

STEPHEN GOLDSMITH • SUSAN CRAWFORD

THE RESPONSIVE CITY

ENGAGING COMMUNITIES THROUGH DATA-SMART GOVERNANCE



FOREWORD BY MICHAEL BLOOMBERG

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Engaging Communities Through
Data-Smart Governance

Stephen Goldsmith
Susan Crawford

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Foreword

There is no better way to improve the lives of billions of people around the world than to improve the way cities work. For the first time in human history, the majority of the world's people live in cities. By 2050, 75 percent will. As more and more people move to cities, more and more of the world's challenges—and solutions—will be concentrated there, too.

The rise of cities coincides with a technological revolution that is empowering local leaders to find innovative new ways to better serve the public. At the center of that revolution is our growing ability to use data to improve the services that government provides. Governments have long been in the business of keeping records, and increasingly they are using those records—billions of data points—to improve everything from emergency response to education to transportation.

I have a rule of thumb: if you can't measure it, you can't manage it. And I brought that approach with me from the private sector to New York's city hall. Our administration looked for ways to use data—and to collect more data—to help us better serve New Yorkers.

In 2003, we launched 311, a nonemergency government information and services hotline available to New Yorkers twenty-four hours a day, seven days a week. Not only did 311 make it easier for New Yorkers to get information from the city—and to file complaints—it also gave city government more information on what New Yorkers were concerned about and helped us keep track of how well we were doing at addressing those concerns.

We also created data systems to measure agency performance and hold ourselves accountable for results. And we took a page from the private sector and brought predictive analytics to local government, using city data to help foresee the challenges of the future—and took action to address them today.

Harnessing and understanding data helped us decide how to allocate resources more efficiently and effectively, which allowed us to improve the delivery of services—from protecting children and fighting crime to repairing potholes and inspecting buildings—while also saving taxpayer money.

Cities and mayors everywhere are recognizing the powerful role data can play in bringing more transparency, accountability, and efficiency to government—and Bloomberg Philanthropies is helping to support this work. For instance, in 2013 the city of Chicago was one of five winners of the Mayors Challenge, an ideas competition for cities, for its groundbreaking idea to use data to help city government prevent problems before they develop. Chicago is quickly setting a new standard, which other cities will surely follow.

Across so much of the work we do with cities—from our innovation delivery program helping New Orleans reduce gun violence to our work with cities around the world to reduce carbon emissions—we see data enabling new and creative approaches. Of course, driving change in cities requires more than just data. It also requires strong managers and creative problem solvers—and Stephen Goldsmith is both. I was lucky to have him join me at city hall as a deputy mayor during my third term in office, and he helped us take our efforts to improve city services to new levels.

In the chapters that follow, Goldsmith and his talented coauthor, Susan Crawford, demonstrate how local leaders are changing the way governments work. Through case studies from New York City, Boston, and Chicago, they explain how data mining, empowered public servants, mobile apps, wireless devices, technically supported citizens, and social media can produce a dramatically more responsive city. And they show how these tools can be used by both elected and community leaders to drive change and improve a neighborhood's quality of life.

Cities will increasingly define the future, in America and around the world. And cities that capitalize on the technology revolution will lead the way. This book helps point the way forward.

June 2014

Michael Bloomberg
Former mayor of New York City

Introduction

Urban government in the United States today is at a critical juncture. Never before over the last century has there been such a need to change the way city hall works. And never has there been such an opportunity to do it. The century-old framework of local government—centralized, compartmentalized bureaucracies that jealously guard information and adhere to strict work rules—is frustrating and disappointing its constituents, whose trust in government is at an all-time low. Residents in many cities despair of getting the services they need from city hall, especially in places where financial stresses are making governments even less responsive than in the past. Yet local government has the means to completely reverse this trend toward despair. That opportunity comes from digital technology: new ways of gathering, storing, and analyzing data; new modes of communication; and the new world of social networks. With these digital tools, citizens and their officials can revolutionize local government, making it more responsive, transparent, and cost-effective than it has ever been.

A confluence of technology advancements now promises broad and constructive change in local government, altering everything from the way workers perform basic functions to the way citizens engage with government. Social media and data science are spurring a sense of renewed civic engagement, which will cause broad changes in government.

This book is about that revolution and the people who are leading it. Specifically, it is about the insights and skills they are applying to digital governance and the institutional obstacles that they have overcome. In the chapters that follow, you will see precisely how data-smart, responsive governance has paid off in

a variety of cities, and you will see how the pioneers whose stories we present achieved that payoff.

