A Guide for Making Innovation Offices Work

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IBM Center for
The Business of Government

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Foreword

On behalf of the IBM Center for The Business of Government, we are pleased to present this report, *A Guide for Making Innovation Offices Work*, by Rachel Burstein and Alissa Black.

In this report, Burstein and Black examine the recent trend toward the creation of innovation offices across the nation at all levels of government to understand the structural models now being used to stimulate innovation—both internally within an agency, and externally for the agency's partners and communities. Based on research into a broad range of federal, state, and local innovation offices, the authors identify six different models for how an innovation office can operate:

- Laboratory

- Facilitator

- Advisor

- Technology build-out

- Liaison

- Sponsored offices

Burstein and Black then present examples of each of these structural models.

In addition to describing models for innovation offices, the authors identify issues that government leaders should consider in their decision to create a new innovation office, along with critical success factors for building and sustaining effective innovation offices. The authors emphasize that government leaders should *not* make the decision to set up an innovation office lightly, and should *not* create an innovation office for symbolic reasons. Rather, moving forward with setting up a center of gravity for innovation should follow a careful assessment of the mission of the new office, financial resources available, and support from key partners.

Daniel J. Chenok

Dr. Jane L. Snowdon

This report continues the IBM Center's long interest in the subject of innovation. The creation of dedicated offices adds a new tool to government in stimulating innovation. Previous IBM Center reports have examined other tools in government's innovation portfolio, for example:

- Gwanhoo Lee examined federal ideation programs now in place throughout government in which ideas from government employees are sought and processed (*Federal Ideation Programs: Challenges and Best Practices*).

- Kevin Desouza examined the use of the Challenge.gov platform in which federal government agencies sponsor challenges with financial rewards to find innovative solutions to government problems (*Challenge.gov: Using Competitions and Awards to Spur Innovation*).

- Sandford Borins examined the use of awards to stimulate innovation in government (*The Persistence of Innovation in Government: A Guide for Public Servants*).

We hope that government leaders interested in innovation at the federal, state, and local levels will find the models and success factors described in this report helpful as they consider future innovation initiatives or expand upon current innovation activities.

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Executive Summary

In the last five years, a growing number of local, state, and federal government entities have created innovation offices and appointed chief innovation officers to:

• Encourage an ethos of innovation

• Pursue specific projects

• Augment the work of existing departments

These innovation offices represent a potentially powerful pathway toward a responsive, adaptive, and efficient 21st century government. To date, there has been no systematic study of this trend, although there are several partial lists of government innovation offices categorized by mission or approach. As more government entities consider innovation offices, a systematic treatment of existing offices is needed. This report attempts to fill that void by looking at the following: their missions, structural models, the factors that go into creating and sustaining an effective office, possible ways of evaluating the effectiveness of innovation offices, and success factors.

Because so little literature on government innovation offices exists, this report relies on phone interviews with 25 government leaders involved in the development of chief innovation officer posts or innovation offices, people who serve or who have served in government innovation-related roles in government, and journalists, commentators, funders, and other observers in the field. The group of interviewees represents all three levels of government—local, state, and federal—and offers diversity in function and background as well. Some interviewees are profi-cient technologists, while others have a background in business or community development. All have had some role in shaping government innovation offices as either thought leaders or practitioners.

The interviewees for this report have been enormously generous with their time, candid in their remarks, and eager to help other leaders determine how best to spur innovation in government. We have organized the report to be a resource for government officials and leaders looking to develop an office or role for innovation in their organization. The interview list, tables, and appendices provide a network of experts and examples of innovation projects and offices.

Through our research and conversations with government leaders, it became apparent that innovation offices may not be the best way to achieve certain objectives and are not a good fit for every government organization. Some alternatives to innovation offices are presented. Innovation offices are not a panacea and more research needs to be done to understand their impact. But discrete innovation structures, thoughtfully constructed to address particular missions and specific outcomes, have potential. The goal of this report is to guide government leaders in realizing the potential and limitations of an innovation office.

After the Introduction, the next section of the report addresses the question, "What is the current state of government innovation offices?" The report's parameters are explained. While we

take an expansive view of the activities that constitute government innovation, the report examines a variety of structures designed to advance innovation. We provide a brief history of the factors that led to the rise of innovation offices, among them corporate innovation offices and research and development groups, larger scale research and development projects at the federal level, open data directives, and philanthropic investments and advocacy groups.

The bulk of our assessment of the current state of the field concerns the different missions and structural models adopted by government innovation offices. The missions of innovation offices can be either externally or internally focused; examples of goals that fit into each category, including projects that achieve each goal, are provided (Table ES-1). Innovation offices may have multiple and overlapping missions, but typically one mission and one goal predominate at any given time.

Table ES-1: Missions, Goals, and Strategies

Mission Focus	Goal	Sample Strategy
External	To engage the public	Citizen archivist crowdsourcing projects (National Archives and Records Administration Office of Innovation)
	To leverage strategic partnerships	Support for opportunities for technology startups to thrive (City of Davis Chief Innovation Officer)
	To impact specific issue areas	Leadership of Institute for Healthy Air, Water, and Soil to guide community data collection and experimentation to address environmental barriers to quality of life (City of Louisville Office of Civic Innovation)
Internal	To create greater efficiencies	i-Teams to identify areas of improved efficiency and execute projects to save the commonwealth money and to improve the efficiency of service delivery (Pennsylvania Governor's Innovation Office)
	To produce cultural change	Employee Innovation Competition to solicit proposals and implement innovative projects based on employees' recommendations (U.S. Department of Veterans Affairs Center for Innovation)
	To establish innovation processes and protocols	Ideas to Reality program to teach innovation approaches to select employees and pilot new projects (City of Nashville and Davidson County Co-Chief Innovation Officers)

The different structural models of an innovation office reflect a number of factors, including mission (Table ES-2). Other important factors in determining optimal structures for innovation offices include available resources, intended goals, personnel preferences, political realities, and more. The structure of the office does not necessarily suggest a particular reporting structure or placement within the larger organization. We examine the following structural models:

• Laboratory

• Facilitator

• Advisor

• Technology build-out

• Liaison

• Sponsored organization

Many innovation offices are hybrids, embracing elements of two or more structural models.

Table ES-2: Structural Models

Model	Description	Example Office
Laboratory	Autonomous group charged with developing new technologies, products, fixes, or programs, sometimes in partnership with other groups, often with public face	New Urban Mechanics, Boston and Philadelphia; and U.S. Department of Health and Human Services IDEA Lab
Facilitator	One person or small group working to convene government departments on internal improvements or external projects	Governor's Innovation Office, Commonwealth of Pennsylvania; and Chief Innovation Officer, Kansas City
Advisor	Small autonomous group or single person within government who provides departments with innovation expertise, assistance, and leadership on specific projects	Chief Innovation Officer, U.S. Department of Labor
Technology Build-Out	Innovation offices specifically tied to a technology function that regard technology as both a tool for encouraging innovation as well as the innovation itself	Chief Innovation Officer, City of Philadelphia; and Chief Innovation Technology Officer, City of Los Angeles
Liaison	Groups that reach out to designated communities outside of government, most often to the business community	Chief Innovation Officer, City of Davis; and Colorado Innovation Network
Sponsored	Innovation offices sponsored in whole or in part by third parties—universities, businesses, nonprofit organizations, philanthropic foundations or others	Office of New Urban Mechanics, Utah Valley University

The third section of this report addresses how government leaders decide whether and how to build and sustain effective innovation offices. Among the most important factors are mission, size and resources of the government entity, the resources of potential partners, leadership and political strengths and context, and the existence and strength of other structures for encouraging innovation. In this section, we also make the case for the government innovation field to develop more robust, real-time measures of success, even given the importance of flexibility in encouraging innovation. Metrics must be aligned with mission; sample measures that respond to specific goals are presented.

The fourth section of the report proposes seven success factors for building government innovation offices, based on our interviews and secondary research. All seven success factors are important for government leaders to consider carefully before developing an innovation office. The following factors were found to be keys to a successful innovation office:

- Commit to supplying real resources.

- Choose leaders carefully, and invest in and provide appropriate support to those leaders.

- Create a specific mission tied to specific impacts.

- Communicate effectively with internal and external partners throughout the innovation lifecycle.

- Find allies within government and committed partners outside of government.

- Establish an innovation process from the outset, even if the exact details and specific projects change over time.

- Seize opportunities to share lessons and information emerging from government innovation offices through both formal and informal networks.

While we remain optimistic about the potential of government innovation offices to pursue projects and goals that often remain unaddressed, it is important to recognize that innovation offices are not appropriate for every government organization. For those government entities that elect to move forward with an innovation office, we hope that this report will be a valuable resource. Additional resources can be found in the appendices to the report: a list of interviewees (Appendix I), a list of references and resources (Appendix II), and a list of selected government innovation offices (Appendix III).

This report provides a first step toward charting and analyzing the field of government innovation offices; we are eager to see the work of other researchers who can advance the field. This work is vitally important if innovation is to thrive in government.

Introduction

Innovation is a buzzword of 21st century governments, often cited as a silver bullet for everything from creating greater efficiencies and developing effective solutions to persistent challenges to changing the way government does business. In the past five years, government entities and positions tasked with encouraging and facilitating innovation in government have proliferated in municipalities, states, and federal agencies.

Yet innovation offices in government are still new, and there is, as yet, no clear sense of how these efforts are tied together across governments or anchored in strategic priorities within particular governments. In many cases, the very meaning of innovation in government remains vague. Is it a product, a policy, a process, or a way of thinking? There is no consensus on basic questions impacting the design and missions of government innovation offices. A common understanding of what innovation offices in government can offer will take time to develop. At present, no comprehensive list of all government innovation initiatives exists, let alone an understanding of how those projects work.[1]

This report is an early effort to fill this void. It serves as a resource guide and primer for government leaders considering innovation offices or chief innovation officer posts. There is a good deal of literature and debate exploring the meaning of innovation in government, the impact of various strategies on encouraging innovation, and the intrinsic worth of innovation processes themselves.[2] Such studies and conversations are essential to an understanding of how to make government more effective in fulfilling its mission. But those on the front lines of promoting innovation within government are an untapped resource in informing the debate or even in proposing questions for study.

The research for this report consisted of 25 interviews with government chief innovation officers or other innovation functionaries, and also journalists, philanthropists, and others with a broader perspective on innovation offices in government. The authors also reviewed available documentation on innovation offices and initiatives to provide context for the interviews in the report. Phone interviews covered the following topics:

- History and background of the innovation office and its leadership

- Structure of the office

- Assessment and evaluation

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1. Two projects provide partial catalogs. *Government Technology* presented an interactive map of local and state-level chief innovation offices in March 2013. (See Mulholland and Knell 2013.) And Parsons DESIS Lab constructed a visualization of select government innovation labs around the world in the fall of 2013. This map examines sponsorship, activities, location, and other elements of government innovation labs. (See Parsons DESIS Lab 2013.)
2. The most recent high-profile debate in this area is about the value of "disruptive innovation" in business, with reference sometimes made to its use in government as well. See Jill Lepore's criticism of Clayton Christensen's landmark 1997 book on disruption (Lepore 2014, Christensen 1997).

• Recommendations for other innovation offices

Secondary sources and academic literature supplement interview findings. Appendix I presents a list of interviewees and a description of our methodology.

The government staff members we interviewed identified a strong need for a practical guide drawing on the collected experiences of and evidence from those who work within government on innovation initiatives. This report, meant for those who work in government, offers a snapshot in time and does not pretend to be the final word on the significance of or ideal method for creating an innovation office. By its very nature, this field is constantly shifting, and we hope and expect that additional studies will emerge to update and rethink this research.

