as well as Frequently Asked Question (FAQ) documents explaining in more detail new or existing statutes. [Nelson, C., personal communication, January 19, 2017.]

* Level 2: Agency specific guidance.

Legislation may have different implications within each individual agency. Each agency can create its own dedicated policy guide expressing how and when to use relevant authorities, and at what levels within the agency they are relevant. At this level, it is important that agency heads understand how they can delegate down to lower levels to encourage greater adoption.

* Level 3: Delegate and offer further agency specific guidance down to the program level.

Offering policy guidance and delegating authority down to the program level allows for further adoption and application. A department like HHS has multiple agencies, each with individual programs. For example, the CDC, Headstart, and NIH all sit under the HHS umbrella, each with unique goals and objectives. The recent 21st Century Cures act specifically calls on NIH to leverage prizes and challenges to accelerate biomedical research, which will require further specialization in policy and practice at NIH to apply this tool to their subject matter and institutional context.

**Example**: To institutionalize and encourage the adoption of prizes and challenges at HHS, former Secretary Sebelius delegated authority to operating and staff division heads, providing them the ability to run their own prizes and challenges without Secretary approval each time.

**Read more:** [federal Register publication of HHS’ delegation of rule authority](https://www.gpo.gov/fdsys/pkg/FR-2011-05-04/pdf/2011-10847.pdf)

**Learn more:** For more examples on how to provide policy guidance, check out the [Sample Agency Policies and Capacity Building Resources](https://www.challenge.gov/toolkit/resources/) on Prizes and Challenges Toolkit.

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#### Create different types of infrastructure that make new approaches easy

Make it easy to adopt a new approach by lowering the time, cost, and complexity to use it.

**Why:** Often, the pursuit of new approaches is discouraged because existing systems and processes make initiating change difficult. Creating and sharing fully developed solutions allow agencies to transform their problem into one that has already been solved.

**How:**  Create different types of infrastructure and both internal and external “marketplaces.”

**Caution:** Ensure there is a plan to scale the underlying infrastructure/marketplace/process before it is created. While these innovative approaches to procurement are innovative at the outset, without scale it becomes a simple novelty. By setting the expectation that the approach will scale after it is tested, teams will run into less resistance if/when the approach takes off. [McMahon, A., personal communication, January 3, 2017.]

**Case snapshots:**

**Agile BPA and Challenge.gov**

[McMahon, A., personal communication, January 3, 2017.]

**18F and Agile BPA**

In January 2015, 18F [announced](https://18f.gsa.gov/2015/01/08/creating-a-federal-marketplace-for-agile-delivery-services/) the creation of the Agile Blanket Purchase Agreement (BPA), a contract vehicle featuring agile delivery vendors who can support the IT acquisition needs of buyers across the federal government. Working with 18F, agencies can access vendors who have publicly documented capabilities in using agile practices. (Open to existing vendors on Schedule 70, participating vendors in the BPA were required to demonstrate their agile capabilities by submitting a working prototype based on a public dataset and also documenting their work in a publicly available git repository.)

Technical experts that understand agile software development performed the vendor selection. Because the BPA can be used by any agency working with 18F, this eliminated the need for this expertise in each procurement that 18F supported for agency partners. The preselected vendors met a threshold of capabilities. [McMahon, A., personal communication, January 3, 2017.]

Because the procurements reflect agile development, task orders feature shorter-time frames, smaller contract amounts, and user-centered design principles. [Source] While only 18F may issue task orders against the BPA, any federal agency may obtain services through 18F. Agencies wishing to use the Agile BPA should contact [inquiries18f@gsa.gov](mailto:inquiries18f@gsa.gov) with information about their problem or project.

**Learn more:**

* [Information for agency partners](https://pages.18f.gov/ads-bpa/buyers/)
* [Ordering Guide for the Agile Delivery Services BPA](https://pages.18f.gov/ads-bpa/ordering-guide/)

**Read more**

* [Creating a federal marketplace for agile delivery services](https://18f.gsa.gov/2015/01/08/creating-a-federal-marketplace-for-agile-delivery-services/)

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**GSA and Challenge.gov**

[McMahon, A., personal communication, January 3, 2017; Nelson, C., personal communication, January 19, 2017.]

The [Strategy for American Innovation](http://www.whitehouse.gov/the_press_office/president-obama-lays-out-strategy-for-american-innovation/), first announced by the White House in September 2009, urged agencies to increase their ability to promote innovation with tools such as prizes and challenges. Within six months, the Office of Management and Budget issued a[memorandum](http://www.whitehouse.gov/omb/assets/memoranda_2010/m10-11.pdf) providing a policy and legal framework to guide agencies in using prizes to stimulate innovation to advance their core missions. In order to support the use of challenge prizes, the General Services Administration (GSA) developed [Challenge.gov](http://www.challenge.gov) to provide a one-stop shop for agencies to announce and administer prize competitions that met all legal and policy requirements. This has allowed agencies to focus on their problem and solutions rather than the bureaucratic hurdles that need to be cleared to run prize competitions.

In the [America COMPETES Reauthorization Act of 2010,](https://www.gpo.gov/fdsys/pkg/PLAW-111publ358/content-detail.html) Congress also called on GSA to “develop a contract vehicle to provide agencies relevant products and services, including technical assistance in structuring and conducting prize competitions to take maximum benefit of the marketplace as they identify and pursue prize competitions to further the policy objectives of the federal government.” In response, GSA launched Sub-Schedule 541 4G, “Challenges and Competitions Services” in July 2011. Contractors on the schedule offer agencies options for technical assistance, prize platforms, and access to communities of individuals and teams interested in entering prize competitions. GSA continues to assist agencies in taking advantage of the available services and to inform private-sector vendors and agencies about the schedule and its benefits. Building on the effort by GSA to engage vendors, several other agencies have also developed agency-wide prize and challenge service contract vehicles and BPAs to streamline access to vendors to support the design and implementation of prize competitions and challenges. [Nelson, C., personal communication, January 19, 2017.]

Learn More: [Challenge.gov](http://www.challenge.gov)

#### Link broader performance management agenda with specific innovative tools

Agencies can embed specific innovative approaches within their broader Annual Performance Plans and Annual Performance Reports to signal high-level support for these methods.

**Why:** Agencies measure, analyze, and communicate performance information to identify successful practices to spread. [“[Delivering on Ihe Accountable government Initiative and Implementing the GPRA Modernization Act of 2010](https://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-17.pdf).” OMB M-11-17. April 14 2011.] Innovative methods are one of many priorities that compete for time and attention. Organizations measure what they value, and adopting goals that relate to specific innovative tools is one way agency leadership can strongly signal their support and commitment for using these methods. Linking specific innovative methods to the broader performance management agenda – like running an incentive prize or completing a certain number of innovative acquisitions – also helps to align incentives to support the use of modern, non-traditional approaches. [Kalil, T., in-person interview, Washington DC, December 6, 2016.]

