It is common nowadays to bemoan the state of our democracy: from growing citizen disaffection, to the growing influence of money in politics. The 2015 Edelman Trust Barometer shows a global decline of trust in government with numbers reaching historic lows.¹ In surveys, government dysfunction continues to surpass the economy as the problem Americans’ are most likely to list as the country’s most serious. A recent Pew survey found that trust in government remains at historic lows.² Only 19% of Americans say they can trust the government always or most of the time. The majority of Americans (60%) think their government needs “major reform,” in contrast to the late 1990s when less than 40 percent of those surveyed thought so. Only 20% would describe government programs as being well run and 55% of the public says that “ordinary Americans” would do a better job of solving national problems then elected officials.³

However, partly in response to citizens’ growing disaffection, a wave of participatory policy reform has emerged in America’s largest cities, capitalizing on new technology, open data and democratic experiments that aim to improve democracy.⁴ Around the globe technologists, government innovators, and civil society are leveraging digital tools and open data to make governance more responsive to citizens, strengthen the relationship between citizens and their government, provide new ways for citizens to participate in decision-making in their communities, and make governments more accountable.

Civic Tech

There are many conversations concerning “civic technology,” or “civic tech” and the opportunities for leveraging digital tools to benefit the public. The $6 billion civic technology is just a piece of the $25.5 billion that government spends on external information technology (IT). Government investments in civic technology can spur powerful partnerships that foster public sector innovation.⁵

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¹ Edelman Trust Barometer 2015
³ Ibid.
⁵ See also Hollie Russon Gilman, “The Future of Civic Technology” April 20, 15 Brookings Institute
http://www.brookings.edu/blogs/techtank/posts/2015/04/20-civic-technology
There is debate about its precise definition including who is even involved in civic tech. For instance, does it include governments seeking to modernize their systems or people sharing resources better? Is it about efficacy or effectiveness? Should the emphasis be on people or politics? Perhaps a definition can be expansive enough to include a variety of actors and activities.

Further, we need more examples of data and technology being used to hold government to account, better govern urban areas or increase civic engagement. This can help spur research of the subsequent outcomes – both positive and negative - in areas such as governance, healthcare and sustainable or local development? Evidence is required to generate robust and meaningful evaluations of the outcomes and success various open data initiatives. This paper outlines four examples of data and innovation to strengthen urban governance and concludes with three key takeaways for researchers, policymakers, and practitioners.

**Chicago OpenGrid**

Chicago has created OpenGrid to provide an open source, situational awareness system to enable an easily accessible and centralized open source repository of public information. OpenGrid reflects one of the most advanced deployments to use government data to empower citizens. It reflects the latest installation in Chicago to build open source data efficiency that is scalable. Their WindyCity platform integrated seven million pieces of data from city departments every day and paired it with a powerful analytics tool to create data visualization to equip managers with new insights on city operations in real time. It won $1 million dollars from Bloomberg Philanthropies Mayor’s Challenge. OpenGrid reflects the latest version of open data being released to spur civic education, agency, and industry. In contrast to processes that simply release data without an engagement strategy, OpenGrid is designed for participation, collaboration, and replicability.

**Participatory Budgeting**

Participatory budgeting (PB) started in 1989 in Porto Alegre, Brazil, by the leftist Partido dos Trabalhadores (Workers’ Party). PB gives citizens the opportunity to learn about government practices and to come together to deliberate, discuss, and substantively

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6 See also “Chicago Tech Plan,” City of Chicago http://techplan.cityofchicago.org/
9 “Chicago Uses MongoDB To Create A Smart and Safer City” https://www.mongodb.com/customers/city-of-chicago.
affect budget allocations (Shah 2007). In its original campaign for participatory budgeting, the PT outlined four basic principles guiding PB: (1) direct citizen participation in government decisionmaking processes and oversight; (2) administrative and fiscal transparency as a deterrent for corruption; (3) improvements in urban infrastructure and services, especially aiding the indigent; and (4) a renewed political culture in which citizens would serve as democratic agents. Recent research convincingly demonstrates that in the last twenty years PB has enhanced the quality of democracy in Brazil and other positive outcomes linked to specific uses of PB in Brazil include increased municipal spending on sanitation and health, increased numbers of CSOs, and decreased rates of infant mortality. Digital tools, including SMS, have been used for various aspect of the process including ideation, dissemination of ideas, and voting. In 2016, New York City conducted the first digital voting, with in person registration, providing an access code for people to use to vote online.