Other reports—including those published in the IBM Center for The Business of Government Innovation Series—examine government innovation as a whole, or specific areas of government innovation, including departmental collaboration, incentive programs, technology, and public engagement.[3] This report complements but does not comment on these other studies, instead focusing on government innovation offices as one strategy for advancing government missions. It is built on extensive interviews with leaders in the field, as well as real-time research on developments in the field.

We come from a critical but optimistic perspective. After dozens of conversations with practitioners, we believe that government innovation offices and chief innovation officer posts have the potential to be more than just the hype surrounding them. In many cases, these offices are doing extraordinary work and are staffed by visionary leaders. To thrive long term, though, government innovation offices must be structured, staffed, and resourced appropriately and thoughtfully, with careful attention to meeting critical needs and solving big challenges.

In this report, we present findings and success factors emerging from our research. The next section surveys the state of government innovation offices, including a description of the history of the field, existing missions, and structural models. A third section examines decision-making processes and evaluation possibilities as a guide for building and sustaining effective innovation offices. A fourth section presents seven success factors for creating effective government innovation offices.

Innovation offices are only one tool in a larger arsenal for those who want to inspire innovation in government, and their construction is not appropriate for every government entity. Some models and approaches may be more useful at different levels of government, or to cities, states, and federal agencies of different sizes, budgets, and cultures. The commonalities in desired outcomes and the potential for productive knowledge-sharing across government levels and diverse characteristics outweigh concerns about inexact comparisons.

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3. See, for example, the following reports published by the IBM Center for The Business of Government: Borins 2006, Borins 2014, and Kay 2011.

Current State of Government Innovation Offices

Definitions

Innovation has come to mean many things—something good, novel, risky, creative, technology-driven, and so on. Government innovation also conjures a variety of meanings for a host of audiences. A cash-strapped city manager might identify a new town website as his community's most important innovation in years. A technology entrepreneur might cite a public/private partnership to encourage the repurposing of technology for state use. A parent of school-age children might point to real-time updates on school bus locations as a stellar example of government innovation. A government staffer may describe a training program for employees to develop and incubate new projects as innovative. A Cabinet secretary may cite a new open data portal as an important innovation, changing the way that government does business.

Such varied examples point to the difficulty of operating in the government innovation space. Without clear, common understanding of what constitutes government innovation, it is almost impossible to explore what those charged with encouraging innovation in government are currently doing, let alone what they should be doing and how they should be doing it. This section sets basic parameters and definitions that govern this study.

Borrowing a page from those on the front lines of this work, the report takes an expansive view of government innovation, considering projects, roles, structures, and missions that use technology and those that do not; that are project-based and ongoing; that are concerned with internal improvements and efficiency and are outward-facing; that are deeply engaged with policy making and that are not involved in policy functions; that focus on new projects and that focus on new processes; and that do or do not involve external partners. In some cases, the innovation offices examined are developing wholly new approaches and projects, while other innovation offices are adapting processes and products for their own government's use.

While the many definitions and examples of innovation presented by government leaders are valid, this report examines one place from which government innovation emerges: government innovation offices. These offices are most commonly led by a chief innovation officer, but have a variety of structural models and missions at all three levels of government. While chief technology officers, chief information officers, chief data officers, and a variety of other departments and roles often serve as innovation nerve centers for their government entities, these roles are not under consideration here, except as a means of understanding how they interface with structures explicitly and primarily appointed as innovation functionaries.

History

Government innovation offices have their roots in research and development (R&D) functions in business and in the more recent emergence of chief innovation officers in

corporations.[4] Contemporary government innovation offices have a variety of structures and missions, but most are built on the assumption that experimentation, calculated risk-taking, and investment in developing new approaches can help government do its job effectively. Along with the profit motive, these core ideas informed early corporate research and development programs. The federal government played a major role in supporting, sustaining, and directing the activities of corporate laboratories and university research centers, especially during wartime, and created R&D functions of its own, most famously the Manhattan Project.

With pressures from the existence of more nimble startups and global competition in the late 20th and early 21st centuries, many large corporations rethought their R&D groups, sometimes spinning them off and sometimes differentiating between product development and systems work. In some cases, corporations established chief innovation officer posts, not so much as a replacement for R&D groups, but to signal a commitment to new product and systems development that was more agile, timely, and integrated than R&D groups sometimes were. At the same time, the World War II and Cold War eras' huge investments in new technologies and coordination between public and private sectors were largely things of the past.

It is into this orbit that government innovation offices have emerged, particularly in the last five years. Some are designed as R&D groups akin to those within business, but the vast majority do not have nearly the same levels of monetary investment as corporate entities of the past. Partly this has to do with changes in the content of research, as the shift to research on computing and service-related technologies over large-scale machinery and industrial projects has reduced costs. But it also reflects political and economic realities that are much more acute in government agencies than in corporations. Transparency rules and taxpayer concern about government spending sometimes complicate large scale R&D programs housed wholly within government entities or government research with external partners. In addition, at the state and local levels, very few resources or models exist for R&D.

At the same time, many recognize the need to develop new solutions to persistent problems, transforming the way that government operates and serves the public. Whether they have innovation offices or not, many government leaders have adopted the language of innovation— including concepts of disruption, open innovation, user-centered design, and the lean startup—from business as a way to address these challenges.

A number of external factors have motivated this transformation. The poor economy of the last six years resulted in government budget cuts, spurring efforts to find ways to do more with less. More accessible technologies like apps and social media, and a user community more comfortable with a wide variety of technologies and more vocal in demanding transparent processes through online tools, have also hastened the establishment of government innovation programs.

At the local level, large investments by Bloomberg Philanthropies in innovation delivery teams and other innovation-related projects created new structures and models for making changes in government.[5] Code for America's efforts to change how local government worked through its fellowship program, brigades, incubators, and other programs offered additional models for innovation.[6]

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4.   For an interpretative history of corporate R&D structures, see Usselman 2013.
5.   For a how-to guide emerging from Bloomberg Philanthropies' sponsorship of innovation delivery teams, see Bloomberg Philanthropies 2014.
6.   Code for America began in 2010 as a fellowship program to bring those with technology skills from the private sector to the public sector for a period of service. Working in teams deployed to cities, fellows developed solutions in coordination with city staff and community residents. Code for America has since created other programs to supplement its fellowship program, including city-based brigades and an incubator initiative.

At the federal level, President Obama's open data program and directives resulted in more agency investment in transparency initiatives, sometimes leading to more extensive innovation programs. These initial initiatives included:[7]

- **The President's Innovation Cohort,** created in 2009, serves as a space for agency Chief technology officers and others to coordinate and compare notes on many of these innovation projects and programs.

- **The Presidential Innovation Fellows Program,** established in 2012, demonstrates innovation's importance in the administration, offers a model for bringing talented personnel from the private sector into the public sector, and provides staff for federal agencies to work on innovation-related projects.

Innovation offices at all levels of government have undergone significant changes in mission and approach since they began to emerge in the last five years. Many early offices initially focused on developing small, outward-facing projects, while more recent initiatives often focus on creating long-term change internal to government. This reflects a growing comfort on the part of the public and government staffers as innovation offices become long-term, institutionalized entities rather than ad-hoc projects. It also reflects a changing economy as government organizations strive to identify greater efficiencies within the organization, using new tools and approaches. This is particularly true at the state and federal levels, where there is less direct contact with the public than at the local level. Among cities and counties, many innovation offices often focus on economic development, reflecting economic realities and administration priorities.

In addition, government innovation offices at all levels have rethought the connection between technology and innovation. Many early programs focused on developing new technologies or using technological approaches and systems to solve problems. More recently, innovation leaders in government have embraced a variety of other approaches including policy making, design thinking, and community organizing. Many use technology as a tool, but one in service of a larger mission that draws on a constellation of actors with a variety of skills, only some of whom are capable technologists. There is a growing consensus among government leaders and chief innovation officers that the mission of the innovation office should drive the tools, projects, and resources used.

Mission

Among innovation officers and other government leaders there is a growing commitment to identifying and fulfilling a mission more specific than simply encouraging and facilitating innovation in government. When the innovation office concept was less familiar in government, mission often took secondary importance to decision-making personalities, including elected officials, agency heads, or chief innovation officers. Hoping to demonstrate value quickly and publicly, and relying on dynamic personalities to establish the credibility of the initiative, early innovation offices tended to have less supporting infrastructure to guide project selection and to unify office activities under a broad mission. But as government innovation centers proliferate, new chief innovation officers with more administrative experience than star power take command, and greater institutional support for innovation offices emerges, these early personality-driven ventures give way to activities unified by clear missions. Though missions may evolve over time in response to government needs, public demand, available resources and opportunities, and leadership

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7. Subsequent innovation initiatives included:
- The U.S. Digital Service, launched in 2014, will consist of digital experts to work closely with other government agencies to make websites more consumer friendly, identify and fix problems, and help upgrade the government's technology infrastructure.
- 18F, also created in 2014, is based in the General Services Administration to assist agencies in the development of digital and web services. Some of the Presidential Innovation Fellows are assigned to work at 18F.

Bloomberg Philanthropies

According to the Bloomberg Philanthropies' website, "In July 2011, Bloomberg Philanthropies announced a $24 million initiative to fund Innovation Delivery Teams that help mayors effectively design and implement solutions to pressing challenges in their cities. The grants fund teams in five cities: Atlanta, Chicago, Louisville, Memphis, and New Orleans … The Innovation Delivery approach is typically implemented by a Team that is based in City Hall and reports to the mayor. The Team members serve as in-house consultants to help the mayor and other partners solve the city's biggest challenges. First, the Team and its partners investigate the problem by gathering information and data and researching how the problem affects other cities. The goal of this phase is to break down a problem into challenges, and to carefully assess the causes of each challenge. Second, the Team assesses possible solutions by leading their partners through a robust and collaborative idea generation process using best-in-class techniques. Third, the city selects the most promising ideas and creates a plan for implementing them. In the fourth and final step, the city puts its plan into action and begins monitoring results." (http://www.bloomberg.org/program/government-innovation/innovation-delivery-teams/#solution)

This process is laid out in more detail in the Innovation Delivery Playbook, available here: http://www.bloomberg.org/content/uploads/sites/2/2014/08/20140819_BP_Playbook_03.pdf

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changes, innovation leaders have found that stating a clear mission from the outset, in coordination with stakeholders, is essential to determining which structures, approaches, and resources are desirable or necessary for the innovation office to thrive.

Two broad types of missions exist among government innovation offices:

- To produce external impacts on the larger community

- To produce internal impacts within government

Most innovation offices embrace some combination of the two, though one area of impact typically takes precedence. For example, the Colorado Innovation Network, housed within the Colorado Office of Economic Development and International Trade, pursues an externally oriented mission, encouraging economic growth and business recruitment in the state. At the same time, with the support of the governor and through its programs and approaches—including an effort to highlight and learn from failed projects in the private sector—it hopes to change the way state agency personnel think about their work and risk-taking. Table 1 (Table ES-1 in the executive summary) examines specific missions, corresponding goals, and sample strategies. In some cases, the strategies presented here emerge from the primary mission of the innovation office, and in other cases they correspond to a secondary or derivative mission.