**How:** Agencies annually document agency-wide performance plans and performance reports. With the approval of agency leadership, new methods or goals can be embedded within these documents as recommendations or requirements. In the first year, a baseline for the new innovative activity can be established and projections created for the following fiscal year. Agency-level progress towards the goal is then assessed in the subsequent annual performance report. To truly shift incentives, goals enumerated in agency plans should be reflected downwards, all the way to front-line employees’ performance plans. The identification of agency-wide goals in support of innovation can also benefit from collaborative, employee-centered dialogue. [Naggar, M., phone interview, December 29, 2016.]

**Cautions**: Communicate the intended outcomes clearly when adding new baseline metrics to the Annual Performance Plan; the goal should be to create a supportive environment that explicitly encourages experimenting with new ways of working. Unrealistically ambitious goals can be discouraging, so quantified goals may need to start small and grow in ambition over time as an agency gains more expertise in working with a certain method.

**Case snapshot**

**HHS**

In February 2015, HHS added two new goals to its FY2016 Annual Performance Plan: 1) “Add ‘Increase the number of innovation solutions developed across the Department’ and 2) “Add ‘Increase the number of opportunities for the public to co-create solutions through open innovation.” [HHS, “[Annual Performance Plan, Fiscal Year 2016](https://www.hhs.gov/about/budget/performance/changes-in-performance-measures/index.html)”]

Further defining “innovative acquisition” as part of the metrics for these goals was a challenging process, notes Mark Naggar; it can be difficult to define something new that hasn’t been measured before. The unknowns in novel approaches can make it difficult to achieve consensus on how to define a new concept, how to measure and capture it, and how to incorporate those measurements into accountability plans. Outside senior support that can lend “air cover” and help to shepherd a new concept through the approval process was essential, he notes. By inserting explicit goals to track innovative activities into the Department’s performance plan, it establishes firm goal posts for the organization to move towards. This helps ensure that innovation is actualized, not just talked about. [Naggar, M., phone interview, January 11, 2017.]

**Learn more:**

* “[Institutionalizing Hiring Excellence to Achieve Mission Outcomes](https://www.whitehouse.gov/sites/default/files/omb/memoranda/2017/m-17-03.pdf)." OMB M-17-03. Nov 1 2016
* “[Strengthening Employee Engagement and Organizational Performance.](https://www.whitehouse.gov/sites/default/files/omb/memoranda/2015/m-15-04.pdf)” OMB, OPM, WHPPO. M-15-04. Dec 23 2014.
* [GPRA Modernization Act of 2010](https://www.congress.gov/111/plaws/publ352/PLAW-111publ352.pdf)
* “[Delivering an Efficient, Effective, and Accountable government and Implementation of the GPRA Modernization Act of 2010](https://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-31.pdf),” OMB, M-11-31. Aug 17 2011.
* [" Delivering on the Accountable government Initiative and Implementing the GPRA Modernization Act of 2010"](https://www.whitehouse.gov/sites/default/files/omb/memoranda/2011/m11-17.pdf), OMB M-11-17. April 14 2011.
* OMB guidance to agencies: [Refer to OMB Circular A-11, Part 2](https://www.whitehouse.gov/omb/circulars_a11_current_year_a11_toc), Preparation and Submission of Strategic Plans, Annual Performance Plans, and Annual Program Performance Reports

**Read more**: [www.performance.gov](http://www.performance.gov)

Shea, R. and Hennemuth, E., “[Leading the Way to Improved government Performance](https://www.td.org/Publications/Magazines/The-Public-Manager/Archives/2016/02/Leading-the-Way-to-Improved-Government-Performance)”, Association for Talent Development, February 10, 2016.

### Create enabling environments

#### Create new organizations and centers of excellence

New units or centers of excellence can develop expertise in the detailed implementation of innovative methods, then coach up and collaborate to share that expertise.

**Why:** Existing bureaucratic structures have enormous operational responsibilities, and sometimes lack the bandwidth and capacity to work through the challenges of executing new methods for the first time. [Camron Gorguinpour, phone interview, December 22, 2016.] Centers of excellence provide a space for agencies to cultivate a dedicated resource with expertise in the implementation of new innovative methods: “Coming up with ideas isn't the problem, it's the hard work of selling the idea and getting way into the weeds with the people who actually have to execute the idea,” notes Dr. Camron Gorguinpour, Director of the Air Force’s [Office of Transformational Innovation](http://www.transform.af.mil/Home.aspx). [Gorguinpour, C., phone interview, December 22, 2016]

**How:** CoEs act as an internal resource to educate and collaborate with agencies through the implementation life cycle of new innovative methods. By providing end-to-end support, centers of excellence can enable agencies to rapidly experiment with new methods before standing up their own capabilities. [“[About CoECI](https://www.nasa.gov/offices/coeci/about)”, Center of Excellence for Collaborative Innovation, NASA.]

**Caution:** Agencies should consider how to integrate new units within the operations of their organization to ensure the entire organization benefits from a center’s focused expertise.New units should **l**ook broadly and think through how to navigate the interdependence of different actors and functional area, especially in complicated bureaucracies. [Camron Gorguinpour, phone interview, December 22, 2016.] Additionally, **“**Think thoroughly about a robust internal communications strategy,” advises Lynn Buquo, Manager of NASA’s [Center of Excellence for Collaborative Innovation](https://www.nasa.gov/offices/COECI/index.html) (CoECI). [Buquo, L., phone interview, December 22, 2016.]

**Case snapshots**

**Center of Excellence for Collaborative Innovation (CoECI)**

The Center of Excellence for Collaborative Innovation (CoECI) was established by NASA in November of 2011 at the request of the [White House Office of Science and Technology Policy (OSTP)](http://www.whitehouse.gov/administration/eop/ostp) after a [successful pilot program](https://www.nasa.gov/centers/johnson/pdf/478350main_2010-davis-nasaOpenGovInnovationArticlePosting.pdf) to assess if the use of crowdsourcing could accelerate and augment NASA’s research and development efforts. Center manager Lynn Buquo explains that the Center started small, scaling operations as it proved success through quick wins with internal NASA teams along with its collaborations with other agencies. [Buquo, L., phone interview, December 22, 2016.] Through the [NASA Tournament Lab](https://www.nasa.gov/coeci/ntl) (NTL), CoECI collaborates with innovators both across NASA and the federal government on challenge-based approaches. The NTL offers a variety of open innovation platforms that engage the crowdsourcing community in challenges to create the most innovative, efficient and optimal solutions for specific, real-world challenges. [“[About CoECI](https://www.nasa.gov/offices/coeci/about)”, Center of Excellence for Collaborative Innovation, NASA.]

