

Civic Tech For Urban Collaborative Governance

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The civism movement is gaining momentum across the land. In many cities, the so-called public-private partnerships are developing whereby business, civic, and political leaders are working together on civic problems. New networks of concerned citizens dealing with safety, education, health care, housing, and other public policy matters are forming (Fredrickson 1982, 506).

INTRODUCTION

Discussions of civic engagement and public-private partnerships are not new. For quite some time, diverse literatures including public administration, political science, and business have developed frameworks, metrics, and norms to assess public-private partnerships. The end goal of these partnerships is often to generate a form of Moore's "public value" (Moore 1995; 2013). In particular, these cross-sector collaborations can accomplish precisely that which a single sector cannot do alone (see discussions in Rogers and Weber 2010, 547; Bryson, Crosby, and Stone 2006).

The rise of networks and information communication technologies (ICTs) represents a new suite of opportunities and challenges for multi-sector partnerships. Digital technologies offer, at least in theory, a more egalitarian public sphere where community residents can be empowered not as passive recipients of governance, but as active participants in the co-creation of policies (for discussion see Kettl 2015, 225). During the early 2000s there was an initial wave of utopian thinking about technology's ability to reform politics. As Joe Trippi declared in 2004: "The Internet is the most democratizing innovation we've ever seen – more so than even the printing press."

Since 2004, the intervening years have made manifest the political and institutional limitations of technology transforming the public sector. "Those living on 'political science street' tend to be quite skeptical because they think technology optimists are inattentive to the mainsprings of politics: interests and institutions." (Fung, Gilman, Shkabatur 2013, 31). Nabatchi (2010, 390) suggests:

In particular, we need to examine the democratic implications of networked governance, how the structures and patterns of the new governance affect the balance of bureaucratic and democratic ethos, and how this balance affects, both positively and negatively, the citizenship and democratic deficits. Likewise, we need to examine the role citizens can play in networked government and collaborative governance.

This article aims to contribute to a burgeoning field of "civic technology" to identify precise pathways through which multi-stakeholder partnerships can foster, embed, and encourage more collaborative governance, outlining a research agenda to guide next steps. Instead of looking at technology as a civic panacea or, at the other extreme, as an irrelevant force, this article takes seriously both the democratic potential and the political constraints of the use of technology for more collaborative governance. The article begins by delineating contours of a *civic* definition of technology focused on generating public good, provides case study examples of civic tech deployed in America's cities, raises research questions to inform future multi-stakeholder partnerships, and concludes with implications for the public sector workforce and ecosystem.

CIVIC TECH FOR COLLABORATIVE GOVERNANCE

Civic tech for collaborative governance differs from "e-government," which is the application of technology to improve government efficiency or to modernize systems. Civic tech used for governance is less focused on finding the next "killer app" than on employing technology in order to achieve more responsive and inclusive governance. As such, this article situates civic tech for democratic aims in dialogue with literatures examining innovative and collaborative governance (for discussions, see Moore and Hartley 2008; Sørensen and Torfing 2011; Ansell and Gash 2007).

The literature on collaborative governance focuses on the types of institutional arrangements to engage citizens in decision making. Collaborative governance at its core "aims to empower, enlighten, and engage citizens in the process of self-government" (Sirianni 2006, 39). One characteristic of collaborative governance is that it ensures that diverse stakeholders engage in a "collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets" (Ansell and Gash 2007, 544). Collaborative governance literature, then, is a body of work that could provide a theoretical framework to assess the types of institutional arrangements that could foster such civic opportunities.

Within definitions of collaborative governance are questions about the precise role and form of civic engagement. Cooper, Bryer, and Meek (2006) use the term citizen-centered collaborative public management to "emphasize the role of the public in a collaborative management process" (Cooper, Bryer, and Meek 2006, 76). Within this definition is a call for more deliberative forms of civic engagement, as opposed to

adversarial or electoral democratic engagement. Research demonstrates that deliberative approaches can build government trust in citizens (for discussions see Yang 2005). Despite the new opportunities for collaborative networks in governance, Agranoff (2006) demonstrates that the vast majority of public managers still spend their time working within bureaucratic hierarchy.