Externally Focused Innovation Offices

Those innovation offices primarily concerned with external impact have goals and methods that break down into three categories, though many offices involve elements of more than one:

- Civic engagement

- Strategic partnerships

- Issue-oriented change

Civic engagement. Civic engagement goals encompass those projects and offices that seek to involve the public in identifying priorities, soliciting feedback, sponsoring events, contributing data, and other activities. In some cases civic engagement is a goal in itself, and sometimes it is a means to fulfilling another goal. For example, many innovation offices hope to change

Table 1: Missions, Goals, and Strategies

Mission Focus	Goal	Sample Strategy
External	To engage the public	Citizen archivist crowdsourcing projects (National Archives and Records Administration Office of Innovation)
	To leverage strategic partnerships	Support for Davis Roots and SARTA to support opportunities for technology startups to thrive (City of Davis Chief Innovation Officer)
	To impact specific issue areas	Leadership of Institute for Healthy Air, Water, and Soil to guide community data collection and experimentation to address environmental barriers to quality of life (City of Louisville Office of Civic Innovation)
Internal	To create greater efficiencies	i-Teams to identify areas of improved efficiency and execute projects to save the Commonwealth money and to improve the efficiency of service delivery (Pennsylvania Governor's Innovation Office)
	To produce cultural change	Employee Innovation Competition to solicit proposals and implement innovative projects based on employees' recommendations (U.S. Department of Veterans Affairs Center for Innovation)
	To establish innovation processes and protocols	Ideas to Reality program to teach innovation approaches to select employees and pilot new projects (City of Nashville and Davidson County Co-Chief Innovation Officers)

perceptions of government by involving the public in identifying projects to pursue through an online forum or through other public forums. In other cases, innovation offices may involve the public in crowdsourcing activities designed to achieve a larger aim, such as the translation of a document at the National Archives and Records Administration.

Strategic partnerships. Partners may take a variety of forms and functions, depending on the specific project or the larger mission of the innovation office. In the case of strategic partnerships, businesses, nonprofit organizations, community groups, universities, and other third parties contribute to the innovation process, offering resources, connections, new ways of thinking, and flexibility that are not present in the government entity for legal, political, cultural, or operational reasons. Partners may contribute to a single project or relationships may be ongoing.

Issue-oriented change. While most innovation offices take on policy-related initiatives at one point or another, some innovation offices focus on one or two specific areas of change at a time, or are governed by an overarching policy area. For example, the City of Davis, California's chief innovation officer has an economic development focus, seeking to create a more favorable environment for business. Using the innovation team delivery approach developed by Bloomberg Philanthropies, the City of Memphis has identified a few initial priorities for the innovation delivery team to focus on: reducing handgun violence, encouraging economic vitality in specific neighborhoods, and improving customer service. Once the team achieves impact in these areas, it will apply the innovation delivery approach to other mayoral priorities.

Internally Focused Innovation Offices
Innovation offices with internally focused missions typically pursue three types of goals:

- Establishing greater efficiencies

- Creating cultural change

- Establishing clear innovation processes

The latter two goals are often byproducts of an externally focused mission or an efficiency-related, internally focused mission and are rarely goals in themselves, however important.

Establishing greater efficiencies. The recession, scrutiny of government spending at all levels, and technological developments have caused innovation offices to concentrate on cost-saving measures and the creation of greater efficiencies as a primary focus. For example, the Commonwealth of Pennsylvania's Governor's Innovation Office established agency i-Teams to identify areas for improved efficiency and to execute projects accordingly.

Creating culture change. In creating opportunities for state employees to collaborate and in recognizing their achievements, the innovation office also creates an environment where pursuing new ideas is valued, thus creating cultural change within government.

Establishing clear innovation processes. Innovation offices have established formal programs encouraging government staff to pursue innovative projects and take risks. They do this by teaching skills, techniques, and strategies and establishing clear processes and protocols for those interested in developing new ideas. While rarely the explicit mission of the innovation office, programs like the Metro Government of Nashville and Davidson County's Ideas to Reality program aim to institutionalize innovation within government, instead of relying on the innovation office as the face of innovation. While acknowledging the difficulty of balancing flexibility with institutionalization, Nashville's Co-Chief Innovation Officer Yiaway Yeh explains that Ideas to Reality is a way to sustain the city and county's innovation program beyond the current mayoral administration and diffuse innovation throughout the government. A variety of structural models advance such programs and missions.

Structural Models

Innovation-specific functions within government take a variety of structural forms, reflecting available resources, intended goals, personnel preferences, political realities, and other factors (see Table 2). These structures include the following:

- Laboratory

- Facilitator

- Advisor

- Technology build-out

- Liaison

- Sponsored organization

These models are paired with a variety of reporting structures in different government organizations; structural models do not imply a particular placement within the organizational chart.

Most innovation offices are hybrids that embrace elements of multiple structures, though one is typically paramount. Some organizations have multiple innovation structures that operate in parallel, sometimes collaborating. This is the case in Philadelphia, which has a chief innovation officer tied to a technology function, a role distinct from a New Urban Mechanics group, which operates more like a lab to experiment with new approaches with internal and external partners. The Boston and Philadelphia New Urban Mechanics programs are discussed further at the end of this section.

Other innovation offices—especially at the federal level where agencies are often quite large—have innovation offices tied to specific departments within the organization. This is the case in

Table 2: Structural Models

Model	Description	Example Office
Laboratory	Autonomous group charged with developing new technologies, products, fixes, or programs, sometimes in partnership with other groups, often with public face	New Urban Mechanics, Boston and Philadelphia; and U.S. Department of Health and Human Services IDEA Lab
Facilitator	One person or small group working to convene government departments on internal improvements or external projects	Governor's Innovation Office, Commonwealth of Pennsylvania; and Chief Innovation Officer, Kansas City
Advisor	Small autonomous group or single person within government who provides departments with innovation expertise, assistance, and leadership on specific projects	Chief Innovation Officer, U.S. Department of Labor
Technology Build-Out	Innovation offices specifically tied to a technology function that regard technology as both a tool for encouraging innovation as well as the innovation itself	Chief Innovation Officer, City of Philadelphia; and Chief Innovation Technology Officer, City of Los Angeles
Liaison	Groups that reach out to designated communities outside of government, most often to the business community	Chief Innovation Officer, City of Davis; and Colorado Innovation Network
Sponsored	Innovation offices sponsored in whole or in part by third parties—universities, businesses, nonprofit organizations, philanthropic foundations or others	Office of New Urban Mechanics, Utah Valley University

the U.S. Department of Veterans Affairs, which has a Center for Innovation housed within the Office of the Secretary. At the same time, the VA's Veterans Health Administration maintains 19 Health Services Research and Development Centers of Innovation throughout the country.

In other cases, offices may shift from one model to another as priorities change and government leaders learn from past experiences. This is the case in the Louisville Metro Government, whose innovation office has undergone structural changes under the leadership of Ted Smith. Reflecting these changes, Smith's title changed multiple times: from director of innovation, to chief of the department of economic growth and innovation, to chief of civic innovation.

The flexibility inherent in these changes and the overlap, multiplicity, and hybrid nature of structural models in the government innovation office space allow offices to adapt and respond to changes, events, and lessons learned. At the same time, it is useful to delineate elements of how different structural approaches work practically, even if the examples provided typically represent one aspect of a larger set of activities and structures.

Laboratory

The laboratory model is most akin to corporate R&D functions, though government staff in such structures rarely conduct large-scale research projects, except in a few agencies like NASA in which research is a core piece of the agency's agenda. Instead, most laboratory models parallel the R&D model in their autonomy and ability to experiment in developing solutions around a set of strategic priorities. These groups may develop new technologies, products, fixes, or programs, sometimes in partnership with other groups. The public face of much of this work further distinguishes most government innovation laboratories from corporate R&D structures.

Examples of the laboratory model include Boston and Philadelphia's New Urban Mechanics programs, Montgomery County, Maryland's Innovation Program, and the U.S. Department of

Innovation Program
Montgomery County, Maryland

Leader: Dan Hoffman, Chief Innovation Officer

What it does: "The Innovation Program has four primary objectives:

- Build organization capacity

- Leverage ongoing initiatives and resources

- Facilitate continuous improvement and change management

- Communicate ideas and lessons learned" (mcinnovationlab.com)

Projects:

- **Text to Give**—As part of a county campaign to reduce panhandling and increase funding for homelessness prevention and outreach, residents will be able to donate via their mobile device.

- **Food Truck Catalyst Program**—a work group will begin to outline a pilot program that will make public space available for food truck vendors using the county's open data platform.

- **Justice Reinvestment Pilot Program**— a concept tested successfully in other jurisdictions that uses predictive analytics to help guide the investments made by corrections departments.

- **Body Worn Camera Pilot Program**—The Innovation Program is seeking to test several prototype video recording devices that could be worn by police officers. These devices would augment the current police cruiser-mounted devices.

- **Makerspace Prototype**—Montgomery County Libraries, the Department of Recreation, and the Innovation Program are in the planning phase of a Makerspace prototype project that seeks to enhance underused public space in libraries.

U.S. Department of Health and Human Services
Washington, D.C.

Leader: Bryan Sivak, Chief Technology Officer

What it does: "The foundational effort of the IDEA Lab is to disrupt the barriers between organizational siloes and practices that prevent people from working together. We do this by equipping HHS employees and members of the public with new methodologies, air cover and pathways for innovation." (www.hhs.gov/idealab)

Projects:

- **HHS Entrepreneurs**—partners federal staff ("Internal Entrepreneurs") working on high-risk, high-reward projects with external entrepreneurs for a 13-month fellowship.

- **HHS Ignite**—provides an opportunity for small teams to test out ideas that could dramatically improve how various offices across the department carry out work. Ignite teams have three months to flesh out their idea and test their solution to a vexing problem before presenting their product and results to senior leadership and pitching for continued funding and support.

- **HHS Innovators-In-Residence**—brings new ideas and expertise into HHS programs through collaboration between the Department of Health and Human Services and private sector not-for-profit organizations.

- **HHS Innovates**—identifies and celebrates internal innovation by employees. This contest recognizes and rewards good ideas, and also helps promote them across the department. To date, HHS employees have submitted nominations of innovations for nearly 500 staff-driven innovations, and employees have cast over 60,000 votes during the community voting phase.

Health and Human Services' IDEA Lab. Though they are both charged with more expansive activities than simply developing and piloting new projects, Boston and Philadelphia's New Urban Mechanics groups experiment with new approaches. Examples of this work include partnerships with the Public Works and Transportation Departments and external groups on infrastructure improvement apps like Street Bump and Adopt-A-Hydrant in Boston and of a civic feedback text messaging tool called Textizen in Philadelphia.

Montgomery County's Innovation Program bills itself as a "laboratory for civic improvement." In addition to other activities diffusing innovation throughout the county government, it pilots

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Governor's Innovation Office
Commonwealth of Pennsylvania

Leader: Joe Deklinski, Director

What it does: "The Governor's Innovation Office is dedicated to improving efficiency and productivity in state government operations. The office reviews, approves, and tracks initiatives by state agencies to save money, increase efficiency, and improve customer service." (www.innovation.pa.gov)

Projects:

• Presentation of Innovator Awards to state agencies

• Savings of over $500 million in efficiency projects, including:

  • Development of a system for identifying inmates attempting to collect unemployment compensation

  • Use of citizen volunteers in state parks

  • Implementation of electronic filing options by the Public Utility Commission

Mayor's Office of Civic Innovation
San Francisco, California

Leader: Jay Nath, Chief Innovation Officer

What it does: "We champion new ideas, tools, and approaches in city government. Our role is to create an environment that allows innovation to flourish in City Hall." (innovatesf.com)

Projects:

• **ImproveSF**—an online platform to provide opportunities for government and citizens to work together by connecting civic challenges to community problem-solvers. The city hosts a series of curated challenges that are open for anyone to submit ideas and win unique prizes.

• **Mayor's Innovation Roundtables**—explores burgeoning startup areas to help city government keep pace with what's next. This is an effort to celebrate the startup community in an environment of learning and discussion. Each roundtable focuses on an emerging sector and explores how these sectors are creating economic impact and social value.

• **SF Open Law**—Following the landmark Open Data Policy, the laws of San Francisco are released in technologist-friendly formats that can power new applications that enhance understanding, improve access, and lead to new insights about the law.

• **Living Innovation Zone (LIZ)**—aims to enhance the public realm with innovation, simplify the permitting process for projects in public space, and support innovators by providing real-world demonstration opportunities.