CoECI acts as an expert resource within NASA and across the federal sector on crowdsourcing and prize-based challenges (including scope development, cost and schedule management, marketing and awards).

The Center educates and shares best practices while also measuring performance impacts. Data-driven analysis has validated the value of crowdsourced challenges while also developing insights for more effective implementation strategies.

CoECI’s research efforts have been critical to early federal prize challenge work; the Center helped lay the groundwork for adoption by establishing a knowledge base of why certain aspects did or did not work, which fed into subsequent policymaking processes. [Nelson, C., phone interview, December 20, 2016.] CoECI was a key element that enabled the flourishing of the prizes and challenges domain. [Nelson, C., phone interview, December 20, 2016.]

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**Learn more: “**[NASA Challenges through Open Innovation,”](https://www.nasa.gov/centers/johnson/pdf/478350main_2010-davis-nasaOpenGovInnovationArticlePosting.pdf) This memo provides a glimpse of the early evolution of NASA’s efforts on open innovation, including the pilot efforts that led to the founding of CoECI.

**Read more:**

* About [CoECI.](https://www.nasa.gov/offices/coeci/about/)
* “Houston, We Have a Problem: NASA and Open Innovation,” (Parts A and B), Harvard Business School case studies, N9-414-044 and N9-414-057, Michael Tushman, Hila Lifshitz-Assaf, Kerry Herman, May 5, 2014.

**Air Force Office of Transformational Innovation**

[Gorguinpour, C., phone interview, December 22, 2016; “[Office of Transformational Innovation](http://www.transform.af.mil/)”]

The Office of Transformational Innovation (OTI) was created in June 2014 to identify and execute new acquisitions processes that enable the Air Force to deliver better capabilities more quickly and cost-effectively. Originally envisioned as a single position placed outside of the bureaucratic structure to work with the acquisition community, the explicit goal was to swing for the fences to [bend the cost curve](http://www.transform.af.mil/BTCC.aspx). With positive initial reception to early discussions and experimentation, in two years a staff of two has scaled to become a staff of 11. [Gorguinpour, C., phone interview, December 22, 2016.]

OTI collaborates with internal and external stakeholders to think through and prototype radical changes to acquisition policies and practices. “We’re there to handhold, collaborate, communicate, and work with folks every step of the way,” Camron Gorguinpour explains. [Gorguinpour, C., phone interview, December 22, 2016.] Project ideas are sourced from industry and the workforce, as well as tasks from the Secretary and Chief of Staff. One success has been the creation of an [Airworthiness Accreditation process](http://www.transform.af.mil/Projects/AirworthinessAccreditation.aspx) for non-defense military aircraft. OTI activities are executed with a “fail fast” model, meaning that each activity is given only six months to demonstrate clear potential promise. OTI openly documents and regularly updates a list of failed projects on their website.

OTI functions as an adjunct organization that reports directly to the Air Force’s Assistant Secretary for Acquisitions. OTI’s relationship with other Air Force contracting offices have evolved over time; Gorguinpour explains, “We don’t come in as a hammer over the head about how to do things better; that’s not effective and would not last. Instead, we’re trying to create a fair and open marketplace of ideas. We have to convey to others – with enough detail – *why* trying something new is important.” [Gorguinpour, C., phone interview, December 22, 2016.] In 2016 alone, a dozen programs proactively reached out to OTI for guidance on how to use Other Transaction Authority with the office offering expert advising on how to evaluate the use the authority within an entire acquisition plan and maximize the potential benefits. [Gorguinpour, C., phone interview, December 22, 2016.]

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#### Charter an Innovation Council to build capacity and consensus

Innovation Councils can signal the importance of innovation to leadership and create institutional capacity to create consensus and coordinate the advancement of innovative approaches across a Department.

**Why**: Councils can be particularly relevant structures for Cabinet departments that act as holding companies for numerous different operating divisions. These departments face a particular challenge with encouraging discussion and collaboration across organizational stovepipes. [Kalil, T., in-person interview, Washington DC, December 6, 2016.]

**How:** Councils connect points of contact across the Department that support collaborative innovative activities and help organizations to cooperatively identify and remove systemic barriers to innovation.

**Caution:** Agencies should create a clear purpose for the Council to encourage participation and engagement from members; it’s important that Councils don’t become simply another meeting. [Holman, R., personal communication, January 8, 2017.] Councils must have active leadership regularly driving useful conversations that are worth the time of the attendees. The membership composition of a Council is also important for maximizing its impact: Effective Councils break down standard hierarchies and have both senior leadership as well as staff-level involvement. [Holman, R., personal communication, January 8, 2017.] While membership can differ depending on the purpose of the Council, it is important to seek and support engaged individuals as members who are influential, available and willing to work on propelling innovation initiatives forward. [Koyani, S., personal communication, January 4, 2017.]

**Case snapshot**

**HHS’ Innovation Council**

Chartered in 2012, the HHS Innovation Council creates and promotes a culture of innovation across HHS and coordinates the Department's innovation efforts. The Council represents interests across the Department in addressing broad community issues and breaking down impediments to innovation The Council serves as the convening body to spark and help institutionalize innovation-enhancing activities across the Department. The Council membership is comprised of HHS's CTO, the Assistant Secretary of Administration, one member from each operating or staff division, and two HHS employees (non-voting). Most Council meetings are also open for anyone in the Department to attend, creating an easy mechanism for leadership to identify interested individuals that may otherwise be hidden towards the bottom of the bureaucracy. [Holman, R., personal communication, January 8, 2017.] In fact, Council meetings have attracted large employee turnout from across the Department and it is notable that over 1,000 HHS employees signed up to track the activities of the HHS Innovation Council via Yammer, a social networking platform. [Koyani, S., personal communication, January 4, 2017.]

The Council has played a central role in advancing HHS’s innovation agenda.  During its first three years of existence, the Council enabled many important advances, including facilitating a change in the social media policy from a confined approach to one that enables uses of social networking platforms by HHS operating divisions; development of new solution-generating pathways, such as prize competitions, that use open innovation practices to solve key challenges; creative uses of hiring authorities, such as Schedule A, to leverage outside expertise; and the creation of innovation programs like the HHS Innovates Awards Program, the HHS Ignite Accelerator, and the HHS Ventures Fund.   [Koyani, S., personal communication, January 4, 2017.]

In 2012, an individual from the HHS New Media team presented a seemingly minor issue that had substantial impact on frontline staff: The legal process for approving new tools to be used was unnecessarily complicated. This presentation, made by a GS-11, directly to the CTO of HHS, the Assistant Secretary for Administration, and others resulted in a Secretary-level memorandum to simplify the processes. This outcome saved a substantial number of hours and thus tax-payer dollars, which ultimately increased the Department’s ability to carry out its mission. [Holman, R., personal communication, January 8, 2017.]