One of us (Goldsmith) has worked for decades in and for cities—as a community volunteer, prosecutor, mayor, deputy mayor, and federal official involved with service to cities. The other (Crawford) has been involved in technology policy as a Washington lawyer, White House advisor, and law professor. In our careers, we have watched American cities face countless challenges, from riots to staff layoffs to bankruptcy. We have also seen cities experience a renaissance in safety, economic growth, and livability. Consistently, though, through good times and bad, there has been a steady rise in residents' complaints about uncaring bureaucrats and unresponsive city halls.

We know that cities can do better. We both teach graduate students at Harvard University who have grown up in the digital era: Goldsmith as the director of the Innovations in Government program at Harvard Kennedy School and Crawford as a codirector of Harvard's Berkman Center for Internet and Society. We and our students see the great opportunities digital technology offers local government. Harvard's Data-Smart City Solutions initiative, funded by grants from Bloomberg Philanthropies, the John D. and Catherine T. MacArthur Foundation, and the John S. and James L. Knight Foundation, features the accomplishments of public and civic leaders who use data to produce effective governance. We hope, through this book and our ongoing work, to help those digital possibilities become reality.

Though we discuss technology throughout this book, technology is not our main subject. Rather, this is a book about the leaders—public, nonprofit, and community—who have forced changes in the status quo by capitalizing on the power of the new tools.

We know the digital age that has so changed every aspect of life can also fundamentally improve local government and raise the civic spirit of our people and the officials who serve them. But experience has shown us that this great advance cannot begin without major changes in governance: bureaucratic structures must be upgraded to accommodate the new technologies and their uses. As the digital city hall replaces one based on paper, cities will have to jettison the structures of governance that have served them for more than a hundred years.

In the past century, when the flow of information was slower and more limited, the best government could do to keep control and ensure quality was to define rules and enforce adherence to them. Today, with data flowing freely among employees and citizens, that rule-bound approach is an obstacle to effective action. City employees can act more quickly and creatively to resolve issues when their jobs are defined as problem solving rather than rule following. Instead of filing reports and waiting for overburdened supervisors to respond, workers can make their own decisions, aided by curated and organized data, and supported often by real-time advice from managers. The result is a smarter and nimbler government that better employs its resources and attention.

Some of the components of city hall's digital revolution are familiar from daily life. There are smartphones and tablets, which move data from file cabinets in city hall to workers out in the field—and in turn let those workers send back new information as soon as they have it. Apps enabled by global positioning systems (GPS) can reveal where employees are performing their work and how long discrete tasks take. That makes it possible to detect unusually good (or unusually bad) performance by an employee and send a notice to a supervisor in real time. Other key digital tools come from private enterprise: methods for storing, organizing, visualizing, and curating data to generate reliable insights and fast responses. These tools allow community groups and government officials alike to make discoveries about their neighborhoods that would elude even the sharpest analysis from the most highly trained specialist.

These discoveries are possible because the digital revolution encompasses more than how data is handled. It's also a radical expansion of the sources of information. To data that comes from government's usual methods—potholes reported, streets plowed, hours spent per complaint—residents themselves can now add massive amounts of information that governments could not, or would not, collect in earlier times. Anonymized data from E-ZPass readers or sensors in the street can reveal patterns in traffic or in the use of city resources. Twitter, Facebook, and other social media create a 24/7 window into what people are noticing, celebrating, or decrying. This combination of self-generated “big data” about people's behavior and their own contributions to social media

is a rich vein of information about almost any problem a city government confronts. Of course, public servants themselves also generate such data, which they can now share easily with one another and with nonprofit organizations, community groups, media, and private companies. Only a decade ago, the 311 call center, that central always-on clearinghouse where citizens can phone in their requests for service and information, represented a major advance over the limitations of a fragmented government bureaucracy. Today the 311 center looks obsolete. The twenty-first century's equivalent of 311 won't be confined to phones or to service requests and questions. Instead, it will be a platform for citizens to engage city hall, and each other, through text, voice, social media, and other apps.

This book focuses on the emerging cadre of officials and civic activists who are using the new data tools to transform city government. We tell their stories, describing the transformations they have already managed to achieve. We also highlight the drivers of that transformation—organizational change to remove hierarchies and bureaucracies; the sharing of data in forms that make it understandable and useful to people in government and outside it; and, perhaps most important, leadership.