• **Entrepreneurship In Residence (EIR)**—Entrepreneurs work side-by-side with senior government officials on actual pain points and needs of the government.

a variety of specific projects to improve residents' lives. Recent innovations include an assistive technology project for students diagnosed with autism that allows them, for the first time, to operate in an inclusive grade-level setting.

At the U.S. Department of Health and Human Services' IDEA Lab, the lab solves problems through:

- Project solicitation for an internal investment pipeline

- "In-residence" programs that bring in temporary outside talent to tackle tough problems

- Strategic priority projects that address high-impact, cross-cutting issues

Among the projects pursued through the IDEA Lab are the "Blue Button," an initiative to provide Americans secure access to their health records for entities both internal to the government (e.g., the VA and Medicare) and in the private sector (e.g., pharmacies and insurance plans).

Facilitator

The facilitator model typically involves one person or a small group working internally with government departments and employees on internal improvements or external projects. Outputs may include specific projects as in the laboratory, but the focus is much more on enabling those within government to do their work more effectively by creating structures for collaboration and processes for project development. In some cases, facilitator models may include third-party partners, but partnerships with external groups are not the focus of the facilitator's work.

Examples of this model include the Commonwealth of Pennsylvania's Governor's Innovation Office and Kansas City, Missouri's chief innovation officer post. In Pennsylvania, the office director works with a small staff to build cross-departmental teams of agency staffers to advance specific efficiency-related projects. An example includes an effort to reduce the cost of file shipments between Human Relations Commission offices across the state through coordination with the state Department of Transportation's truck messenger service. In Kansas

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Center for Innovation, U.S. Department of Veterans Affairs
Washington, D.C.

Leader: Patrick Littlefield

What it does: The Center for Innovation introduces "innovative technologies, methods, and processes into the largest civilian cabinet agency, a nationwide organization of more than 300,000 employees who provide health care and benefits to over eight million Veterans." (www.innovation.va.gov/index.html)

Projects:

- **Industry innovations**—designed to give VA the opportunity to get the best thinking from the private sector to solve the department's most pressing challenges. VACI has held three Industry Innovation Competitions, resulting in nearly 800 ideas submitted across 15 topic areas.

- **Employee Innovations**—Employee Innovation Competitions give VA a mechanism to tap the ingenuity and innovative spirit of the workforce while providing innovators with funding and support to make their ideas a reality. Successful innovations are transitioned into regular practice for wider deployment.

- **Prize Challenges**—VACI has held three prize challenges so far: Blue Button Challenge, Project Reach, and Badges for Vets.

City, the chief innovation officer is charged with creating a culture change in government and enabling more efficient and effective service delivery. She builds innovation teams from across the city's departments around specific initiatives and offers additional capacity and perspective to the city and teams through initiatives like a young professionals' cabinet.

Advisor

The advisor model typically consists of a single person who provides expertise to different parts of the government organization on particular projects. He or she may also play a facilitation role, principally through matchmaking between groups within government, and may or may not bill departments for his work. However, in the advisor model, the innovation officer typically does not bring additional financial resources beyond his or her salary, instead relying on departments to provide funding for larger projects.

At the U.S. Department of Labor, the chief innovation officer—who occupies the first chief innovation officer post in a federal agency—operates on an advisory model, with some overlap with the facilitator function. Chief Innovation Officer Xavier Hughes spent the initial months of his tenure showcasing the value of his new office through pilot projects. After gaining buy-in from department heads, Hughes convened department heads to discuss needs, generating project ideas within particular departments and across them. Hughes describes his role this way: "I am a collaborator and facilitator, but I also offer expertise in IT modernization. I don't have a budget and I don't have anyone working for me. So it's all about power of persuasion and understanding the needs of the organization."

Technology Build-Out

Many innovation offices involve technology-related projects. Some government organizations have chief technology officers, with portions of their portfolios similar to the activities of innovation offices. However, a few government groups feature explicit innovation offices specifically tied to technology. In this model, technology is both a tool for encouraging innovation and the innovation itself. In most cases, the technology build-out model interfaces with other types of innovation-related personnel within government.

Examples include the City of Philadelphia's chief innovation officer and the City of Los Angeles' chief innovation technology officer. In Philadelphia, the chief innovation officer oversees the IT

Office of Innovation and Technology
Philadelphia, Pennsylvania

Leader: Adel Ebeid, Chief Innovation Officer

What it does: "The Office of Innovation and Technology (OIT) was established in August 2011 by Mayor's executive order. OIT oversees all major information and communications technology initiatives for the City of Philadelphia—increasing the effectiveness of the information technology infrastructure, where the services provided are advanced, optimized, and responsive to the needs of the City of Philadelphia's businesses, residents and visitors." (www.phila.gov/it/Pages/default.aspx)

Projects:

- **Open data**—Providing increased access to and transparency of data and information. The Open Data policy allows the city to publish collected data online and the public to participate in city agency decision-making processes.

- **KeySpots**—The Freedom Rings Partnership is a collaborative of nonprofit organizations, city agencies, and universities addressing the digital divide.

department while also leveraging the city's technological resources to broaden the reach of the organization through open data initiatives, public engagement programs, and strategic partnerships. Chief Innovation Officer Adel Ebeid, who previously served as chief technology officer of the state of New Jersey, took a tiered approach to his work, first working to make sure the IT department worked effectively and then working to serve his "clients"—the employees of the City of Philadelphia—in new, innovative ways.

In Los Angeles, the chief innovation technology officer works primarily on outward-facing projects like improving customer service using technology, and other technology-specific initiatives. He reports to the deputy mayor for budget, innovation, and excellence, who is responsible for resource allocation and thinking more broadly about innovation across city government.

Liaison

In the liaison model, the innovation office reaches out to designated communities outside of government, most often to the business community as a means of spurring economic development and bringing private sector expertise and resources to government. Innovation hubs at the municipal level are sometimes part of the liaison approach, but this structure includes a variety of projects and techniques. State and city innovation offices may seek to attract innovation-related businesses through streamlined processes for business' interaction with government or matchmaking on research projects with local universities. At all three levels of government, the liaison model may offer a means of circumventing inflexible procurement rules, building connections between start-ups and government through hackathons, challenges, and other means.

Examples of the liaison structure include the chief innovation officer in the City of Davis, California, and the Colorado Innovation Network in the state of Colorado. In Davis, the chief innovation officer is charged with conducting outreach to the technology business community along with the University of California-Davis, serving in an economic development role. The Colorado Innovation Network is more heavily invested in recruitment of new companies to the state, indexing the state for innovation, among other projects.

Sponsored

Sponsored innovation offices may be housed within government or outside it and typically have aspects of other models. However, they are sponsored in whole or in part by third parties—universities, businesses, nonprofit organizations, philanthropic foundations, or others. In

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Colorado Innovation Network

Leader: Michelle Hadwiger, Executive Director of Colorado Innovation Network

What it does: The Colorado Innovation Network (COIN) is "a catalyst for innovation. We are creating a physical and virtual network of global leaders that will encourage relationships to support the innovation ecosystem, grow companies, and create jobs." (www.coloradoinnovationnetwork.com)

Projects:

- **Colorado Innovation Network**—The network issues an innovation report measuring Colorado's innovation progress. The report evaluates innovation in Colorado across four categories—ideas, talent, capital, and entrepreneurship.

- **Glorious Failure**—In Search of Success Innovation Challenge was designed to showcase and accelerate innovators with high-growth potential ventures who are willing to share their lessons learned from obstacles and adversity.

some cases, support is short term and in other cases it is ongoing. Most often found at the local level where budgets are smaller and opportunities for third-party support are more realizable, sponsored innovation offices are different from the public-private partnerships that most innovation offices pursue. In sponsored organizations, a third party is intimately involved in the funding and strategic direction of the office as a whole, not on isolated projects.

Examples of sponsored innovation offices include the City of Memphis' Innovation Delivery Team; the Office of New Urban Mechanics at Utah Valley University; and the Office of Civic Innovation of the Louisville Metro Government, a city that also has an innovation delivery team sponsored by Bloomberg Philanthropies. In Memphis, the innovation delivery team is nearing the end of three years of exclusive support from Bloomberg Philanthropies and is transitioning to a mix of public/private support. In fact, all five of the pilot cities funded by Bloomberg Philanthropies are moving to public funding when their grants end and will no longer be sponsored offices.

Utah Valley University sponsors a regional affiliate of the New Urban Mechanics, leveraging university resources—especially student learning opportunities—for the benefit of both local governments in the region and the university. It includes an advisor approach in which local governments are billed for manpower provided by students and others in the university community. The university also serves as a broker to facilitate partnerships and coordinate change across the region. This iteration of New Urban Mechanics is tailored to spur innovation among smaller communities.

Louisville's Office of Civic Innovation receives funding from a nonprofit organization and from the city budget and includes elements of the laboratory model for developing solutions to address community needs. The office complements the work of other innovation-related programs in the city, including an innovation delivery team initially funded by Bloomberg Philanthropies.

Mayor's Innovation Delivery Team
Memphis, Tennessee

What it does: "The Mayor's Innovation Delivery Team is leading the way for groundbreaking public-private partnerships that can make enduring change in Memphis. Since starting its work in January 2012, the team has made remarkable progress in some of our most pressing urban challenges: reducing gun violence and restoring economic vitality to our core city neighborhoods." (innovatememphis.com/)

Projects:

- **MEMFix**—works with communities to redesign and temporarily activate specific city blocks over a weekend to demonstrate the "art of the possible." From bike lanes, walkability, and pedestrian access to community gardens, parks, and green space, MEMFix engages residents to showcase the potential for quality public areas and economic vitality.

- **MEMShop**—activates vacant storefronts for days, weeks, or months to help build local businesses and increase a community's visibility and vibrancy. MEMShop creates partnerships to activate spaces, test new business concepts, and provide business support services to help sustain and grow local businesses.

- **MEMMobile**—contributes up to $15,000 in forgivable loans to five mobile businesses. In order to be eligible for this funding opportunity, successful applicants have equity of 25% of total costs.

Innovation Incubators—New Urban Mechanics

According to its website, the New Urban Mechanics "serve as each City's innovation incubator, building partnerships between internal agencies and outside entrepreneurs to pilot projects that address resident needs. The Mechanics focus on a broad range of areas from increasing civic participation, to improving City streets, to boosting educational outcomes. The specific projects are diverse as well – from better designed trash cans to high tech apps for smart phones. Across all these projects, the office strives to engage constituents and institutions in developing and piloting projects that will re-shape City government and improve the services we provide." (http://www.newurbanmechanics.org/about-2/)

Then-mayor Thomas M. Menino founded the Mayor's Office of New Urban Mechanics in 2010, and Mayor Michael Nutter of Philadelphia established a Mayor's Office of New Urban Mechanics office in his city in 2012.

In 2014, Utah Valley University launched an affiliate of the New Urban Mechanics to serve towns and cities in its region. The three offices share a brand and a similar approach to partnerships, developing solutions, and piloting projects. In addition, the New Urban Mechanics serves as a knowledge-sharing network as leaders communicate with and learn from each other.

City of Boston, Massachusetts

Leader: Nigel Jacob and Chris Osgood, Co-Chairs

What it does: "Boston's Mayor's Office of New Urban Mechanics (MONUM) pilots experiments that offer the potential to improve radically the quality of city services. MONUM focuses on three major issue areas: Participatory Urbanism, Clicks and Bricks, and Education. To design, conduct and evaluate pilot projects in these areas, MONUM builds partnerships between constituents, academics, entrepreneurs, nonprofits and City staff." (www.newurbanmechanics.org)

Projects:

- **Citizens Connect**—This application for smartphones helps constituents make their neighborhoods better by giving them an easy tool to report service problems.

- **Community PlanIT**—Developed by the Engagement Game Lab at Emerson College, this platform explores how online games can complement in-person community meetings to deepen and broaden the engagement with residents in planning processes.