The Council meetings took a brief hiatus in late 2014, and re-launched in 2015. In its re-launching, the Council explored existing solutions to cross-cutting barriers to innovation, such as hiring, and served as advisory body to the innovation efforts led by the HHS CTO. [Koyani, S., personal communication, January 4, 2017.] Its very existence as a body advising the Secretary signaled to all HHS staff the importance of seeking new approaches and outside-the-box ideas. [Holman, R., personal communication, January 8, 2017.]

**Learn more:** The [memo documenting approval of the HHS Innovation Council Charter](https://www.hhs.gov/idealab/wp-content/uploads/2014/05/Approval-of-the-HHS-Innovation-Council-Charter-091812.pdf) demonstrates how a Department can formally create this mechanism.

#### Use internal innovation accelerators to pilot new ideas

Internal Innovation Accelerators provide a space for the exploration and testing of new ideas, wrapped in a structure of training, coaching, and support and access to resources.

**Why:** Accelerators provide a trusted platform to grow new solutions in a low-risk, supportive environment. The accelerator model can help agencies identify paths for overcoming systems-level challenges. Accelerators also propagate an agency’s innovation ecosystem by equipping internal innovators with tools to realize new ideas.

**How:** Many variations are possible, and ultimately each accelerator should be customized for the environment within which it is being implemented. Similar to startup accelerators in the private sector, accelerators contain the following common elements:

* Small teams (typically of 3 to 5 people)
* Competitive application
* Some resources are given to selected teams (seed-funding, tools, leadership time, infrastructure resources, etc).
* Fixed time frame (typically 3-6 months)
* Training sprint where the practices of customer-discovery, prototyping, and product testing are introduced and acted on (typically in a 3 to 5 day “boot camp” at the beginning of the program)
* Ongoing coaching and mentorship to reinforce the methodologies (typically through weekly check-ins)
* A culminating event at the end where each team presents their results to senior leadership. Teams describe what they built, what they learned, and pitch for support to take their idea to the next level. (typically this a “Demo Day” or a “Shark Tank”-like event.)

[Ippolito, A., personal communication, January 3, 2017.]

**Caution**: Using guidance from past accelerator models, it is important to take time to adequately plan the accelerator. At the same time, cautions Read Holman, many new accelerator programs are tempted to create at the outset a highly-functioning (and complicated) accelerator program with all of the bells and whistles (teaching, coaching, dinners, webinars, funding, boot camps, shark tanks, tech tools, etc.). [Holman, R., personal communication, January 8, 2017.] He advises that it’s best to start small with just the basics, launch a test pilot for a year, and then refine and scale based on learnings. [Holman, R., personal communication, January 8, 2017.]

**Case Snapshots**

**HHS Ignite Accelerator** and **VA Innovators Network Accelerator supported by the Spark-Seed-Spread Innovation Funding Program**

The [HHS Ignite Accelerator](https://www.hhs.gov/idealab/ignite-accelerator/) is an internal innovation startup program for HHS staff. Begun in July 2013, the Ignite program exists for employees to develop bold ideas to improve how their program, office, or agency works and to infuse entrepreneurial approaches into their work. Selected teams receive design thinking and lean start-up training over a three-day boot camp, followed by coaching and technical guidance over three months to empower teams to define and test creative ideas in meaningful ways.

The VA’s [Spark-Seed-Spread Innovation Funding Program](http://www.innovation.va.gov/innovatorsnetwork/assets/files/SPARKSEEDSPREADFACTSHEET.pdf) “seeks to supply VA employees with supportive pathways for designing and deploying thoughtful solutions to gnarly challenges. It opens up training opportunities for VA employees to learn innovation-related skills like human centered-design; it also provides access to three different types of funding (‘spark’ grants to support proof of concepts, ‘seed’ grants to support pilots of innovations, and ‘spread’ grants to support diffusion of innovations across the VA) and mentorship support to grow and deploy innovation projects.” [“Accelerator Playbook,” Unpublished; draft uploaded for STPI.]

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**Learn more on how to launch your own:**

* Link to Accelerator Playbook [Available Jan/Feb 2017, contact Andrea Ippolito]
* [Ignite Accelerator Syllabus](http://www.hhs.gov/idealab/ignite-syllabus/)

HRSA’s IdeaSpring Guide also provides an excellent overview of recommendations and resources for establishing an agency-level innovation accelerator program. [Upload HRSA blueprint]

**Read more:**

* “[Spurring digital innovation with a page from the Silicon Valley playbook](http://dupress.deloitte.com/dup-us-en/focus/signals-for-strategists/corporate-accelerators-spurring-innovation-startups.html),” John Ream, David Schatsky, Deloitte, February 2016
* “[Innovation Accelerators: Defining Characteristics Among Startup Assistance Organizations](https://www.sba.gov/sites/default/files/rs425-Innovation-Accelerators-Report-FINAL.pdf),” report for Small Business Administration, October 2014
* [Data on hundreds of accelerators around the world, and the companies they've funded](http://seed-db.com/accelerators), from SeedDB
* “[Accelerating growth: Startup accelerator programs in the United States](https://www.brookings.edu/research/accelerating-growth-startup-accelerator-programs-in-the-united-states/),” Ian Hathaway, Brookings, February 2016.

### Incentivize and reward experimentation

Align incentives to support a culture of learning and discovery.

#### Formally recognize innovators through awards and acknowledgement

Recognizing federal innovators through agency awards, acknowledgement and letters from senior officials, and opportunities to attend Department headquarters or White House events with either agency leadership (or the President or other high-profile individuals) is an essential component to creating a culture that celebrates and sustains innovative work. [Holman, R., personal communication, January 8, 2017.]

**Why:** Recognitions and awards recognize individuals for their efforts in experimenting, risk-taking, and realizing new ideas. They also provide visible, tangible examples of what peers are doing and acknowledge that innovative efforts are already ongoing.[Kalil, T., in-person interview, Washington DC, December 6, 2016.]

**How:** Regulations give agencies flexibility in designing their awards programs, but supervisors should check with their agency awards administrators to determine the types of awards available in their agency. The types of awards agencies may grant federal employees as individuals or members of a group include:

* Cash
* Honorary recognition,
* Formal recognition, or
* Time off without charge to leave or loss of pay. [“[Performance Management - A Supervisor's Quick Review of Awards](https://www.opm.gov/policy-data-oversight/performance-management/performance-management-cycle/rewarding/supervisors-quick-review-of-awards/)”, U.S. Office of Personnel Management.]