How does civic technology fit into a paradigm of collaborative governance? Civic technology is an emerging field lacking a universally accepted definition. This causes confusion about its contours—particularly to what extent it is public and to what extent it is private—but also provides opportunities for creativity. According to a Microsoft vice president, “Broadly defined, civic tech ranges from engagement between the city government and its population on social platforms, all the way to enterprise solutions that offer deep government IT problem-solving.”¹

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Despite the lack of a coherent definition, civic tech continues to grow as a field. According to the Omidyar Network, \$493 million was spent on civic technology in the United States in 2015 alone.² This figure is just a piece of the \$25.5 billion the government spends on external information technology (IT). The International Data Corporation report defines civic tech as merging “technology innovation with civic purpose” and cites its rapid growth, particularly in state and local government.³ One area of this form of civic tech is upgrading legacy government systems, generating citizen-facing services, and ensuring websites have mobile access. Another is creating greater access to, and transparency of, data and policy performance.

Further, contentiousness among stakeholders about definitions evidently has not dampened neither the excitement nor the funding of the civic tech sector. In 2013, the Knight Foundation released a report showing that the number of civic tech organizations had grown 23% from 2008 to 2013, with a total investment of more than \$431 million. The report cited two broad themes: community action and open government. Within these categories fell collaborative consumption, government data, crowd funding, community organizing, and social networks. Furthermore, the Omidyar Network outlined three broad categories of civic tech including citizen to citizen, citizen to government, and government technology.⁴

Some definitions of civic technology include for-profit entities while excluding publicly funded projects or the role of government as a civic incubator and technology innovator. Numerous publicly funded projects in civic tech began with the establishment of the US Government first web portal, FirstGov.gov, during the Clinton-Gore Administration. Other significant projects were the Millennium Challenge Corporation in 2004, and the passage of the E-Government Act of

2002, which made the Office of E-Government and Information Technology a permanent fixture within the White House Office of Management and Budget (OMB).

The Obama administration continued to leverage digital tools and technology talent into the federal government starting with the Open Government Initiative, to “direct executive departments and agencies to take specific actions to implement the principles of transparency, participation, and collaboration.”⁵ Scholars have noted that while open government information and open data foster transparency, they do not necessarily encourage deliberation and collaborative policy making (for discussions see Zavattaro, French, and Mohanty 2015; and Reddick 2011; Reddick and Norris 2013).

Obama also launched the Presidential Innovation Fellows to enable “tours of duty” for those with technology skills. Obama’s Administration also launched the Office of Citizen Services and Innovative Technologies (est. 2010), 18F (est. 2014),

and the United States Digital Service (est. 2014) to deploy teams throughout agencies to optimize user-centric service delivery.⁶ These teams include designers, programmers, and digital experts whose task is to modernize service delivery in order to enhance the experiences of everyday people.

Based on their success within the government, in 2016 the Obama Administration created a new unit within the General Services Administration called the Technology Transformation Service to institutionalize these reforms and create a more sustained pipeline for drawing external ICT talent into the federal government. President Trump announced the creation of an Office of American Innovation.⁷ As the next section will describe in detail, these innovations are also occurring at the municipal government level.

Leveraging civic tech for collaborative governance requires not only modernizing government services, but also changing the traditional relationship between citizens and the state. This paper proposes to narrow the definition of civic tech to put democratic institutions front and center. It defines civic tech as: *technology that is explicitly leveraged to increase and deepen democratic participation*. This definition includes both the use of new digital tools specifically designed to promote democratic deepening and the repurposing of old digital tools with the new objective of deepening democracy. By design, this is a stylized definition that excludes technology used solely for modernization or market gain.

METHOD

The purpose of this article is to begin a rigorous, detailed study into the nascent field of civic tech applied to collaborative and inclusive governance. Innovations in urban governance are occurring so rapidly that there is a dearth of empirical research. This exploratory article is a first step towards building

a broader body of knowledge about what is working on the ground and why. It offers three relevant cases of civic tech and its intersection with collaborative governance: innovation units, open data, and civic crowdfunding. These three cases reflect mixed methods research over several years that include case study research in 10 cities as well as roughly 150 in-depth structured and semi-structured interviews with public managers and citizens. These cases do not aim to offer a complete evaluation of social impact nor to comprise a representative sample. Instead, they are offered as particular examples of innovations that are changing governance processes but are not currently accounted for by existing theories.