- **Street Bump**—a mobile app that helps residents improve their neighborhood streets. As they drive, the mobile app collects data about the smoothness of the ride; that data can provide the city with real-time information.

- **City Worker**—To help city staff better manage its infrastructure and respond to constituent requests, the city has developed a smartphone application to be used by city workers. This application allows workers to easily manage their daily work list and access and record information about the condition of city infrastructure such as street lights, trees, and roads.

Philadelphia, Pennsylvania

Leader: Story Bellows, Director

What it does: "Philadelphia's Mayor's Office of New Urban Mechanics (MONUM) pilots experiments that offer the potential to improve radically the quality of city services. To design, conduct and evaluate pilot projects in these areas, MONUM builds partnerships between constituents, academics, entrepreneurs, nonprofits and city staff." (www.newurbanmechanics.org/philadelphia)

Projects:

- **Launch of Textizen**—A civic feedback text messaging service

- **CityHow**—A project to share information across City Hall

- **The Philadelphia Social Enterprise Partnership**—A project to engage entrepreneurs in developing solutions to big social problems in the city.

Deciding to Build and Sustain Effective Innovation Offices

In determining whether and how to establish an innovation office, certain factors should be considered. These are presented here along with a brief listing of alternatives to innovation offices as methods for encouraging government innovation. While research shows an increased commitment to evaluating specific innovations, very few overall measures of innovation office effectiveness exist.[8] Yet there is a great hunger among practitioners for clear metrics to understand the value of innovation offices in fulfilling their missions.

Factors to Consider in Creating an Innovation Office

If they are to be effective, chief innovation officers and the groups they lead need to be empowered to be more than public relations stunts or window-dressing for larger problems. This requires political and practical support, as well as a clearly defined—though flexible—mission, established well before the office or entity is created. The decision to create a chief innovation officer post or an innovation group is not a small one and government leaders need to think carefully and strategically about what the group can offer and what kinds of support it will require. Interviewees consistently emphasize the need for careful planning and long-term vision from government decision-makers.

Among the most important factors that should inform decision-making processes in establishing and structuring innovation offices are the following:

- Mission

- Size and resources of the government entity

- Resources of potential partners

- Leadership and political strengths

- Existing structures and alternatives to innovation offices

Mission

A vague desire to encourage innovative practices to flourish within government is not a good enough reason to establish an innovation office. Nor will such a mission allow the innovation office to be effective. Instead, decision-makers must carefully consider the mission and desired impact of the innovation office and critically evaluate whether existing structures can perform this work effectively.

For example, if leaders hope to establish open data protocols and release data to the public, an innovation group may not be needed; an existing IT department may be well positioned to do this work if given additional resources. On the other hand, if leaders' main aim is to engage the public, then a new structure charged with bringing community members, technologists,

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8.   Sandford Borins traces this greater commitment to evaluation. See Borins 2014.

government workers, and others together to identify challenges and develop solutions may be appropriate.

The mission will, in turn, influence many different decisions related to the structure and resources of the innovation office. For example, an innovation office charged with an internally focused mission of producing greater efficiencies in government or of increasing cross-departmental collaboration will require leadership with a clear understanding of how government operates, capable of building deep, trusting relationships with department heads whose involvement with the initiatives is critical. In such cases, a respected career civil servant may be a more effective leader than someone from the private sector. On the other hand, if the mission of the innovation office is to be externally focused—for example to promote economic growth—a leader with connections to the business community may be a more prudent choice. The mission will inform other sorts of resources as well—from the budget of the group to the partnerships required.

Size and Resources of Government Entity

A commitment of real support from the government entity is crucial if the innovation office is to meet its mission. However, different missions require different resources and a clear assessment of available resources and the likelihood of their deployment should inform decision-making. Nearly all interviewees agree that assigning innovation office responsibilities to an existing employee on top of his or her other responsibilities makes it difficult for the employee to do either job well. But smaller governments unable to commit large funds to the innovation office might consider a structure that spans governments or agencies, or that resides in a third party. Governments that expect an administration change or are unable to obtain multi-year funding may also consider innovation office projects that are initially limited in scope, but with the ability to grow if additional resources become available.

Resources are not just financial. Decision-makers should also consider other needed and existing resources such as technologies, existing expertise among government employees and departments, other types of needed knowledge and the channels (like professional association membership) necessary to obtain them, and others. Early comparison between existing and needed resources allows for greater efficiencies and more effective communication and collaboration between the innovation office and other parts of government. It will also help determine what internal relationships and joint projects are necessary or desirable.

Resources of Potential Partners

Government leaders must also weigh the resources that potential partners bring to the table and the likelihood that those partners will be willing to deploy them on behalf of the innovation office and the mission it is trying to accomplish. Not all partnerships are worth pursuing, and not all partners are equally committed. Still, many interviewees found external resources valuable in the absence of government support. For example, the presence of a strong technology community that can be mobilized to develop technological solutions for a given problem may make an innovation office's dual mission of transforming the public's relationship with government while encouraging greater efficiencies through technology more realizable.

Such partnerships have implications for the orientation of the innovation office. For example, if the technology community signals interest in participating, it may make it less important to staff the office with internal technical experts, instead relying on the external community expertise. Or, if philanthropic support can be secured for an initial period of time, the innovation office may need to focus more explicitly on developing metrics in compliance with foundation specifications and may need to plan for the form the innovation office will take after the initial period ends.

On the other hand, partnerships take enormous effort to coordinate and government leaders should not presume that potential partners will want to contribute or that partners will be interested in pursuing the same objectives as the government innovation office. As a result, gauging the likelihood of such partnerships coming to fruition, and determining the scope and duration of the partnership and its accompanying resources, are essential before a decision is made about how to structure the office.

Leadership and Political Strengths

Politics can easily derail efforts to create an innovation office or render an existing innovation office ineffective. In considering whether to create a new group, decision-makers must assess the political will to support and sustain the innovation office. This evaluation is not a simple up-or-down listing of agreement or disagreement for the proposal for all concerned parties with power within the organization—elected officials, agency heads, department heads, or others. It also involves a clear understanding of the willingness and ability of such individuals and groups to commit to long-term sustainability, and the ability of the structure to survive a leadership change.

If long-term support is not possible—because an elected official is facing a tough reelection fight, for example—decision-makers may still be willing to create an innovation office. However, this lack of certain support in the long term may affect how the office is structured, staffed, and resourced. Decision-makers may decide to extend multi-year funding to an office through another organization either internal or external to the government entity. Or, if there are other political tensions—an ongoing feud between two department heads, for example—decision-makers may decide to pursue certain projects that fulfill the organizational mission while avoiding the tensions until the value of the office is demonstrated.

Alternatives to Innovation Offices

In some cases, government entities may find that existing departments, personnel, and other organizations interacting with government are already doing important work that might be part of an innovation office portfolio. In such cases, decision-makers must consider how to leverage these existing structures and exercise caution in not duplicating efforts. In some cases, decision-makers may believe that the creation of an innovation office is unwise, while in other cases, government leaders may decide to augment existing structures and resources for innovation with an innovation office.

There are many alternatives for encouraging innovation for those who decide an innovation office is not useful or achievable for their government entity. These are not covered in detail here, but include the following:

- An innovation and leadership training program for selected staff

- Membership in organizations that promote knowledge sharing around government innovation

- Changes in recruiting practices to attract different skill sets to government

- Public-private partnerships

- A host of other programs and projects

Like innovation offices themselves, alternatives for promoting innovation must correspond to the initiative's desired impact and mission. For example, government leaders interested in changing the incentives for innovating among government staffers might focus on developing an incentive

or recognition program. Leadership academies to train staffers from different departments and organizational levels to collaborate using innovative thinking may be a viable option if the goal is to give employees the tools necessary to develop and implement new approaches. On the other hand, if the goal of the innovation project is more externally focused, alternatives to innovation offices may encompass a different set of programs—a project to collaborate with university researchers on collecting data for a particular policy initiative or a crowdsourcing initiative to involve the public in fixing bugs on a technology initiative, for example.

In other cases, alternatives to innovation offices may be less project-oriented and involve different institutionalized structures. A chief technology officer, a chief data officer, or chief information officer and his or her staff may possess resources and the will to pursue innovation-related goals internally or externally, even if the innovation function is not an explicit piece of their portfolio. Or an existing public-private partnership may be used to advance a particular innovation-related goal.

Alternatives to innovation offices still require resources; in some cases they may require more funding, personnel, and political will to implement and sustain than established innovation offices. But they are typically also more flexible and specific, responding to a particular immediate need or goal, rather than signaling a general commitment to innovation over time. For some types of governments and in advancing certain priorities, such alternatives may be more effective than innovation offices.

At the same time, the innovation office itself encompasses many different options. Offices may be housed within a particular department, across an entire organization, or within a third party. In some cases they may even work across governments. They may develop solutions for internal or external impact, working with a constellation of actors within and outside government.

Innovation offices won't be the right choice for every government entity, but they represent a potentially powerful approach to encouraging government to work more effectively, efficiently, and responsively. Innovation offices have matured over the last five years as early experiments give way to long-term planning around sustainability and impact. Yet there is still much work to be done, especially in the areas of assessment and institutionalized knowledge-sharing.

Measuring Success and Identifying Failure

Once created, innovation offices need to show value to the government entities they serve, and demonstrate that they can fulfill the mission for which they were set up. Measuring how effectively the innovation office delivers on its promise is no easy task. Most innovation functionaries have few resources for evaluating their work, and few incentives for exposing challenges. Indeed, honesty and openness about failing projects and programs often threaten the sustainability of the innovation office and subject the political regime as a whole to scrutiny. A number of interviewees with longer tenure in the government innovation space think that government leaders are more willing to evaluate their work critically now as innovation offices become familiar fixtures in government and as external groups—particularly philanthropic foundations—provide structures and support for effective evaluation. At the same time, innovation officers cite a fundamental disconnect between the work that they perform in a necessarily fluid field and the notion of applying concrete metrics to that work. Many express concern that heavy evaluation could stifle innovation by disincentivizing risk-taking and consuming scarce resources.

While we understand these concerns, we also believe that if conducted and structured sensibly, sensitively, and thoughtfully, evaluation can help improve and sustain individual innovation offices, while providing models and lessons for the field as a whole. Doing this work requires

enormous flexibility—in developing measures and methods that capture relevant data, and in interpreting and applying those data throughout the innovation process. This may also mean changing targets and modifying metrics accordingly. It also requires transparency throughout the process. It is far easier for innovation officers to respond to criticism as a program unfolds than to have to defend decisions made long after the fact. Evaluation can be a tool for organizations as they make those intermediate adjustments.

For example, the Memphis Innovation Delivery Team initially set three indicators to measure economic vitality in each of three neighborhoods: commercial property vacancy rates, number of new businesses, and tax revenue. However, as it conducted its work, the team found that initially vacancy rates rose neighborhood-wide in response to blight remediation and activation actions deployed along key commercial corridors. This rise in vacancy was attributed to long-dormant properties coming back on the market in response to new activity and investment. To get a more accurate sense of impact, the team refined the boundaries of their measurement area to just those corridors where their activities were deployed and measured the results over time. While the metrics remained the same, the scope shifted, giving the team better insight into which policy initiatives were working. The team then saw a dramatic reduction in commercial vacancy rates in those areas where its work was targeted.

Metrics for effective evaluation will necessarily be unique to the particular innovation office, resources available, and specific projects undertaken. In addition, organizations must give careful thought not only to what kinds of data to collect but also to how they will apply those data in order to improve their work. Without a commitment to change, it is useless to undertake evaluations. Thus, the work of evaluation is highly contingent. There is still value in identifying very general areas of measurement tied to the different missions of innovation offices—those that focus on producing various types of change internal to government, and those that focus on producing various types of change external to government. Table 3 describes some ways that innovation officers can measure their progress on internal and external change.