**Caution**: Recognitions need to be genuine articulations of appreciation and not merely a box-checking exercise. Formal recognition is ideally one part of a multi-pronged strategy to create an atmosphere where innovators feel valued and supported within their agency or Department.

**Case snapshots:** [“[Innovates Awards - About](https://www.hhs.gov/idealab/innovates-awards/)”, HHS Idea Lab.; Koyani, S., personal communication, January 4, 2017.]

One example of an agency-level recognition program is the [HHS Innovates Awards](https://www.hhs.gov/idealab/innovates-awards/), which identified and celebrated employee-led innovation at HHS. Each year, HHS employees were encouraged to submit their innovative solutions or nominate work by their colleagues. Top innovative solutions were voted on by HHS staff, and winning innovators were personally recognized by HHS leadership in an awards ceremony. In addition to engaging the community of innovators across the Department, participants also received:

• Recognition for their work across HHS and in the media

• Cash prizes for winning innovators (HHS Employees and Commissioned Corps Officers only)

• Inclusion of HHS Innovates certificate in winning innovators’ employee performance file

Between 2010 and 2015, employees were nominated over 500 staff-driven innovations, with more than 200 employee innovators recognized by the Secretary. [“[Innovates Awards - About](https://www.hhs.gov/idealab/innovates-awards/)”, HHS Idea Lab.] “Recognition is one of the reasons why people actually participate in these things. They want to see their ideas develop. They want to be able to experiment with some of these concepts. But to get recognized by the leadership of the department is also very compelling,” comments former HHS CTO Bryan Sivak. [Feldman, A.,“[Implementing a department-wide innovation strategy: An interview with Bryan Sivak, Chief Technology Officer, U.S. Department of Health & Human Services – Episode #58](http://govinnovator.com/bryan_sivak/)”, GovInnovator Podcast, August 20, 2014.]

**Learn more about** [**HHS Innovates Awards**](https://www.hhs.gov/idealab/innovates-awards/)

**Read more:** OPM provides an [overview of recognition options and guidance](https://www.opm.gov/policy-data-oversight/performance-management/performance-management-cycle/#url=Rewarding)

Additional guidance from OPM:

[Awards Ceremony Suggestions](https://www.opm.gov/policy-data-oversight/performance-management/performance-management-cycle/rewarding/awards-ceremony-suggestions/)

[Ceremony Has its Own Recognition Value](https://www.opm.gov/policy-data-oversight/performance-management/performance-management-cycle/rewarding/ceremony-has-its-own-recognition-value/)

#### Create incentives for adoption that cascade through the organization

A thriving culture of innovation can emerge when staff incentives are aligned with transformational outcomes.

**Why:** Redesigning systems to reward creativity, hard work, and novel thinking helps to establish a culture that is open to adopting, adapting, and generating new ways of working. Providing incentives to nurture innovation can help agencies shift their culture.

**How:** It's important to recognize that different constituencies in an agency each have a different context and usually face different incentives. It's often best to segment these into stakeholder groups, analyze them, and design interventions appropriate to each. One possible strategy is to focus on managers. "The supervisor is center of gravity of any organizational strategy," shares Josh Marcuse.  [Marcuse, J., phone interview, December 21, 2016]. “You can't influence the behavior of the workforce without influencing behavior of the management. Many senior leaders try to send signals to their workforce by essentially speaking directly to them, going over the heads of multiple layers of management. This helps, but it’s a more powerful strategy to engage managers and modify their incentives to reward different behaviors at the business unit level.” [Marcuse, J., personal communication, January 19,2017.]

The case snapshot below illustrates how the [Health Resources and Services Administration](https://www.hrsa.gov/index.html) has taken a holistic approach to shifting organizational incentives.

**Caution:**Agency leaders should seek a balance using systems of incentives and disincentives that is appropriate for their particular mission context. Designing incentive systems may require iteration to find the right mix and architecture.

**Case snapshot**

**How HRSA holistically creates incentives for innovation**

[Macrae, J., Matoff-Stepp, S., Arsenault, M. and Miller, S., phone interview, December 2, 2016.]

Rewarding people for being innovative, and making the resources (both time and money) available to encourage employees to take risks helps to institutionalize a culture of innovation, according to Jim Macrae, Acting Administrator of HRSA, and members of the HRSA team. In their experiences, HRSA has shifted the culture through multiple, iterative steps that function through feedback loops:

**Build internal capacity and offer the right tools to support creativity** – HRSA offers a “leadership training program” where staff participate in a seven month action learning project where they are presented a “big, hairy problem” from the agency and are forced to come together, apply design thinking techniques, and tackle an agency problem. The HRSA idea sprint reinforces the approach, allowing the teams to continue to apply design thinking in real time. “Rather than going to a class, make it experiential” – it focuses on customer discovery then pushing the team right into calling people to directly interact with the problem.

Reinforce the training in practice, and allow time and space for people to problem-solve:

* After HRSA’s in-house leadership program, participants all reported that they would use these skills gained in the next problem they confronted. “This was the institutionalizing of it,” Jim Macrae notes: “Now, can we do this again and again and this is where the culture can shift. Not every idea has to go through an incubator.” [Macrae, J., Matoff-Stepp, S., Arsenault, M. and Miller, S., phone interview, December 2, 2016.]
* Shifting the daily mindset is the goal. Human centered design provides HRSA staff with foundational tools, but the focus on adoption of the mindset to become a problem-solver is what has helped to institutionalize the innovative culture.
* Enabling communication and dialogue is the glue for innovative collaboration. Using in-person meeting time and space, and technology like Adobe Connect, HRSA encourages and schedules time for people to interact.

Incentivize, reward and recognize

* Mentors and leadership play an important role recognizing staff for being creative and fulfilling the agency’s goals. This can include a verbal acknowledgement, a pat on the back, or a letter of recognition. Acknowledging individuals and teams for their work in front of other staff reinforces the message that effort toward innovative problem solving is taken seriously within the agency and sets a course toward greater adoption of the desired mindset.
* Rewarding people for their efforts helps establish sustained effort. HRSA began an annual in-house innovation award to reward ideas that come through their organizational innovation ecosystem. Additionally, employee submissions to their idea incubator have increased gradually over time, sparking further recognitions for employees by the HHS Innovate program.
* Create a space for additional discussion and recognition of innovative ideas. HRSA began an innovation symposium as another way to provide recognition to staff. People present and are recognized for their work on developing or conceptualizing various tools.

[Macrae, J., Matoff-Stepp, S., Arsenault, M. and Miller, S., phone interview, December 2, 2016.]