Leadership is essential because the new type of public servant we describe must break down three barriers to progress that business-as-usual bureaucratic government imposes. First, there is a narrow and technical definition of what constitutes good work by government employees; second, the vertical silos of the usual city government's organization block the free flows of ideas and information, making it ill suited to problems that don't fit into the "verticals"; and, third, the bureaucracy orients itself to performing and measuring activities (potholes filled, cases processed) rather than solutions to problems. To benefit from digital technology, in other words, government must get out of its own way. That requires that it set aside some of the structures, traditions, and habits that have accumulated over the past 125 years.

Reformers brought about those structures in response to the chaotic free-for-all that characterized city government in the nineteenth century. Eager to rid themselves of corruption, incompetence, and unreliability in city hall, Progressive reformers in the late 1800s enshrined rationality, professional standards, and

the division of labor. Government was centralized and organized into separate functional areas (firefighters for fires, public health nurses for epidemics, trash collectors for sanitation). Workers were chosen for meeting clear standards rather than for their political connections, and they were given well-defined tasks and assessed on their performance. Managers told employees what to do; employees reported back to managers in a clear chain of command.

Clearly defined tasks were a crucial feature of the reforms of the nineteenth-century Progressives. And so government was focused on producing activities rather than solutions. Officials measured how many homeless beds, how much health care, how many potholes filled rather than actual reductions in homelessness, improvements in health and education, and the overall smoothness of the streets. Government was securely protected against any abuse of discretion through an orientation toward compliance with regulations, not toward results. While serving as chairman of the board of the Corporation for National and Community Service (the federal parent of AmericaCorps VISTA, Senior Corps, and many faith initiatives) one of us (Goldsmith) saw the unfortunate consequences of this orientation. If a nonprofit produced terrific results but did not keep its books correctly, it was harshly penalized and considered a failure. If an organization accomplished nothing but did so with impeccable bookkeeping, the corporation's inspectors judged it successful.

And so we arrive at the crisis that city government faces today. Structures that produced progressive government in 1890 ensure regressive results in 2014. Public officials work in narrow spaces confined by civil service laws, labor contracts, job classifications, court cases, and risk-averse lawyers. Layers of bureaucracy, inflexible rule applications, redundant multiple agency involvement in a single transaction, and tone deafness to citizens became the hallmarks of government as progressive government overgrew itself. Again and again, local and state officials, hemmed in by federal mandates, miss commonsense breakthroughs because of the way they are organized and regulated. Confined to verticals, with a different agency responsible for each program, public servants strain to engage with constituents who, like all other people, live their

lives “horizontally”—in neighborhoods and families, not within the purview of the sanitation department or the housing agency.

Not only did complexity and rule-driven accountability affect the way we manufactured government; it also affected the way government regulated. As the twentieth century advanced, this system broke down. Problems spread across the neat organizational lines that divided building inspection from health from fire. Citizens who were used to smartphone apps lost their patience when told they had to wait for documents to be found in file cabinets and put in the mail. Local governments addressed risk in a complex society by imposing more regulations. When serious breakdowns occurred, watchdogs and monitoring procedures also were piled on. To deal with problems that didn’t fit neatly into departmental divisions, working groups were fastened onto the older bureaucratic structures. Meanwhile, even while stretching to do its old job, local government added new responsibilities to its portfolio. The federal government led this charge with a vast array of regulations and programs it imposed on cities and states. Courts also handed down mandates. City hall, once concerned with fires, crimes, sanitation, and other basic services, now expands its reach from prenatal to preschool through to senior services and scores of services in between. The expansion of services coupled with the increasing complexity of modern life made government workers’ jobs more difficult to break down into clear, simple, easily supervised tasks.

We need a postprogressive response by government, and this century’s digital tools are perfectly equipped to sweep these frustrations away.¹ Because they can collect, analyze, and share information so efficiently, these technologies push both government and its constituents to focus on results rather than compliance. This frees up the talents and judgment of government workers, letting them spend more time solving problems and less time proving they adhered to rigid standards. Moreover, that ability to share data undermines the vertical organization of traditional government, encouraging horizontal exchanges among departments (and, of course, among community groups and other stakeholders outside city hall). This can open up the machinery of government to its people, letting them collaborate to create solutions coproduced by public servants and their constituents. In the place of bureaucratic and centralized

structures that frustrate citizens and officials alike, information technology can deliver government whenever and however citizens need it. The result is a smarter and nimbler government that better deploys its resources and attention.