Table 3: Sample Mission-Aligned Metrics

	Sample Goals	Sample Measures
Internal Change	Greater collaboration between departments	• Number of jointly proposed and executed projects • Resource allocation to collaborative projects as a percentage of departmental budgets to show priority and visibility of projects
	Greater efficiency in government processes and possible allocation of saved dollars to new projects	• Projections of cost saved over time, even with possible initial spending increases • Decline in staff time dedicated to executing targeted processes
	More willingness to take informed and reasonable risks, and to learn from failure	• Number of projects that are evaluated mid-course and changed or cancelled as a result • Number of opportunities for employees to share what they are learning from innovation-related projects within their government entity and with the field
	More systematized processes and funding opportunities for innovative projects	• Combined value of monetary and in-kind support for innovation-specific projects across the government entity • Number of employees trained in innovation thinking and processes
	Increased ability to attract top candidates from diverse backgrounds to government	• Diversity of platforms through which candidates learn of opportunities as compared with the past • Diversity of skill sets identified on job descriptions as compared with the past
External Change	Improved relationship between public and government	• Increasing scores on customer satisfaction surveys for targeted departments • Number of attendees at public events offered in coordination with the innovation office
	Improved relationship between business/organizations and government	• Number of businesses and organizations applying to partner with government entity compared with the past • Number and value of monetary and in-kind donations from businesses and organizations across the government entity
	Greater transparency in government decision-making	• Number of documents and other pieces of information about government decision-making made available to the public • Increasing number of downloads, views, data manipulation, or other means of accessing government-supplied information
	Greater accommodation of community need in service development and deployment	• Number and diversity of opportunities for the public to voice opinions on services offered and deployed • Number of projects changed, abandoned, or reassessed as a result of partner comment

Success Factors for Building and Sustaining Effective Innovation Offices

Innovation offices and chief innovation officer positions can have a profound and positive effect on internal operations, resource deployment, citizen engagement, and the types of services offered. At the same time, innovation offices may not be effective for every government or every goal. The following success factors can help those considering new or improved innovation offices. These success factors can chart a path forward and set realistic expectations about the ongoing support innovation offices need for short and long-term success.

Success Factor One: Commit to supplying real resources.

Innovation requires flexibility, adaptability, and change. At the same time, effective innovation offices require some institutionalization. Chief innovation officers and others in similar posts are adamant that a tangible, steady, and certain commitment of resources is essential from the outset. Without it, innovation office staff are forced to engage in difficult budget fights every year, enter into unwise partnerships, or rely on department heads skeptical of motives for basic funding, detracting from their ability to do the work they were charged with doing. A multi-year commitment is also important as it gives innovation offices the ability to build relationships and develop partnerships without fear of being on the chopping block before huge gains are realized.

This commitment of resources need not be large, and it does not just include money. Indeed, smaller commitments can encourage innovation offices to pursue creative partnerships. But resources must extend beyond the salaries of those involved. As an innovator at the municipal level puts it, "It would have been really nice to have been able to buy doughnuts for meetings that first year when city department heads were trying to figure out who we were." Without any budget to work with, she and her colleagues were forced to foot the bill themselves, or make asks to internal or external groups for limited resources to pursue small projects.

In many cases, innovation office leaders have been successful in identifying partnerships—particularly with the private sector or entrepreneurship community—or developing new programs such as fellows programs to generate additional resources. But these partnerships are rarely a substitute for institutionalized financial or human resources and should be undertaken with caution and careful planning and consideration for the goals, strengths, and weaknesses of those involved.

In addition, the political and practical fallout from pursuing new relationships with organizations that other government departments or parts of the agency have connections to can be damaging to all involved. Boston's New Urban Mechanics has been careful not to pursue foundation funding locally, instead targeting national funding streams that don't already support projects in the city. Nigel Jacob explains, "We wanted to make sure we weren't taking money from a Boston school or something."

Success Factors for Building and Sustaining Effective Innovation Offices

1. Commit to supplying real resources.

2. Choose leaders carefully, and invest in and provide appropriate support to those leaders.

3. Create a specific mission tied to specific impacts.

4. Communicate effectively with internal and external partners throughout the innovation lifecycle.

5. Find allies within government and committed partners outside of government.

6. Establish an innovation process from the outset, even if the exact details and specific projects change over time.

7. Seize opportunities to share lessons and information emerging from government innovation offices through both formal and informal networks.

Finally, a serious commitment of resources must be paired with long-term thinking about if and how the office will be made sustainable. In some cases—as in Kansas City, Missouri—a chief innovation officer post may no longer be necessary after the culture of innovation takes root in an empowered city staff. But even in such cases, it is important to consider what resources will be necessary to sustain the city's hard-won gains. Perhaps an employee recognition program needs funding, or a long-term volunteer pipeline for a young professionals' cabinet needs to be established. Developing these resources from the outset and creating plans for maintaining support are essential if the innovation office and its work are to flourish, adapt, and grow.

Success Factor Two: Choose leaders carefully, and invest in and provide appropriate support to those leaders.

There is no one office model, leader type, or reporting structure that best promotes innovation in government; circumstances, resources, politics, mission, and a host of other factors determine what office types are most effective. But in all cases, competent and flexible leadership within the innovation office and strong support from above are crucial to success. Without the full backing of agency, state, or city government officials—especially elected officials with the power to commit resources and with a public, bully pulpit to support the work of the innovation office—innovation offices are difficult to sustain.

This means that those working in the innovation office have meaningful access to top executives and that reporting structures include face-to-face time with that executive. In many cases, innovation office heads report to a chief of staff. While this arrangement allows for frequent updates, it is not a substitute for direct contact with a mayor, governor, or federal agency head. Such contact is essential for communication and the inclusion and adaptation of the innovation office's agenda into other administrative priorities. Furthermore, it signals a strong commitment to the office on the part of higher-ups, giving innovation office staff credibility in building relationships with others in the government agency or entity. In many cases, the inclusion of innovation office heads in department head meetings, or as members of the executive's cabinet, as is the case with Maryland's chief innovation officer, serve this important function.

At the same time, elected and appointed executives must create some public distance between themselves and the innovation office after an initial period of growth and development. This

helps to ensure that the office is capable of surviving an administration or agency head change. Because innovation offices are relatively new, there are few examples of how such transitions operate. But those on the verge of a transition are consistent in their view that if outsiders perceive the innovation office as the pet project of a prior executive, incoming officials are unlikely to continue the project. Exceptions occur when the office is so institutionalized that existing departments and external partners champion it, protesting loudly if the office is dismantled. Such was the case with the New Urban Mechanics in Boston, where a new mayor took office earlier this year.

Innovation office staff must also exhibit particular qualities if the office is to be successful. People from many different backgrounds thrive in innovation office leadership roles. However, whether they emerge from the private or public sector, it is important that leaders have knowledge and understanding of how government works. This helps ease the fears of career bureaucrats who may perceive innovation offices as threats to seniority rules, an invitation for layoffs undertaken in the name of efficiency, a commitment to technology over people, or other fears, especially initially. Not everyone has to have the long experience of Joe Deklinsi, the 35-year veteran of Pennsylvania state service, but Deklinski's long tenure is helpful in building partnerships within government and in lending credibility to the overall innovation effort.

Memphis Innovation Delivery Team Director Doug McGowen acknowledges that initially, building trust with partners was challenging. While his team brings great knowledge, expertise, and commitment to the work, without recent, local government experience it was difficult to build support within city government until the team was able to demonstrate its value. At the same time, a number of interviewees cite their experience in other sectors and their background in systems thinking as important as providing them an understanding of how government fits into the larger whole. Such broad experience can make it easier to build coalitions and develop strategic partnerships.

Competent leadership at the helm of innovation offices also requires flexibility, willingness to try new things, ability to work across wide coalitions, and a commitment to informed risk-taking. Facilitation, systems thinking, community organizing, and other skills can help. In the long term, though, competent leadership means an office that rises above personality and demonstrates the flexibility to learn and adopt different approaches to problems.

Success Factor Three: Create a specific mission, tied to specific impacts.

Government innovation offices have a wide range of priorities and underlying missions. Early offices often focused on small-scale technological tools to improve citizens' lives or engage citizens in new ways. Other early initiatives at the state level focused on identifying and implementing improved efficiencies within government. More recently, local and state governments have created innovation offices connected to economic development and business recruitment functions. And some federal agency innovation offices concentrate on or derive from White House-initiated directives around open data, transparency, and technology.

No one mission fits all government organizations, and missions may shift or evolve over time. But whatever it is, the mission of the innovation office must reflect available resources, experience, and circumstances. It must be more specific and meaningful than the vague goal of encouraging innovation in government. And it must be tied to the larger goals of the government entity. For example, the governor of Maryland identified a list of priorities for his administration, and the chief innovation officer's work is directly tied to them. Whether it is a reduction in gun violence, greater collaboration between businesses and government, poverty

alleviation, or the opening of government data to the public, a goal should be clearly stated from the outset. An underlying goal of improving service to the public, creating greater accountability in government, or promoting transparency may unify incremental project-related goals.

Secondary missions may emerge, but the focus should remain on achieving specific, targeted primary goals. Many of the innovation officers interviewed express a desire to change the culture of government in the long term, for example. But most realize that with limited resources and time, this impact could be achieved through the office's day-to-day work toward its primary goals. Sometimes tensions exist between these internal and externally facing goals, but ideally these missions should be related and dependent, though one should be primary. In many cases, the level of government, personnel strengths, needs of the organization, and commitments of the executive will play important roles in shaping the desired impacts of the innovation office. Regardless, haphazard pursuit of individual opportunistic projects without a commitment to a larger set of goals is rarely successful. It creates confusion about the value of the innovation office within and outside government and makes the case for longevity and sustainability difficult.

Success Factor Four: Communicate effectively with internal and external partners throughout the innovation lifecycle.

Effective communication at all stages of the innovation lifecycle and at all moments of the development of the innovation office helps to build trust, facilitates viable partnerships, and sets expectations. In many cases, sound communication involves transparency, but transparency alone is not enough. Communication must also be accessible. Some innovation officers involved in open data initiatives found that initial releases in formats inaccessible to the public or with usage cases undefined were a turnoff for many. Excessive use of legalese can have a similar impact. Transparency needs to be accompanied by an explanation of the value of the office and its initiatives. For example, the National Archives and Records Administration's (NARA) efforts to create "citizen archivists" allows the public to interact with the Archives' online catalog through tagging and transcription, among other activities. This not only assists NARA in critical activities, but also encourages and facilitates public engagement with NARA's holdings, ultimately demonstrating the value of online accessibility.

Communication must also be directed at the right audiences, especially partners, those targeted by the innovation office mission, and government workers impacted by the innovation office's work. A number of interviewees are critical of big, public launches for government innovation offices, press conferences, and press releases, particularly if the large-scale event is unaccompanied by parallel conversations with internal and external allies and potential allies. This lets outsiders set expectations, presuming that visible, outward-facing projects will be released quickly. This can be a tall order to fill, for innovation officers must get a lay of the land before developing and launching new products, programs, or approaches.

A splashy event to inaugurate an innovation office may also give the impression that those behind the project are interested primarily in generating positive publicity for a politician, undermining the good and difficult work government staffers are already doing. Similarly, the frequent releases of quotations and announcements to the press may alienate partners, making the work that the innovation office does in the future more difficult. As one innovation officer relates, "Some people are disappointed I have not emerged as the visible champion of innovation in this administration. But I can do a lot more if I am willing to share credit with people who are doing a lot of the work."

Doing so requires effective communication. Communicating progress and setbacks to partners and other stakeholders throughout the innovation process allows partners an opportunity to voice objections, propose fixes, and commit resources at various points throughout the process. Waiting until a project or process is completed to unveil it can create unanticipated problems. A department or the public may reveal that the approach taken is no longer so useful. A new need may have emerged. Political or administrative obstacles to the effective use of the approach may make project implementation questionable. Most importantly, stakeholders who may have improved the project or offered resources or unique perspectives will have been shut out. In such instances, the innovation office will experience the fallout long after the project is completed.