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**Learn more:**

* Investigate “Promoting A Culture of Innovation” on how HRSA is empowering employees to achieve its mission [link to shared resource]
* Review “The HRSA IdeaSpring Guide: Recommendations and Resources for Establishing an Agency-Level Innovation Program” [link to shared resource]
* Read “[Operationalizing Innovation: A Q&A with Jim Macrae](https://www.hhs.gov/idealab/2015/11/25/operationalizing-innovation-qa-jim-macrae/)”, November 25, 2015.

#### Link individual performance plans with agency strategic plans and broad federal-wide goals

Individual performance management plans can be a useful tool for encouraging innovative efforts, but only if agencies take these plans seriously. [Kalil, T., in-person interview, Washington DC, December 6, 2016.]

**Why:** The lack of aligned incentives limits the ability to accomplish innovative activities: “To highlight the importance of innovation, it needs to be part of how people are measured.” [Chenok, D., “[Encouraging and Sustaining Innovation in government for the New Administration”,](http://businessofgovernment.org/blog/business-government/encouraging-and-sustaining-innovation-government-new-administration) IBM Center for the Business of government, March 3, 2016.] Additionally, performance plans can be used to encourage collaboration and break down natural organizational silos.

**How:** Building measures into performance management plans can explicitly encourage experimentation with new processes, provided that people are given sufficient guidance and tools to achieve those metrics. By starting with goals set at the highest level of an agency and reflecting downward through each employee’s individual performance management plan, individual plans can be vertically aligned with agency-level strategic goals and sub-goals. [Naggar, M., phone interview, December 29, 2016.]

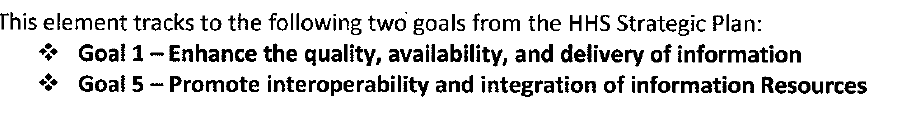
While vertical alignment of incentives may be effective for ensuring that frontline innovators are rewarded for their work, horizontal alignment across functions should also be considered. To achieve a full alignment of incentives and accountability while also explicitly encouraging collaboration and partnerships across organizational, functional silos, agencies can experiment with helping align the performance plans of personnel who frequently contribute to the lifecycle of similar and/or the exact same requirements and programs. Performance plan alignment, and associated transparency, can be an effective tool for profound culture change if they are appropriately utilized and leveraged across functional areas and throughout an agency. [Naggar, M., phone interview, December 29, 2016.]

**Cautions:** Agencies vary in their use of performance plans. The potency of performance plans as a lever for encouraging innovation depends on how seriously the plan is treated within the agency and by supervisors. Other common performance plan challenges include increased stress, fear of failure, goals as ceilings, and ignoring non-goal areas, according to OPM.[“[Performance Management - Improved Performance Starts with Planning IV](https://www.opm.gov/policy-data-oversight/performance-management/performance-management-cycle/planning/improved-performance-starts-with-planning-iv/)”, Office of Personnel Management.] These can be mitigated with effective management strategies like clear, open communication and realistic goal-setting.

**Case snapshot**

**Mark Naggar at HHS**Individual performance plans are an opportunity where employees can actively engage and shape the expectations for their work. Each performance management plan has multiple elements associated with an individual’s functional role or responsibilities, like administrative or communication work. Typically, metric-based components are evaluated in conjunction with employee performance, which feeds into their ratings. [Naggar, M., phone interview, January 11, 2017.]

While supervisors often take a lead role in designating what performance plans will measure, Mark Naggar shares that for him, it was useful to actively engage with the process and directly integrate his agency’s strategic goals into his individual performance plan. [Naggar, M., phone interview, December 29, 2016.] For instance, he integrated two goals from HHS’ Strategic Plan to ensure that the expectations for his work were grounded in the broader context of agency priority goals:



[Image source: Mark Naggar’s 2016 performance plan. Used with permission.]

Naggar also suggests that further agencies might be able to derive even greater value from the use of individual performance plans. If the forms were redesigned in a user-centric way and captured digitally, agencies could easily leverage results to assess agency-wide areas for improvement. “360 degree” reviews are a common tool in the private sector that could be incorporated into how agencies use performance management; efforts to holistically align organizational incentives would ideally harmonize the different performance metrics to encourage greater collaboration between cross-functional teams. “You need to know what’s going on around you – what your work is connected to, and how it relates,” comments Naggar. [Naggar, M., phone interview, December 29, 2016.]

**Learn more:**

* [Performance Management - Improved Performance Starts with Planning IV](https://www.opm.gov/policy-data-oversight/performance-management/performance-management-cycle/planning/improved-performance-starts-with-planning-iv/), Office of Personnel Management
* Behn, B., “[Why Measure Performance? Different Purposes Require Different Measures](http://www.coe.int/t/dghl/cooperation/cepej/thematiques/Measuring_perf/Why_measure_performance_stawa_en.pdf),” Public Administration Review, September/October 2003, Vol. 63, No.5.
* “[Why successful performance measurement starts with considering purpose](http://govinnovator.com/bob_behn_2014/): An interview with Bob Behn, Professor, Harvard Kennedy School.” GovInnovator Podcast, July 14, 2014

### Foster an empowering culture of learning

#### Use experiential learning in professional training and development

Incorporate experiential learning into professional training and development offerings.

**Why:** Effective learning materials are necessary to transmit knowledge around tactical process questions. Experiential learning, which emphasizes hands-on interaction, can help bridge the gap between theory and practice and better prepare federal staff to apply new knowledge in their work.

**How:** Experiential learning stresses critical thinking, problem solving and decision-making in real environments. Working alongside practitioners helps transmit tacit knowledge while also ensuring that federal employees will feel comfortable applying new approaches.

**Caution:** Supervisors and senior leadership need to support the investment of resources and time for experiential learning programs.

**Case snapshot**

**Digital IT Acquisition Professional (DITAP) Training from Office of federal Procurement Policy and USDS**

Using human-centered design principles and agile methods for software development are very different from traditional waterfall methods for development. The Office of federal Procurement Policy and USDS created Digital IT Acquisition Professional (DITAP) Training to train contracting professionals on how to develop appropriate acquisition strategies for procuring digital supplies and services.