Refreshingly, we also see that a citizen's judgment concerning the trustworthiness of the local government can be facilitated by public transparency and social media use, resulting in more participation in solving the community's problems. This social-media-engendered trust can produce an enhanced role in areas from policy to development to planning. We can see from international research work that "although social media cannot promise to unite both institutions and citizens one hundred percent, to a certain extent, it can facilitate effectiveness in two important perspectives: (1) build social capital via online civic engagement and (2) instill a sense of confidence and trust in the government and justice system."²

In this book, we present stories of digital efforts designed to accomplish just this kind of trust building. More important, we describe the successful struggles of people who managed to overcome resistance to change.

Saving Children with Tablets

For twenty years Jim Payne presided over Juvenile Court in Marion County, Indiana. Each year he and his magistrates adjudicated over twelve thousand delinquency cases that had been investigated by police officers assigned to their department's juvenile branch, prepared for court and sentencing by the juvenile probation department, and filed by a separate prosecutor's office. Payne's courts also handled matters involving more than one thousand neglected and abused children annually, whose cases were investigated by workers from the county welfare department. Some of the neglect cases also involved school social workers who had identified young children who had frequently missed school. That adds up to five different departments addressing the same problem but never sharing information.

Payne tried for years to get these five departments to pool, or at least share, their data. His first opponents were lawyers for each administrative unit, who explained that even if information

sharing would help children, it could not be done. Payne fought and won that legal battle, but it had little immediate practical effect a decade ago when his victory occurred. The data that could now be shared existed only on paper. As long as data could move only by briefcase and envelope, there would be no free flow of collaborative information in real time.

When Payne moved on to become director of the Indiana State Department of Child Services, he continued to press for shared data, but the situation in his new job was no better than the one he had left. His caseworkers took their notepads into challenging homes without access to relevant records from schools, family doctors, mental health providers, the criminal justice system, or other sources. Payne had inherited a statewide information system, required of Indiana and other states by federal government standards, that was designed for data storage and control, not getting information to employees who were trying to help troubled children.

With the assistance of the Annie E. Casey Foundation, Payne addressed this problem by launching the country's leading effort to eliminate paper in child welfare services, adopt digital processes, and get digital tools to the field. The department's data services were redesigned so that information could be gathered and carefully shared with those with a need and legal right to know, including foster parents, education professionals, medical staff, and service providers. Data from other departments (e.g., Corrections and Family and Social Services) was integrated and also made accessible pursuant to a set of rules that allowed the information to be used by the child service employees involved with the family. Payne's department purchased laptops and tablets for every caseworker, allowing them to add information to a case file in real time and giving them the ability to get the information they needed exactly when they needed it. The goal, of course, was to equip fieldworkers facing time-sensitive critical questions with far more information to make decisions. Indiana's efforts against the abuse of children are no longer just run on the hunches of young caseworkers; they are now fought with intuition and discretion informed by hard information and performance metrics.

Payne has found that the ability to look peripherally, that is, to see across the verticals of many agencies and systems, is essential to making best decisions for the safety and well-being of children. His reforms aimed to create such peripheral vision, and in doing so they have produced demonstrably better outcomes. The effort had the additional virtue of spreading beyond Payne's department to improve the workings of other parts of Indiana's state government. The state's chief information officer under Governor Mike Pence, Paul Baltzell, decided to leverage data even more to take on infant mortality, which we will explore further in the final chapter.

Coordinated, Precision Crime Fighting

In November 2011, Mayor Michael Bloomberg of New York City appointed Shari Hyman commissioner of the city's Business Integrity Commission (BIC). Hyman had served in several jobs that helped her understand how a government's propensity to treat all incidents identically reduces its effectiveness against the real "bad guys" even as it creates substantial red tape and increases costs for honest small businesspeople. As director of business acceleration, she focused on streamlining city operations to help small businesses. For instance, she designed and implemented the New Business Acceleration Team, which consolidated and coordinated once-separate city inspections, so that new restaurants and retail stores could get their permits and open their doors more quickly. Before that effort, she developed the concept of targeted multiagency enforcement as the first director of the Mayor's Office of Special Enforcement, where she took on another seemingly intractable problem that required interagency cooperation: counterfeiting of name-brand articles of clothing in one of the country's leading locations of such sales, New York City's Canal Street. That initiative, the largest anticounterfeiting operation in the city's history, required consolidating the resources of four agencies in many operations, including raids on a single property with thirty-two separate stores, all selling fake luxury products, which the city dubbed the "counterfeit triangle."