Success Factor Five: Find allies within government and committed partners outside of government.

Given the limited resources that government innovation offices have and the need to demonstrate value from the outset, innovation officers should initially aim to form a "coalition of the willing." Innovation officers routinely use this phrase, emphasizing that it requires enormous effort and considerable skill to convince skeptics within and outside government of the innovation office's merit, especially in the early stages as the office is still proving its worth. As Jeff Friedman, co-founder and former co-director of Philadelphia's Mayor's Office of New Urban Mechanics, explains, "It's impossible to change a large government organization immediately and in its totality. Initially, it's imperative to start small, then iterate towards the more substantial. Working opportunistically with people who 'get it'—a coalition of the willing—will enable the innovation office to be more productive and impactful, generate early quick wins, subsequently positioning itself to win over the hearts and minds of those less supportive initially."

This does not mean that chief innovation officers should embrace every willing potential partner. Instead, they should concentrate on recruiting and using allies who can bring resources, access, and attention to the work, who have a unique perspective on the mission of the project, or who may serve as a gateway to transforming skeptics into allies. This is particularly true in identifying external allies, who are often easier to recruit than those within government. Companies, nonprofit organizations, universities, and others often have particular interests in pursuing relationships, or are not able to commit needed resources. As a result, great care should be taken to ensure that the partnership is targeted, strategic, and beneficial to both parties. Nearly all innovation officers interviewed could point to at least one example in which a partner failed to deliver, was interested in pursuing goals or approaches that were out of sync with the needs of government, brought skills that did not help to advance the partnership, or expected a favor in exchange for their services. In many instances external partners were well-meaning, but lack of clear expectations and evaluation of what the partner brought to the relationship caused problems.

Still, if external partners are selected carefully and if external partnerships are structured strategically and maintained appropriately, they can have a profound impact on community and government support for the work that the innovation office is pursuing. External partners can publicize projects to their networks, generating greater usage and additional resources for the work that is being pursued. But it is important that government staffers are informed of this process and given real opportunities to participate. If not, internal partners may become alienated, resenting external partners and squaring off against them. While partners will shift depending on the project goals and strategy, chief innovation officers must remember that a commitment to relationship building and trust-building in dealing with external and internal partners is essential for the long-term success of the innovation office and the pursuit of the larger goals it is charged with meeting.

Success Factor Six: Establish an innovation process from the outset, even if the exact details and specific projects change over time.

Determining which projects to select to fulfill an innovation office's mission, and figuring out which partnerships and allocation of resources can best advance those projects, are among the biggest challenges chief innovation officers face. Establishing a clear protocol for piloting projects, programs, and approaches from the outset can help address those challenges. Guidelines about how selections for initiatives are made and transparency around processes for testing those initiatives give focus to the innovation office's work and provide clear entry points for allies to participate.

This also saves innovation office personnel time and political capital. Many interviewees describe how their office's first months and years of operation were devoted to an array of unrelated projects requiring different procedures, processes, and measures of success. Staff need to identify and develop an innovation process and model, whether it takes the form of a laboratory for testing new ideas, an incubation hub for developing fledgling projects, a project-based consulting service to departmental clients, a training initiative to scale innovation thinking, or another form. And clear criteria for the selection of projects—whether they relate to resources, administration priorities, desirable partners, or other things—should inform what types of projects are funneled through that pipeline.

Increasing the scale of projects over time can help in this process. A series of small-scale, quick wins in the beginning of an innovation office's life can help demonstrate the office's value and establish credibility. A number of interviewees describe how hackathons or other community events, or the development of a long-planned website, could play this role. At the same time, it is important to set the expectation that the office isn't just interested in creating new apps or hosting events, but in addressing big challenges. Thus, even small-scale projects pursued initially must fit into the larger set of criteria for project selection, serving the overall and incremental missions of the innovation office and the government entity it serves.

They must also provide opportunities for the public at large, community groups, businesses, departmental staff, or other targeted groups to participate. A number of proposed or executed projects resulted in products that were of little use, principally because the target audience had not been consulted or engaged through the innovation process. This points to the need for great flexibility in designing and piloting projects and metrics for success, even if the process protocol remains firm. It also indicates that iterative processes are most useful, allowing multiple opportunities to pull the plug or rethink a project before enormous resources are expended. The Montgomery County Innovation Program's list of projects with accompanying statuses, descriptions, and desired outcomes offers one model for transparency around the innovation process, including failures.

Success Factor Seven: Seize opportunities to share lessons and information emerging from government innovation offices through both formal and informal networks.

There is no one entity that catalogs government innovation offices or that facilitates communication between them. In part, this is because the missions, personnel, and projects pursued by innovation offices are so diverse. Depending on their backgrounds, activities, and partners, chief innovation officers rely on existing formal networks designed for other purposes or create

informal networks of their own to get information about new approaches, discuss challenges, and share what they are learning with others in the field.

At the federal level, innovation officers are often part of the Presidential Innovation Cohort. Those at the municipal level are often involved in Code for America or communicate with Bloomberg Philanthropies' Innovation Delivery Team grantees. Innovation officers at all levels of government who have a technology focus often share information at conferences for government technologists.

The diversity of the information-sharing forums used by innovation officers, and the lack of intersection between these networks, suggest a need for a unified platform for sharing learnings, especially as the government innovation space expands and becomes more institutionalized. Many interviewees describe similar projects, and while the circumstances surrounding projects are often place and time-specific, there is much that innovation officers can learn from one another. Agencies that do share information and approaches with other government innovation leaders find that there is a great deal of interest. A case in point is the National Archives and Record Administration's social media and crowdsourcing pointers for other federal agencies. Yet most do not have the resources or interest to publicize learnings, especially when it comes to challenges. That is why an organization or other body to coordinate private conversations around sensitive issues, connect government innovation professionals, and distribute key learnings from this space is so essential.

Conclusion

The effectiveness and value of an innovation office are unique to the government organization it serves. Not all structural models, projects, or leadership types are appropriate for all missions, and a host of other factors including community needs and attitudes, political will, financial resources, and existing structures within and outside government will affect how the innovation office operates and the impact that it has. Still, the spectacular growth of the innovation function at all levels of government shows the need to understand, categorize, and assess the government innovation office space as a whole, not just in relation to individual governments or projects. This report presents a first step.

While innovation offices are here to stay and many have already demonstrated their value and potential, such offices, and chief innovation officer positions, are just one tool in a large array of programs, processes, and structures for advancing innovation in government. However structured and in support of whatever mission, innovation offices are not the right approach for every government organization. That is why it is so crucial that researchers continue their work to understand the innovation process within government and to evaluate strategies for realizing it. Governments may look to a variety of initiatives and structures as alternatives to innovation offices, many of which are documented in reports like this one.

Appendix I: Interviews

The bulk of this research derives from phone interviews with those in the field—primarily government chief innovation officers or other innovation functionaries, but also journalists, philanthropists, and others with a broader perspective on innovation offices in government. Phone interviews covered the following topics: history and background of the innovation office and leadership, office structure, assessment and evaluation, and recommendations. We conducted phone interviews between April 2014 and July 2014 with the following individuals:

1. Story Bellows, Director, Mayor's Office of New Urban Mechanics, City of Philadelphia
2. Rick Cole, Deputy Mayor for Budget and Innovation City of Los Angeles
3. Joe Deklinski, Director, Governor's Innovation Office, Commonwealth of Pennsylvania
4. Katie Appel Duda, Government Innovation Team, Bloomberg Philanthropies
5. Adel Ebeid, Chief Innovation Officer, City of Philadelphia
6. Luke Fretwell, Founder, GovFresh
7. Jeff Friedman, Former Co-Director and Co-Founder, Mayor's Office of New Urban Mechanics, City of Philadelphia
8. Michelle Hadwiger, Executive Director, Colorado Innovation Network, State of Colorado
9. Ashley Z. Hand, Chief Innovation Officer, City of Kansas City, Missouri
10. Dan Hoffman, Chief Innovation Officer, Montgomery County, Maryland
11. Alexander Howard, Columnist, TechRepublic; and Founder, E Pluribus Unum
12. Xavier Hughes, Chief Innovation Officer, U.S. Department of Labor
13. Nigel Jacob, Co-Chair, Mayor's Office of New Urban Mechanics, City of Boston
14. Patrick Littlefield, Center for Innovation, U.S. Department of Veterans Affairs
15. Doug Matthews, Chief Communications Director, City of Austin, Texas
16. Doug McGowen, Director, Mayor's Innovation Delivery Team, City of Memphis, Tennessee
17. Jay Nath, Chief Innovation Officer, City and County of San Francisco
18. Luke Peterson, Faculty Director, Office of New Urban Mechanics, Utah Valley University
19. Michael Powell, Chief Innovation Officer, State of Maryland
20. Bryan Sivak, Chief Technology Officer, U.S. Department of Health and Human Services
21. Ted Smith, Chief of Civic Innovation, Louisville Metro Government, Louisville, Kentucky
22. Meredith Stewart, Management and Program Analyst, Office of Innovation, National Archives and Records Administration
23. John Tolva, Former Chief Technology Officer, City of Chicago
24. Rob White, Chief Innovation Officer, City of Davis, California
25. Yiaway Yeh, Co-Chief Innovation Officer, Metro Government of Nashville and Davidson County, Tennessee

Appendix II: Additional References

In addition to the literature cited in the report, these references can serve as resources for those interested in establishing or improving government innovation offices:

Bloomberg Philanthropies. January 2014. *Transform Your City through Innovation: The Innovation Delivery Model for Making It Happen*. New York: Bloomberg Philanthropies. Available online at http://www.bloomberg.org/content/uploads/sites/2/2014/04/IDT-Playbook-full.pdf.

Borins, Sandford. 2006. *The Challenges of Innovating in Government*. 2nd ed. Washington: IBM Center for The Business of Government. Available online at www.businessofgovernment.org/report/challenge-innovating-government.

Borins, Sandford. 2014. *The Persistence of Innovation in Government: A Guide for Innovative Public Servants*. Washington: IBM Center for The Business of Government. Available online at http://www.businessofgovernment.org/report/persistence-innovation-government-guide-innovative-public-servants.

Christensen, Clayton. 1997, reprint 2003. *The Innovator's Dilemma: The Revolutionary Book That Will Change the Way You Do Business*. New York: Harper Collins.

Kay, Luciano. 2011. Managing Innovation Prizes in Government. Washington: IBM Center for The Business of Government. Available online at http://www.businessofgovernment.org/report/managing-innovation-prizes-government.

Lepore, Jill. June 23, 2014. "The Disruption Machine: What the gospel of innovation gets wrong." *New Yorker*. Available online at http://www.newyorker.com/magazine/2014/06/23/the-disruption-machine.

Mulholland, Jessica, and Noelle Knell. March 28, 2013. "Chief Innovation Officers in State and Local Government (Interactive Map)." *Government Technology*. Available online at http://www.govtech.com/local/Whos-Making-Innovation-Official.html?utm_source=relatedandutm_medium=directandutm_campaign=Whos-Making-Innovation-Official.

Parsons DESIS Lab. Fall 2013. "Gov Innovation Labs Constellation 1.0." Available online at http://www.scribd.com/doc/191296032/Gov-Innovation-Labs-Constellation-1-0.

Usselman, Steven W. November 11, 2013. "Research and Development in the United States since 1900: An Interpretative History." Economic History Workshop Working Paper. New Haven: Yale University. Available online at http://economics.yale.edu/sites/default/files/usselman_paper.pdf.