CIVIC TECH FOR COLLABORATIVE GOVERNANCE: CASE STUDIES

Innovation Units: Boston New Urban Mechanics

Chris Osgood joined the Boston Mayor's office as part of Harvard Business School's Leadership fellows program, which

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places up to 20 fellows a year to work in the nonprofit or public sector.⁸ During the fellowship year, Osgood worked on integrating digital tools to improve city performance. He stayed on as an adviser to Mayor Menino who was known as "The Urban Mechanic" due to his interest in tinkering with new tools for governance.

In 2009, Osgood and his colleague Nigel Jacob took advantage of the momentum in the distribution of smart phones to develop a cutting-edge application called *Citizens Connect* (Crawford and Walters 2013). The app created a streamlined process for residents to report local issues directly to the right municipal agency, empowering them to improve the condition of their neighborhoods. To date, over 80,000 issues have been submitted, with 72,000 completed, across multiple platforms, including a web-based interface and Android.⁹ The app, now called *Commonwealth Connect*, accounts for one-fifth of all city service requests, or roughly 10,000 per year and provides a more direct two-way channel for citizens to identify concerns and communicate with government.

In 2010, Osgood and Jacob co-founded the Mayor's Office of New Urban Mechanics (MONUM) in Boston.¹⁰ The office was designed to pilot experiments in urban planning and to work directly with entrepreneurs. The goal was to leverage technology and innovation to improve the quality of City services and to strengthen the relationship between citizens and the City to promote "peer-produced governance."¹¹ Part of MONUM's mandate includes empowering entrepreneurs to help solve public problems and working closely with external stakeholders. This often includes bringing in fellows from universities, engaging with foundations such as Living Cities,

and engaging with technology companies such as Microsoft Civic Innovation.

MONUM has been recognized as a global example, by the UK Innovation Unit NESTA and others.¹² The office serves as an in-house research and development group for the Mayor's team. Each staffer builds partnerships between internal agencies and outside entrepreneurs and works to support pilot projects that address the needs of residents. MONUM renders Boston's city planning decisions more legitimate by giving citizens open and transparent opportunities to influence politicians and subsequent policy decisions. By serving as a "risk aggregator," according to one staffer, and absorbing risk from other city agencies, MONUM enables city officials to operate in a more experimental, responsive, and participatory capacity.¹³ Unlike other opportunities to engage citizens, who previously had not been involved in decision-making processes, MONUM uses digital tools to ensure that government officials with decision-making authority receive feedback.

While innovation units are propping up across federal, state, and local government, MONUM has made a targeted approach to engage traditionally marginalized viewpoints into the policy making process. Elsewhere in research (see Gilman and Gover 2016), the author has identified several challenges with innovation units, which feel like "an island off the mainland," as one innovation staffer noted. Innovation units can suffer from a lack of high-level leadership leading to one-off endeavors, which do not change public management. There can also be a lack of clarity of focus or poor communication across agencies and with the public.

Community Driven Open Data: Chicago OpenGrid

One example of data being leveraged for collaborative governance is Chicago's Open Grid, which provides an open source, situational awareness system that enables people to easily access a centralized open source repository of public information.¹⁴ OpenGrid represents one of the most advanced deployments of open government data to empower citizens (Thornton 2016). Presently, Chicago has moved beyond internal efficacy projects to create an external situational awareness interface that allows everyday people to engage with the city's information, making this information as easy to search and find as if using Google Maps. Even with open data portals in many major cities across the globe, it can be difficult for a layperson to quickly find the relevant data in a sea of information.

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The city is partnering with Smart Chicago Collaborative, which brings together technologists, funders, and civic organizations with a mission to use digital tools to improve lives in Chicago by directly engaging community residents with open data.¹⁶ Smart Chicago runs a Civic User Testing (CUT) Group comprised of residents from across the city that test civic websites and apps and then provide direct feedback. This ensures that the viewpoints of community residents are at the table in key discussions of civic technology (for discussions see McCann 2015).

In particular, Smart Chicago engages non-“tech savvy” users and residents, who otherwise may feel left out of decision making, to help determine how the city should develop technological tools. They are reaching out to people with limited tech experience to determine an app’s usability, understanding digital skills required for use, and gauging an app’s potential for community engagement and impact. Users receive a gift card for their participation. Importantly, the user tests take place in local communities around Chicago and are facilitated to ensure that diverse viewpoints are expressed and that people do not feel excluded throughout the process.