**Boston New Urban Mechanics**

In 2010, Boston launched the first Mayor’s Office of New Urban Mechanics (MONUM) at the beginning of Mayor Menino’s fifth term. The office was designed to pilot experiments, and work directly with entrepreneurs, to leverage technology and innovation to improve the quality of City services and strengthen the relationship between citizens and the City for “peer-produced governance.” Menino was long interested in the process of tinkering with tools, which gave him the nickname “The Urban Mechanic.” Since 2010, the office quickly gained momentum, with the two co-heads receiving an award as the Public Officers of the Year by Governing Magazine. MONUM has been recognized as a global example, including by the UK Innovation Unit NESTA and recently received $1.3 million as part of Bloomberg Philanthropies Innovation Team program to develop solutions to the middle-income housing challenge. The MONUM model has spread to Philadelphia and Salt Lake City and continues to serve as an international paradigm for cities to emulate. The success of MONUM illustrates the opportunity for digital technology to alter institutional culture to make it more amenable to experimentation and focused on residents.

**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 declared chapter 9 bankruptcy – the first time a city in Rhode Island has declared bankruptcy. In this socio-political climate, the city government decided to try

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12 See http://newurbanmechanics.org/boston/
something new to engage the community around a shared project. They partnered with Citizinvestor, a crowdfunding and civic engagement that works similarly to Kickstarter for governments, to launch a civic crowdfunding campaign – one of the first in the United States. Municipalities post a project with a funding goal. Citizens donate online. If the goal is met, the municipality receives the funds minus fees. It’s an all or nothing model – in order for the entity to receive the funds, the fundraising goal must be met. Central Falls launched a Citizinvestor campaign that hit their goal of $10,044. Local residents were active participants in every part of the process; identifying the topic for fundraising, pledging their own dollars, and collaboratively designing artistic trash cans working directly with a local arts nonprofit The Steel Yard.

3 Policy Lessons: Civic Tech for More Inclusive Governance

(1) Leveraging Multi-Sector Partners

Each of the examples took advantage of talent and expertise and have partnered with external experts, such as the Citizinvestor platform itself and leveraging resources from external entities such as the Amazon Web Services in Chicago. OpenGrid has partnered with the Smart Chicago Collaborative, which is funded by the MacArthur Foundation and the Chicago Community Trust. The civic tech examples here also take advantage of University expertise. This can take the form of fellowships (e.g. MONUM), computing power (e.g. OpenGrid) or research support (PBNYC).

Policy makers can think more expansively about the resources at their disposable and structure civic tech experiments with deliberate intent to engage multi-sector stakeholders. The methods employed enable public private partnerships and create entry points for the public sector to leverage external resources.

(2) Embedding pilot programs to become institutionalized

Many of these examples moved from pilot processes to become more embedded and institutionalized structures. The Boston New Urban Mechanics were able to prototype several types of programs in a lean and agile way. Through gaining momentum and winning support from citizens, they now are being asked to solve critical problems for the city in a systematic way. PB in the United States began as a pilot with $1 Million in 2009 and now upwards of $50 Million is being allocated through the process. By starting out as small and nimble programs, many of these projects were able to take risks they otherwise would not have been able to. Importantly, this enables less pressure from the onset and the ability to think more creativity about implementation.

Policy makers can learn valuable lessons from pilot projects. The stakes are lower and they can try outreach to traditionally marginalized communities. Experiments offer an opportunity to reach citizenry in non-traditional way and expand the traditional public service delivery model of citizen as only a customer. Pilots that are well structured can empower people for more inclusive decisionmaking.

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(3) Learned Lessons Across Contexts

Because civic tech is not bound to one geographic region, many of these examples take a more network approach. This enables an opportunity to take lessons learned from various contexts and apply these principles. Participatory budgeting first began in the Global South and is quickly spreading across the North. Philadelphia was the first city to experiment with a Citizinvestor public funding campaign and though they did not reach their goal, valuable insights from their process directly improved the process in subsequent cities. The Chicago DoIT ensures that all the code for the city is open source and available on GitHub. Other cities, in turn, can use this code for their own public interfaces to spawn more open and democratic open data.

Policy makers can take lessons from many types of actors across diverse contexts. Best practices from global experiments can be translated to fit specific contexts and ensure local, community needs are front and center. These experiments do not need to be viewed in isolation from one another, but rather can serve as a useful petri dish to shed light on further implementations. The result can be a more expansive approach to innovation, which is inclusive of diverse cultures and backgrounds. The critical factor is applying these lessons to a context specific locality that is sensitive to the local socio-political context and environment.

Practitioner Points

- Public sector officials can leverage multi-sector partnerships to capitalize and harness the expertise of academia, civil society, industry and philanthropy to spur civic tech and data for governance.
- Creating centralized repositories of interested funders, open source digital tools, collaborations, and best practices for civic engagement can streamline multi-stakeholder partnerships in order to circumvent some of the current institutional barriers facing government officials eager to implement change.
- In order to incorporate civic tech for more inclusive governance, practitioners can start small by piloting civic tech experiments and then move to embed and institutionalize new practices into governance.
- Public officials in the United States can learn best practices from a variety of global examples. Lessons learned can be shared internationally.