DITAP is a "whole new concept," argues Joanie Newhart, Associate Administrator of Acquisition Workforce Programs at OMB. [“[Digital IT Acquisition Professional Training (DITAP) with Joanie Newhart](https://www.fai.gov/media_library/items/show/27)”, federal Acquisition Institute, February 18, 2015.] "We think if we do this, we can change agency cultures.” [“[Digital IT Acquisition Professional Training (DITAP) with Joanie Newhart](https://www.fai.gov/media_library/items/show/27)”, federal Acquisition Institute, February 18, 2015.] The program was designed through [a challenge](https://www.challenge.gov/challenge/digital-service-contracting-professional-training-and-development-program-challenge-2/) issued on Challenge.gov. Select contracting professionals are offered an intensive six-month blended learning program with both online and in person components. The program consists of online learning through a learning portal, discussion boards, badging, interactive assignment to demonstrate learning, collaborative in-person classroom sessions and a live digital assignment. Training is hands-on, stressing experiential learning over just book knowledge. Participants work alongside acquisitions officials already successfully implementing these new approaches. DITAP also emphasizes an integrated team approach to contracting by involving program officers and legal counsel upfront to decide together how to implement new contracting approaches. When the teams return to their agency, agency leadership is encouraged to put the on teams where they can use their new skills and coaches provide support to work through roadblocks or questions.

“We had three key goals in mind when we designed this program,” writes Traci Walker, Director of Digital Service Procurement at USDS: “1) **Practice**: All Contracting Officers that complete this program will become digital service procurement experts. 2) **Process:**Contracting Officers will be equipped with the knowledge necessary to be imbedded within agency Digital Service teams to serve as a business advisor to the team, its customers, and its stakeholders. 3) **Culture change:**Contracting Officers will gain knowledge on how to influence their partners and allies within their agency and government by leading agency training, workshops, and consultations.” [Walker, T., “[Congratulating our Challenge.gov winners](https://medium.com/the-u-s-digital-service/congratulating-our-challenge-gov-winners-f6ec5deefbd6#.j8mm7m5lc)”, The U.S. Digital Service.]

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Joanie Newhart, Associate Administrator for Acquisition Workforce Programs, OFPP, jnewhart@omb.eop.gov

**Learn more:**

* OFPP, “[Digital IT Acquisition Professional Training (DITAP) with Joanie Newhart](https://www.fai.gov/media_library/items/show/27) ,” *FAI Media Library*, February 2015.
* “[Prepared Remarks of US CAO Anne Rung](https://www.whitehouse.gov/blog/2016/03/22/prepared-remarks-us-cao-anne-rung-acquisition-excellence-2016)” Acquisition Excellence, March 22, 2016.

**Read more:**

* “[Getting smarter about IT acquisition](https://fcw.com/articles/2015/08/27/feature-it-acquisition.aspx),” FCW, August 2015.

#### Foster Communities of Practice

Communities of practice (CoPs) are the lifeblood of an innovative ecosystem; they enable peer-to-peer knowledge-sharing and collaboration around effective innovative approaches.

**Why**: Communities of practice are critical to both initiate and develop innovative practices. They can foster a culture of creative, collaborative problem-solving. They create continued engagement and opportunities for people to connect with each other and with the ideas/materials that are being pursued. CoPs can decrease the learning curve, reduce re-work and prevent re-invention, and increase innovation. [Lesser, E.L. and Storck, J., “[Communities of Practice and Organizational Performance](http://www.providersedge.com/docs/km_articles/CoP_and_Organizational_Performance.pdf)”, IBM Systems Journal, 2001.]

**How:** Building and sustaining a community of practice requires a point person to drive and nurture the community. Though CoPs frequently take the form of a digital listserv, regular meetings and multiple touchpoints like events and activities are necessary to build thriving communities. These can be both in person and virtual. Relationships are key to sustain the community. CoPs require an investment of time and space for people to interact and build relational connections. CoPs can be used both to drive knowledge from the top-down to help diffuse a tool, and also to seed at the ground level and allow it to grow and bubble up organically, according to Christofer Nelson, Assistant Director for Open Innovation, OSTP. [Nelson, C., phone interview, December 20, 2016.] Communities need both the grassroots connections and an official policy framework to drive adoption of policy and advance the tool to maturity. Either top-down or bottom-up approaches can emerge first, but a lasting community needs both elements to grow – and participants must be given the chance to share their own learnings with their peers.

**Cautions:** “CoPs are not set-it and forget-it collaborations,” cautions Christofer Nelson. “They require active management through an individual whose job it is to shepherd it along and manage it.” [Nelson, C., phone interview, December 20, 2016.] Communities need to be created both within agencies and across the government for maximal benefit. Innovation is frequently context specific. For example, while someone in the National Park Service (NPS) may get a great new idea from or share lessons learned with a colleague at NASA, it may also be tremendously valuable to connect with other peers situated directly within NPS. [Nelson, C., phone interview, December 20, 2016.]

**Case snapshots**

**Citizen Science and Crowdsourcing CoP and the Prizes and Challenges CoP**

Prizes and Challenges

The CoP on Prizes and Challenges emerged from a collaborative OSTP and GSA effort. To develop, it took continued stoking and GSA as backbone to nurture its growth. “We seeded it early on and helped it grow,” elaborates Chris Nelson: “We wanted to create a place that provided professional development to support the growth of the community and to help people build their capacity.” [Nelson, C., phone interview, December 20, 2016.] While the website functioned as a hub, quarterly meetings offered opportunities to build connections and share emerging best practices; “The Challenges listserv became a great tool over time, but the early workshops and events is where we laid the foundation,” Nelson explains. [Nelson, C., phone interview, December 20, 2016.]

Today, GSA continues to convene quarterly meetings, but the thriving CoP activity is largely driven by the community itself. Nelson adds: “Now listserv serves as support, people ask very specific, detailed, difficult questions, and it drives itself. Within one hour of a message going out, three people will respond to explain, ‘This is how I did it, and here is the name of lawyer at my agency that can help’. “ [Nelson, C., phone interview, December 20, 2016.] He adds that many of the subjects of the quarterly meetings, workshops, and trainings now come from regular questions and discussions that happen on the listserv and throughout the CoP. [Nelson, C., personal communication, January 19, 2017.]

Crowdsourcing and Citizen Science

The Crowdsourcing and Citizen Science CoP represents a grassroots approach to building a knowledge-sharing community.

The group began three years ago as a small listserv with five members and has now grown to more than 300 federal employees from 59 government organizations. [Olson, K., “federal Agencies Take Citizen Engagement to a New Level,” GSABlog, December 12, 2016.] The CoP grew organically over time, “just because people wanted to connect with one another,” Chris Nelson recounts. [Nelson, C., phone interview, December 20, 2016.] The group was largely self-organizing, and after a year or so OSTP and GSA plugged in to help support the existing community: “We have helped shepherd it along and develop it more formally from within OSTP, but it grew on its own while we helped support in parallel on the policy side.” [Nelson, C., phone interview, December 20, 2016.] The community of practice continues to operate as a grassroots effort and gathers regularly to share resources, methods, and idea and feed into more formal policy work on the subject.