Chicago’s Open Data strategy puts community residents front and center. Chicago’s CIO notes: “At the Department of Innovation and Technology, our clients are the residents and businesses of Chicago. We’re driven by what they need, and how we can serve them” (Thornton 2016). The City’s approach is able to bring in diverse viewpoints to policy making and promote digital literacy. However, it is also resource intensive, requires strong public-private partnerships, and takes intentionality and time on behalf of public administrators to enact policy changes based on public feedback. Furthermore, open data first requires internal data organization (Thornton 2013) and strategy to engage beyond the tech savvy “usual suspects.” But most of all, public managers need to devote time and energy to recognize the potential public value of unleashing data to the public.

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RHODE ISLAND CIVIC CROWD FUNDING

Central Falls, Rhode Island, is a densely populated community in a small geographic area, with Rhode’s Island only majority-Hispanic community. In 2011, Central Falls filed for bankruptcy under chapter 9, marking the first time a city in Rhode Island had this condition. In this socio-political climate, the city government decided to try something new to engage the community around a shared project.¹⁷ They partnered with Citizinvestor,¹⁸ a crowdfunding and civic engagement site similar to a “Kickstarter” for governments, to launch a civic crowdfunding campaign, one of the first in the United States. On Citizinvestor, municipalities post a project with a funding goal. Citizens donate online. If the goal is met, the municipality receives the funds minus fees. It is

an all-or-nothing model—in order for the entity to receive the funds, the fundraising goal must be met.

Central Falls hosted open town halls about the funding proposal in order to gauge community interest. The community responded by discussing the lack of proper trash bins in the central park of the City. Central Falls launched a Citizinvestor campaign that hit the goal of fundraising \$10,044. Local residents were active participants in every part of the process from identifying the area for fundraising to pledging their own dollars and collaboratively designing artistic trash cans, working directly with the local arts nonprofit The Steel Yard. Community members even came out to place the trashcans and paint them. The project invigorated the community in a process that was both functional and that led to direct improvements in public life.

“Civic crowdfunding projects can therefore be defined as projects that produce some non-rival benefits that serve either the non-excludable public or broad sections of it” (Davies 2014, 29). According to Davies, the most popular civic crowdfunding projects involve parks. Several cities across the United States have been experimenting with civic crowdfunding, and they are learning from one another. Philadelphia was the first city to partner with Citizinvestor in a campaign to fund TreePhilly.¹⁹ While they did not meet their \$13,000 funding goal, the lessons learned helped shape further civic crowdfunding experiments. Lessons learned included the launching of projects targeted to specific communities while ensuring that crowdfunding does not become a substitute for existing public resources, but a supplement to these. In Rhode Island, the city government managed the process to ensure that civic crowdfunding supplemented public funding and offered a channel for more inclusive participation in identifying and executing governance decisions. The project was particularly lucrative for the city. Its main value was not monetary; it was offering a new, more direct pathway for civic engagement with city officials.

Civic crowdfunding raises concerns about distributional equity, more specifically with ensuring that it is not only wealthier residents who can afford specific amenities for their communities. In response to these concerns, some states are starting to develop laws to govern crowdfunding. One such state is Oregon, which allows Oregon-based companies to raise up to \$250,000 from Oregon investors to start new businesses or fund existing operations. No single investor can invest more than \$2,500 in any one project. Civic crowdfunding has been limited to specific projects and can help generate immediate gratification for citizens.²⁰ Each project can also generate larger lessons. For instance, insight from Philadelphia’s crowd sourcing project helped inform future efforts in Central Falls. As the process continues to

spread, each experiment creates a valuable model that can help generate a set of best practices and considerations to inform future projects.

POLICY IMPLICATIONS

In each of the previous examples civic technology enabled a wider range of talent to participate in governance decision making: from technologists and entrepreneurs in MONUM, to civil society and philanthropy in Chicago, to a crowdsourced platform in Rhode Island. In particular, the three cases demonstrate that public administrators can deploy civic technology strategically to offer citizens new opportunities to provide input into urban policy making and reduce barriers to entry to engage traditionally disempowered groups.

The methods deployed across these cities enabled public-private partnerships and created multiple and simultaneous entry points for the public sector to leverage external resources. In these cases, government partnered with external experts, benefited from anchor institutions including universities (e.g., through fellowships, research, and knowledge), and leveraged talent and resources from civil society, philanthropy, industry, and from the overall citizens.

The three examples presented in this article offer several illustrative lessons for practitioners and scholars. First, digital tools can both provide greater transparency about government decision making and offer opportunities for public input, feedback, and accountability. Second, a community-driven approach can enable more effective use of government data. Finally, context matters: political incentives, political leadership, and on the ground political realities and organizations shape governance implementation.