In her job at the BIC, Hyman took over an eighty-one-person staff and agency dedicated to ensuring integrity among commercial waste haulers and market wholesalers—industries once known for deep penetration by organized crime. BIC licenses

over two thousand companies. When she started as commissioner, determinations about the integrity of a particular applicant depended on data from twenty-seven unaligned and inconsistent databases, comprising more than five thousand data fields and one million pages of paper files.

Reflecting on her first weeks on the job, Hyman wrote: “It was readily apparent that the agency was sitting on twenty years of information and data with no discernible way of using it effectively. Systems barely talked, cases lived in hard-drive silos and performance reporting was cumbersome.”³

Hyman set out to eliminate the paper, scanning half a million pages of documents, and deployed an enterprise data management (EDM) system—an approach, much more common in private enterprise, that integrates separate databases.

More important, Hyman began the process of changing the BIC’s focus from processes (following steps to the issuance of a license) to its actual mission of ensuring integrity. The risks it had to fight no longer solely involved the traditional organized crime families. Instead, new criminal enterprises had evolved to take advantage of the inherent resale value of recyclable materials—paper, metal, and even grease waste. Honest providers of these materials faced increasing illegal competition from thieves, so Hyman decided to use the commission’s massive quantities of data to guide a change in enforcement.

Hyman and her chief program officer, Joanna Weiss, examined forty categories of information, including data on companies that operate in the private sanitation and wholesale market businesses, data on people who operate in the private sanitation industry and wholesale marketplaces, and data on the fleet of vehicles used in these industries.

Thanks to EDM, the analysts could now see data from many different angles. Weiss says, “For example, with all data about a particular person consolidated into a single location, BIC can now see entire employment histories of industry members. In industries where a common tactic is for less-than-reputable individuals to shuffle between companies to hide their presence, this is an invaluable asset. Consolidating all data into a single system improves BIC’s ability to identify bad actors, and ultimately to use scarce resources more strategically.” Weiss and Hyman also coordinated data users, encouraging them to communicate. They formed a

governance committee that included a representative from each practice area within the BIC and identified and met monthly with staff they labeled “power users”—those employees most active in using data to fight crime.

With assistance from the Mayor’s Office of Analytics, using a “hotspot” analysis, Hyman saw that in addition to thwarting thefts, she could also help relieve a costly problem for the city’s Department of Environmental Protection: restaurants were illegally dumping their cooking grease into the sewer system. Every restaurant is required to have a licensed hauler take its grease, so by collecting industry data on grease production, restaurant permits, and sewer backups from the Departments of Health (DOH) and Environmental Protection (DEP), Hyman’s department could predict illegal activity and target enforcement. BIC, DOH, and DEP inspectors collaborated to identify which restaurants lacked a licensed carter, thereby identifying the restaurants that were either illegally dumping or participating in the grease black market. Focusing on the outliers produced dramatic results—an increase in enforcement actions of 30 percent while achieving a 60 percent reduction in manpower dedicated to grease enforcement.

The Renewed Public Employee

Stories like Payne’s and Hyman’s are encouraging illustrations of how much can be done when nineteenth-century governance is transformed with digital tools. But most of today’s public employees still labor in the highly mechanized, routine processes of a government system created more than a hundred years ago. Consider, as an example, the case of the two thousand dollar ticket. As deputy mayor of New York City in 2010, Goldsmith encountered that ticket, which had been written by a Department of Sanitation inspector and given to a man who had picked up a piece of an air-conditioner from the street. The relevant law was aimed not at citizens who picked up a single discarded appliance but at organized gangs that stole valuable recyclable material that would otherwise have been sold by the city. However, no one in the system had any discretion. Any such violation, according to Sanitation Department regulations, mandated a violation and a fine of two thousand dollars. The system in which the inspector

worked could neither provide him real-time information relevant to enforcement questions—Was the culprit a recycling recidivist? Was the junk valuable?—nor did it have the tools to monitor how he used his discretion. And thus he was not permitted to use his judgment.