Appendix III: Selected List of Government Innovation Offices
(as of September 2014)

The landscape of government innovation offices is remarkably fluid; new offices appear on a near-monthly basis and others develop new missions and structures or welcome new personnel. As such, this list of government innovation offices is a work in progress, representing a snapshot in time. It aims to be comprehensive as of the date of publication, but it may be incomplete.

This list includes innovation offices and posts attached to government entities in the United States only. Not included here are government innovation offices in other countries or within international organizations.

This list includes chief innovation officers and innovation offices, rather than groups or posts that sometimes pursue innovation-related activities and strategies. The list of chief technology officers, chief data officers, chief information officers, chief digital officers, and others is long, and many are doing impressive work. We interviewed a number of people who currently serve or previously served in such roles and include a few specific initiatives under the purview of these posts on our list in cases in which initiatives take the form of an innovation office structure. However, we have maintained our focus on innovation-specific offices.

We also do not list innovation commissions, panels, committees, task forces, strategies, funds, or zones. Many cities, counties, states, and federal agencies have advisory panels that draw on expertise from within or outside government, have established economic development mechanisms through zones, or have created alternative structures to promote innovative activity, such as funds. While these groups may sometimes draw on existing personnel or may have their own budgets, they are not offices. They are therefore not included on this list.

A number of government entities have personnel that include the word "innovation" in their titles, but whose portfolio is substantively something else or who exist at a low level in the organization. We have not included these on our list, though many are working to advance innovation in government.

We have included a number of government R&D groups at the local level, but we have not aimed to be comprehensive in our list of R&D groups at the federal level. This is principally because these groups are highly contingent on subjects studied, require significant funding and are not highly replicable. As such, they are not good models for most government entities interested in developing innovation offices.

Finally, for the most part, this list includes only government-wide innovation offices, not posts or offices housed within a department or other subset of government. For example, we have not included innovation offices within public school systems, state economic development departments, or federal offices that reside within larger agencies, such as the Office of Innovative Program Delivery within the Federal Highway Administration at the U.S.

Department of Transportation, or the chief innovation officer within the Health Affairs group in the U.S. Department of Defense. We have made exceptions to this rule in cases in which offices represent a very large department or agency within a larger agency.

Local

City	Office	Website	Contact
Atlanta, Georgia	Mayor's Innovation Delivery Team	http://www.atlantaga.gov/index.aspx?recordid=2677&page=672	Kristin Canavan Wilson
Austin, Texas	Chief Innovation Officer	http://www.austintexas.gov/news/city-manager-ott-names-first-chief-innovation-officer	Kerry O'Connor
Boston, Massachusetts	Mayor's Office of New Urban Mechanics	http://www.newurbanmechanics.org/boston/	Nigel Jacob and Chris Osgood
Centennial, Colorado	Chief Innovation Officer	http://www.centennialco.gov/staff-directory.aspx	Dave Zelenok
Chattanooga, Tennessee	Chief Innovation Officer	—	Jeff Cannon
Chicago, Illinois	Mayor's Innovation Delivery Team	http://www.cityofchicago.org/city/en/depts/mayor/press_room/press_releases/2013/october_2013/mayor_emanuel_announcesinnovativecompetitiontoreduceenergyusagei.html	Charles West
Chicago, Illinois	Department of Innovation and Technology	http://www.cityofchicago.org/city/en/depts/doit.html	Brenna Berman
Davis, California	Chief Innovation Officer	http://city-managers-office.cityofdavis.org/press-releases/the-city-of-davis-and-techdavis-launch-a-unique-public--private-partnership	Rob White
Ferndale, Michigan	Chief Innovation Officer	http://www.ferndalemi.gov/Government/Departments/City_Manager/Innovation	Joseph Gacioch
Hennepin County, Minnesota	Chief Innovation Officer	—	Scott Martens
Kansas City, Missouri	Chief Innovation Officer	http://kcmayor.org/newsreleases/mayor-james-announces-the-appointment-of-ashley-z-hand-as-the-citys-first-chief-innovation-officer	Ashley Z. Hand
Los Angeles, California	Chief Innovation Technology Officer	http://www.lamayor.org/mayor_garcetti_appoints_peter_marx_as_chief_innovation_technology_officer	Peter Marx
Louisville, Kentucky	Office of Civic Innovation	http://www.louisvilleky.gov/Mayor/News/2014/7-23-14+mayor+announces+civic+innovation+and+other+staff.htm	Ted Smith
Louisville, Kentucky	Mayor's Innovation Delivery Team	http://mayor.louisvilleky.gov/strategicplan/basic-page/bloomberg-innovation-delivery-teams	Margaret Handmaker
Memphis, Tennessee	Mayor's Innovation Delivery Team	http://innovatememphis.com/	Doug McGowen
Montgomery County, Maryland	Chief Innovation Officer	http://mcinnovationlab.com/	Dan Hoffman

City	Office	Website	Contact
Montrose, Colorado	Department of Innovation and Citizen Engagement	http://www.cityofmontrose.org/568/Innovation-Citizen-Engagement	Virgil Turner
Nashville and Davidson County, Tennessee	Office of Innovation	http://www.nashville.gov/Mayors-Office.aspx	Yiaway Yeh and Kristine LaLonde
New Orleans, Louisiana	Mayor's Innovation Delivery Team	http://www.bloomberg.org/program/government-innovation/innovation-delivery-teams/	Charles West
New Orleans, Louisiana	Office of Information Technology and Innovation	http://www.nola.gov/iti/	Ed Kerkow
New York, New York	Chief Information and Innovation Officer	http://www.nyc.gov/html/doitt/html/open/open.shtml	Rahul Merchant
Philadelphia, Pennsylvania	Mayor's Office of New Urban Mechanics	http://www.newurbanmechanics.org/philadelphia/	Story Bellows
Philadelphia, Pennsylvania	Office of Innovation and Technology	http://www.phila.gov/it/Pages/default.aspx	Adel Ebeid
Pittsburgh, Pennsylvania	Chief of Performance and Innovation	http://pittsburghpa.gov/mayor/executive-team/debra-lam	Debra Lam
Redlands, California	Department of Innovation and Technology	http://www.cityofredlands.org/DoIT/CIO	Danielle Garcia
Riverside, California	Chief Innovation Officer	http://www.riversideca.gov/press_releases/2013-0318-l-deesing-press-release.pdf	Lea Deesing
San Francisco, California	Mayor's Office of Civic Innovation	http://innovatesf.com/	Jay Nath
San Leandro, California	Chief Innovation Officer	http://www.sanleandro.org/civica/press/display.asp?layout=1&Entry=289	Deborah Acosta
Seattle, Washington	Office of Policy and Innovation	—	Robert Feldstein
St. Paul, Minnesota	Director of Budget and Innovation	http://www.stpaul.gov/index.aspx?NID=5252	Scott Cordes
Utah Valley University	Office of New Urban Mechanics	http://portfolio.newurbanmechanics.org/utah-valley/	Luke Peterson

State

State	Office	Website	Contact
Colorado	Chief Innovation Officer	http://www.coloradoinnovationnetwork.com/	Mark Sirangelo
Maryland	Chief Innovation Officer	http://www.governor.maryland.gov/staff.html	Michael Powell
Massachusetts	Chief Innovation Officer	http://www.mass.gov/anf/commonwealth-innovation/biotonyparhamgovernmentinnovationofficer.html	Tony Parham
North Carolina	Innovation Center	http://icenter.nc.gov/	@ncicenter
Pennsylvania	Governor's Innovation Office	http://www.innovation.pa.gov/Pages/default.aspx#.U9KStqhX-uY	Joe Deklinksi

Federal

Agency	Office	Website	Contact
Centers for Medicare and Medicaid Services	Innovation Center	http://innovation.cms.gov/	@CMSinnovates
Domestic Policy Council	Office of Social Innovation and Civic Participation	http://www.whitehouse.gov/administration/eop/sicp	Jonathan Greenblatt
Environmental Protection Agency	Chief Innovation Officer, Office of Research and Development	http://www.epa.gov/sciencematters/december2011/executivemessage.htm	Peter W. Preuss
General Services Administration	18F	https://18f.gsa.gov/	Kathy P. Conrad and Lena Trudeau
General Services Administration	Digital Services Innovation Center	http://gsablogs.gsa.gov/dsic/	Gwynne Kostin
National Aeronautics and Space Administration	Administrator for Innovation	—	Rebecca Keiser
National Archives and Records Administration	Office of Innovation	http://www.archives.gov/about/organization/org-detail.html?org=V	Pamela Wright
National Science Foundation	National Innovation Network	http://www.nsf.gov/news/special_reports/i-corps/index.jsp	Don Millard
Office of Personnel Management	Innovation Lab	—	Abby Wilson
Social Security Administration	Office of Strategic Planning and Innovation	—	Regina B. Smith
U.S. Agency for International Development	Development Innovation Ventures	http://www.usaid.gov/div	Jeff Brown
U.S. Department of Commerce	Office of Innovation and Entrepreneurship	http://www.commerce.gov/news/press-releases/2014/05/01/us-secretary-commerce-penny-pritzker-announces-new-director-office-in	Julie Lenzer Kirk

Agency	Office	Website	Contact
U.S. Department of Education	Office of Innovation and Improvement	http://www.ed.gov/oii-news/about-office-innovation-and-improvement	Nadya Chinoy Dabby
U.S. Department of Energy	Energy Innovation Hubs	http://energy.gov/science-innovation/innovation/hubs	Patricia M. Dehmer
U.S. Department of Health and Human Services	IDEALab	http://www.hhs.gov/idealab/	Bryan Sivak
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U.S. Department of Veterans Affairs	Office of Innovation	http://www.innovation.va.gov/index.html	Patrick Littlefield
White House	Office of Science and Technology, Technology and Innovation Division	http://www.whitehouse.gov/administration/eop/ostp/divisions/technology	Tom Kalil
White House	Presidential Innovation Fellows	http://www.whitehouse.gov/innovationfellows	Nick Sinai

Acknowledgments

About the Authors

Rachel Burstein is Academic Director at Books@Work, a public humanities nonprofit organization.

Dr. Burstein previously served as a Research Associate at the New America Foundation's California Civic Innovation Project. In her role at the New America Foundation, she studied perceptions of innovation among government staffers, knowledge and innovation diffusion, and civic innovation theory and practice at the local level. She authored and co-authored a number of reports, including "The Case for Strengthening Personal Networks in California Local Governments," "The 2050 City: What Civic Innovation Looks Like Today—And Tomorrow" and "Creating Networked Cities." Dr. Burstein also published articles on the topic of civic innovation for a number of popular publications, including *Slate*: that article, "Most Cities Don't Need Innovation Offices," provided the impetus for this report.
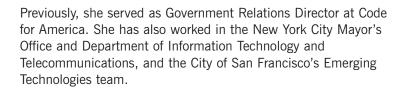
Dr. Burstein holds a PhD in History from the City University of New York Graduate Center. Her dissertation examines the public relations strategies of American labor unions in the postwar period. She graduated Phi Beta Kappa and with High Honors from Swarthmore College with a BA in History.

Alissa Black is principal of investments at Omidyar Network. At the Omidyar Network, she is working to improve the relationship between citizens and government through driving sector-level change in government and the emerging civic technology ecosystem.

Prior to joining Omidyar Network, Black was director of the California Civic Innovation Project (CCIP) at New America Foundation, where she was responsible for developing the project's strategy and managing the research portfolio. The CCIP explored the use of innovative technologies, policies, and practices that engage residents in public decision-making throughout California.

Previously, she served as Government Relations Director at Code for America. She has also worked in the New York City Mayor's Office and Department of Information Technology and Telecommunications, and the City of San Francisco's Emerging Technologies team.

Black earned a bachelor's degree in environmental studies with a minor in anthropology from the University of California, Santa Barbara, and a master's degree in urban planning from the Wagner School of Public Service at New York University.

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