Policy implementation and management are crucial for effectively leveraging civic tech to engage citizens. Digital technology and innovation do not substitute for effective public management, but rather are an integral complement. When data, tech, and innovation are treated separately from the question of public management, they become an “island off the mainland.” Effectively employing the three recommendations aforementioned will require addressing concerns about technology only amplifying existing civic engagement divides. In addition to the digital divide, there is another

building a broader body of knowledge, which can be tested, measured, and assessed for impact. More empirical research can help demonstrate the value proposition for public officials to use civic tech, even when these processes require time, resources, and buy-in from public officials. Demonstrating the value of these tools for deepening civic engagement in governance will make the use case for decision makers.

Broader research also needs to explore mid-tier cities as well as rural and exurban communities. Focusing on only big or coastal cities risks further siloed conversations and research. Within each community there exist citizens with hyper-local expertise (for discussions see Noveck 2015). The question for the next generation of public servants will be how to tap into citizens’ local, specialized knowledge for more inclusive and collaborative governance.

Each of the three recommendations provided in this article offer channels for further research and inquiry to understand the precise impact of civic tech for government. Further research is necessary to understand the current limitations on public officials to leverage digital tools and engage citizenry. This includes, but is not limited to, digital access and literacy, time and resources, and buy-in from managers. Before deploying digital tools to engage community residents, public officials themselves need to be, at least, conversant in technology and will often need to have some type of technology internally in place in their offices.

Each of the case studies presented required public servants to devote significant time and resources to engage the broader public. The cases benefited from robust anchor institutions. How can academic institutions serve as knowledge generators and disseminators to generate public value? What is required (including changes in hiring structures and recruitment) for higher education to train tomorrow’s public sector leaders to have dual competencies in technology and policy?

Additionally, civil society, entrepreneurs, and philanthropy play critical roles as the engines catalyzing civic tech within communities. What resources does civil society need to ensure genuine participation and inclusion of community driven interests for technology needs? What types of training and tools could civil society use to ensure tech equity, digital access, and training? How can philanthropy fund more

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related concern of re-creating “star” cities, rife with resources, technology and talent, while others lag behind in innovation.

FURTHER RESEARCH

The goal of this article is to initiate a research agenda to understand how policy makers can leverage civic tech to enable new channels for citizens to participate in the decision making process. This exploratory article is a first step towards

innovative and experiential civic tech ventures, while ensuring organizations can retain their social mission? In this rapidly changing field, what metrics or indicators are necessary evaluate impact while not hindering creativity?

OBSTACLES TO IMPLEMENTATION

There are several avenues of policy concerns, including digital access as well as privileging bigger cities over other midsize

cities or rural and exurban communities. I will address each of these concerns individually.

First, any efforts on behalf of public administrators to deploy digital tools must acknowledge the potential biases and address questions surrounding digital access, literacy, and equity. It is critical to ensure an inclusive, community-driven approach to these projects. A recent survey by *MySociety*, a prominent NGO, describes civic tech in richer and more developed countries as having a “clear bias in users towards the group that has often been referred to as ‘male, pale, and stale’” (Rumbul 2015, 23).

Specifically, it will be important to avoid path dependency and elite capture with regards to specific funders, technology platforms, tools, technologists, and software. Working toward collaborative governance will require policies around the commercially valuable and ever-ubiquitous data people generate every day. It will also be important to ensure public norms to guide privacy, equitable access, and citizen empowerment over their information. It will be important to safeguard against empowering only certain types of people (e.g., elites) with certain skills (e.g., data coding) being funded by the same foundations.

Even after a United States federal court ruling that high-speed Internet service is a utility; there are still an estimated 34 million Americans without broadband services.²¹ Across the United States, Internet access is highly unequal: poor and rural areas see limited investment in digital infrastructure and hardware. Urban cities have not escaped these pitfalls. Across cities, the digital divide is correlated with poverty. Additionally, communities without high-speed Internet often lack hardware or digital training to effectively leverage digital tools. While research has examined the urban-rural divide, there is also growing digital inequality across US cities that demands further inquiry.