It was just the sort of absurd situation that can and should vanish into history now that digital technology is widespread. With the ability to access information in real time, employees deepen their knowledge and can use it to inform their judgments. The instant flow of data also affords supervisors the chance to support, train, and monitor their field staff much more closely than they could have in predigital times. With that safeguard against abuse, workers can be unshackled from legacy rules that limit their discretion. In other words, pushing data to the field changes the nature of public work and engagement. And that, of course, represents an opportunity to revolutionize public work. A performance system based on learning allows for deviance: workers can make decisions about allowing exceptions, departing from risk-averse procedures when such departures would add value. It allows, for example, a Sanitation Department inspector to act on the obvious difference between a gang of thieves and an ordinary citizen picking up a discarded air conditioner. It is a new and better form of accountability. Like any other kind of accountability, it does not guarantee that errors will never be made, but it does increase the likelihood that workers will make informed, conscientious decisions.

As an example of how information flow can replace rigid routine, consider the San Diego Sheriff's Department, whose four thousand employees provide services to three million residents. For decades, when a deputy on patrol needed hard information, he or she would request it by radio from dispatchers and wait. Today thanks to a data fusion project, deputies can immediately get probation information, warrants, photos, and other important information related to a particular license plate or driver's license number. According to Ashish Kakkad, the department's chief information officer, the new data approach promotes the patrol officer to the role of "the decision maker rather than a mere conduit who transfers messages from the street to a dispatcher who secures information and eventually sends it back to the deputy." With rapid, well-integrated access to key data, officers

make much more effective use of their time, Kakkad explains. The effects of digital tools ripple out into many aspects of the job. With information so readily available when needed, the department can now recognize the experience and knowledge of its employees, entrusting them with discretion to use their judgment. The new data tools can unlock dramatic productivity gains if the structures of government allow them.

The Digital Civic Switchboard

At a small office in Manhattan's Meatpacking District, the workers behind the nonprofit OpenPlans look for ways technology can help the public find bike-sharing locations, learn where a bus is on its route, and solve other daily urban dilemmas. They labor to produce online tools that gather public input and share information in order to make cities operate better. Although their methods are digital, the role the group plays in the community would be familiar to any resident of 1930s New York: they are the modern equivalent of the switchboard operators.

The switchboard operators of yesteryear did far more than connect phone lines. They managed the fabric of their communities. Births, election results, traffic accidents, and local gossip were their daily fare. They embodied the community's voice and its memory. In their ability to match a specific person's problem with the resource needed to solve it, they delivered solutions to individuals and encouraged their engagement with their neighbors.

After the demise of the switchboard, no one took the operator's place. Instead, the role of the civic hub was preempted by professional bureaucrats. Without a "switchboard," government officials made decisions (about which pothole gets fixed first, what restaurant can open, where a child can go to school) that were technically correct in that they adhered to procedure, but they ignored the community's collective knowledge. This process unintentionally marginalizes the people it was designed to serve, excluding them and their imagination from participation even in decisions involving their own families.

In the digital era, this bureaucratic system is bound to end. It will be replaced by people and digital tools. These hubs of community problem solving will use both city hall's data (made accessible

to the public) and data generated by citizens themselves to tailor responses, engage and respond to problems, and even prevent problems from occurring in the first place. As the switchboard operator lived on the phone lines, these new problem solvers will live in social media—the connective tissue of community in our century. Of course, there will be differences between the new social media urban community and the switchboard of yore. Social media brings far more people together than the old phone system ever did, and unlike a corded telephone, these social media are ubiquitous and always available. Hence social media will break down barriers—between citizen and public servant and between citizen and citizen—and upend urban hierarchies.

Governments that embrace the digital civic switchboard will make it a platform for joint action with their constituents. Once this has occurred, cities will be able to better prioritize resources, anticipate problems, customize responses, and unleash the now-untapped resources of collaborative community action. Innovative governments will create new ways for citizens to make their voices heard, giving them the ability to provide input into regulations, budgets, and the provision of services. This new form of engagement will create better ways for residents to register requests for service or complaints. Beyond that, it will give citizens a chance to play a part in the design, and sometimes the delivery, of these services. An example: a few years ago, New York City created its Community Data Portal (an online trove of truly interactive, usable data maps) and gave training in its use to leaders of its fifty community boards (committees made up of active community people, each representing a swatch of neighborhoods). Empowered with information, these activists created a steady stream of solutions to their local problems.

Those kinds of results are good for urban politics, as citizens find they can engage and find solutions to their problems. But the digital switchboard is also good for the bottom line, as the federal government's General Services Administration's (GSA), the federal agency that primarily provides services to other government agencies, has shown. In 2014 the GSA received Harvard University's prestigious Innovations in American Government Award for creating Challenge.gov, an online portal for running