The recent [American Innovation and Competitiveness Act](https://www.congress.gov/bill/114th-congress/senate-bill/3084) has implications for new policies on prizes and challenges and citizen science. Because the two robust Communities of Practice existed, agency leaders had a resource to go and connect to; the communities helped create knowledge upwards and downwards as policy discussions took place.

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**Learn more:** [“Communities,” Digital.gov](https://www.digitalgov.gov/communities)

**Read more:**

[HHS](https://www.acf.hhs.gov/ocs/resource/establishing-a-community-of-practice-to-enhance-training-technical) suggests the following resources for establishing CoPs:

* Gottlieb, H., “[Learning Communities / Communities of Practice / Learning Circles: What are they? How do they work? Why would we want one?](http://www.help4nonprofits.com/NP_EDU-Cm_Learning_Communities.htmVisit%20disclaimer%20page)” Help 4 NonProfits, 2009.
* [Suarez, L.,](https://www.acf.hhs.gov/disclaimers) “[How to Boost Community of Practice Activities with the Creation of a Critical Mass](http://it.toolbox.com/blogs/elsua/how-to-boost-community-of-practice-activities-with-the-creation-of-a-critical-mass-7467)”, Toolbox, January 26, 2006.

In addition, see:

* Trayner, E. and Wenger-Trayner, B., [Introduction to communities of practice](http://wenger-trayner.com/introduction-to-communities-of-practice/), Wenger-Trayner, 2015.
* Lesser, L.E. and Storck, J., ["Communities of Practice and organizational performance"](http://www.providersedge.com/docs/km_articles/CoP_and_Organizational_Performance.pdf), IBM Systems Journal, 2001.
* McDermott, R. and Archibald, D., ["Harnessing Your Staff's Informal Networks",](http://hbr.org/2010/03/harnessing-your-staffs-informal-networks/ar/1) Harvard Business Review. March 2010.

###### Supporting Policies

### Legislation

[S.3084 - American Innovation and Competitiveness Act](https://www.congress.gov/bill/114th-congress/senate-bill/3084), December 2016

[The America COMPETES Reauthorization Act](https://www.gpo.gov/fdsys/pkg/PLAW-111publ358/content-detail.html)

Provides all federal agencies broad authority to conduct prize competitions.

### Policy and Guidance

“[Principles for federal Engagement in Standards Activities to Address National Priorities](https://www.whitehouse.gov/sites/default/files/omb/memoranda/2012/m-12-08_1.pdf)” OMB, M-12-08, January 17, 2012.

## 

###### Additional Resources

### Community of Practice

* Federal Community of Practice for Change Management—Established by Association of Change Management Professionals, DC Chapter and open to all federal government employees.
* [Hack-the-red tape](https://list.nih.gov/cgi-bin/wa.exe?SUBED1=HACK-RED-TAPE&A=1)—Listserv on hacking red tape for innovators in the federal government
* Chief Information Officer Innovation Committee—Committee of the Chief Information Officer Council that focuses on enabling transformation to 21st century government.

### Contacts

### Views on Innovation in the Federal Government

“[Innovation as a Problem Solving Tool in government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf)”, Office of the Chief Technology Officer - U.S. Department of Health and Human Services, December 2016: An overview of how HHS has deployed innovative approaches to deliver on its mission.

“[Open Innovation: Practices to Engage Citizens and Effectively Implement federal Initiatives](http://www.gao.gov/products/GAO-17-14)”, U.S. government Accountability Office, October 13, 2016: Open innovation tools for more effective citizen engagement.

“[Innovation at DARPA](http://www.darpa.mil/attachments/DARPA_Innovation_2016.pdf)”, DARPA, July 2016: This report outlines the history of innovation at DARPA and discusses processes and practices within the institution to create an innovative environment.

Davis, J. and Richard, E. E., “[Advancing Innovation Through Collaboration: Implementation of the NASA Space Life Sciences Strategy](http://www.nasa.gov/pdf/649978main_IAC-11E612x9614AdvInnov.pdf)”, International Astronautical Federation, 2011: An overview of the current collaborative strategies in NASA and future possibilities.

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“[Data and Analytics Innovation: Emerging Opportunities and Challenges”,](http://www.gao.gov/assets/680/679903.pdf) US government Accountability Office, September 2016: GAO convening summary of the emerging innovation opportunities presented by big data and analytics.

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[Capacity to Innovate](http://capacitytoinnovate.org/). : Guidance for innovating in your organization

[DIY Toolkit](http://diytoolkit.org/) : Practical tools to trigger & support social innovation.

[Open Opportunities](https://openopps.digitalgov.gov/) : Platform to engage with other federal employees on projects across the government from digitalgov.gov

### Other Resources

#### Multimedia

Tina Seelig on the [“Inventure Cycle”](http://ecorner.stanford.edu/videos/3387/The-Inventure-Cycle) [2.5 min video]

[Gov Innovator Podcast](http://govinnovator.com/): Conversations on useful practices and insights from public sector innovators and experts, hosted by Andy Feldman, a Visiting Fellow at the Brookings Institution and former Special Advisor for Evidence-Based Policy at OMB.

* “[Implementing a department-wide innovation strategy](http://govinnovator.com/bryan_sivak/)” with Bryan Sivak, former Chief Innovation Office of the U.S. Department of Health and Human Services
* “[Learning from innovative businesses about creating a culture of experimentation in government](http://govinnovator.com/jim-manzi/)” with Jim Manzi, author of *Uncontrolled*
* [Stanford’s e-corner](http://ecorner.stanford.edu/) contains several conversations, videos and podcasts with leading innovators and entrepreneurs. Content includes:
* “[Make government Work Better for All](http://ecorner.stanford.edu/podcasts/3426/Make-Government-Work-Better-for-All)” with Jenn Pahlka, founder and executive director of Code for America and former U.S. Deputy Chief Technology Officer, discusses how government can harness technology and design principles.
* “[From Inspiration to Implementation](http://ecorner.stanford.edu/videos/3386/From-Inspiration-to-Implementation-Entire-Talk)” with Tina Seelig, Professor of Practice at Stanford’s School of Engineering, introduces the Inventure Cycle and discusses the attitudes and actions needed to foster innovation.
* “[Innovate for America](http://ecorner.stanford.edu/videos/2756/Innovate-for-America-Entire-Talk)” with Aneesh Chopra, former US Chief Technology Officer, describes the potential of technology and innovation to unlock national economic growth and prosperity in the United States.
* Steve Blank’s [repository of resources](https://steveblank.com/slides/) related to innovation and entrepreneurship: Steve discusses work with the government and implementation strategies for innovation tools at the National Governors Conference in 2014: [Part 1](https://www.youtube.com/watch?v=XAN1pNO10KE&feature=youtu.be) and [Part 2](https://www.youtube.com/watch?v=8TYKnI7zMI4&feature=youtu.be)

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