The second concern comes into dialogue with questions about what precisely is the role of city government in the twenty-first century. There is a long history of government reform aiming to make the government function more like a private firm. It is not the purpose of this article to engage in that literature (for discussions see Kettl 2015, 224-228; Evers and Ewert 2015). Critically, it is important to note that multi-sector actors should not *replace* or *gut* the public sector. Civic tech projects need to ensure that they are not abdicating responsibility for the public sector to other multi-sector actors or burdening people themselves with administering governance solutions. Instead, they should supplement and enhance the ability of the public sector to foster collaborative governance and generate public value.

Further, many of the examples I have outlined were limited in scope and topic area. If civic tech projects are limited to only “toilets and trees” they will have limited impact (for discussion see Fung 2015). Fung (2015, 9) refers to this as the “park bench problem,” where participatory interventions are only engaging citizens on small-scale politics. Public officials need to ensure that these processes are not limited in reach but rather empower civic voice and new pathways for citizens to be engaged in policy and decision making. For all the promise of these innovations and partnerships, ultimately

change must seep into the very fabric of every city hall, state house, and federal building to truly foster more collaborative, citizen-centric governance. This will require more flexible hiring, innovative procurement, IT modernization, and training to help existing staff understand and implement the new paradigm.

A broad set of actors, from philanthropy to Silicon Valley and universities have a role to support an ecosystem for leveraging civic tech for more collaborative governance. Academic institutions, in particular, can serve as knowledge generators and disseminators (for discussions see Katz and Wagner, 2014). Several of the examples above offer a window into how innovation districts can work in practice. Much further research is necessary to understand how precisely academia, technology, civil society, and philanthropy co-mingle to support civic tech for governance. It will be critical to ensure that a broad and inclusive range of voices from different backgrounds and viewpoints are represented in a more collaborative process. The ultimate goal is to unleash the potential of digital tools and harness viewpoints from people that may not typically be associated with governance to break down boundaries across geography, socio-economics, race, gender, and education level. This is how to build more resilient governance, which reflects the dynamism of our communities.

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NOTES

1. Retrieved from <http://blogs.microsoft.com/on-the-issues/2014/10/27/civic-tech-solutions-governments-communities-serve/>
2. See Omidyar Network (2016) “Engines of Change: What Civic Tech Can Learn from Social Movements.”
3. See International Data Corporation (2014) “Civic Tech Fuels U.S. State and Local Government Transformation.”
4. There has been debate about these definitions. For example, whether for-profit entities (such as Airbnb or Waze) should be included in the definition of civic tech, the role of government backed projects, and whether or not “govtech” should be counted as well. For discussions see Nathaniel Heller “The Sharing Economy is Not Civic Tech,” Global Integrity, retrieved from www.globalintegrity.org/2013/12/the-sharing-economy-is-not-civic-tech and Alex Howard “Civic Tech in 2015: \$6.4 billion to connect citizens to services, and to one another.” Tech Republic, retrieved from <http://www.techrepublic.com/article/civic-tech-in-2015-6-9-billion-to-connect-citizens-to-services-and-to-one-another/>.
5. Retrieved from <https://obamawhitehouse.archives.gov/open/documents/open-government-directive>.
6. USDS and 18F are federal agencies with the goal of improving service delivery for citizens; they are comprised of teams of engineers, designers, coders, and policy makers. USDS is housed at the Office of Management and Budget (OMB) and is actively deploying USDS teams throughout agencies. 18F is housed at the General Services Administration (GSA); the building is physically located at 1800 F St., NW, Washington, D.C. See more at: <https://www.whitehouse.gov/digital/united-states-digital-service> and <https://18f.gsa.gov/>. These agencies grew out of the Presidential Innovation Fellows program, a fellowship to bring in technology experts

for a rotation in the federal government. They reflect a general trend in the Obama administration to integrate technology into the federal government, which included implementing the positions of Chief Technology Officer and Chief Data Scientist.

7. Retrieved from: https://www.washingtonpost.com/politics/trump-taps-kushner-to-lead-a-swat-team-to-fix-government-with-business-ideas/2017/03/26/9714a8b6-1254-11e7-ada0-1489b735b3a3_story.html.
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12. See Steve Goldsmith, "An Old-School Mayor on the Forefront of Innovation," *Governing*, September 6, 2012.
13. See <https://nextcity.org/daily/entry/for-these-urban-mechanics-city-hall-is-a-place-to-experiment>.
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15. Thornton, 2016.
16. See <http://www.smartchicagocollaborative.org/>. Donor collaborative, funders include the City of Chicago, the MacArthur Foundation, and the Chicago Community Trust.
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