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Innovations in Public Service Delivery

Issue No. 1

Can 311 Call Centers Improve Service Delivery?

Lessons from New York and Chicago

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The economic and social changes taking place in Latin America and the Caribbean are creating new and complex challenges for the region's governments. A defining challenge is the pressure to rationalize government spending while addressing rising public expectations by a growing middle class and an increasingly connected society. Governments need to devise new ways of interacting with citizens, who are demanding greater inclusion and more dynamic participation in policymaking, as well as greater accountability of governments for the quality of public services. These shifts in governing techniques are leveraged by the new and fast-evolving information and communication technologies, including the innovations of digital government and social media. Narrowing the distance between people and institutions can enhance trust in government. Recent OECD studies show that satisfaction with and accountability for the quality of public service delivery are major determinants of trust in government, and that innovation is improving responsiveness of many governments.

Notwithstanding the fact that many governments in the region are modernizing public management, institutional fragmentation and complicated administrative procedures are still a major hindrance to effective, efficient, and open government in the region. Many countries are still struggling to improve their public services and delivery capabilities, which affect the living standards of citizens and the competitiveness of the private sector. The Inter-American Development Bank (IDB) is working with governments in the region to strengthen their management capacities and simplify administrative procedures to improve the quality of public services. This support includes technical and financial assistance to Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico and Uruguay, among other countries. The IDB is also investing in the generation and sharing of policy-relevant knowledge to better understand the drivers of institutional change and government modernization leading to improvements in public service delivery and to institutional environments that foster innovation in the public sector. There is no single recipe or model to address the multiple factors affecting the quality of public service delivery. Nevertheless, new approaches to public management underscore the need to place the citizen at the center. This approach stresses the importance of striking the right balance between innovation and institutionalization.

Since 2013, the IDB has been working with the Ash Center for Democratic Governance and Innovation at the Kennedy School of Harvard University, under the coordination of Professor Stephen Goldsmith, in the development of a conceptual framework for identifying innovations in government and analyzing promising practices in Latin America and the Caribbean and around the world to improve the quality and delivery of public services. This analytical framework

served as a reference for the selection of a series of concrete experiences of public innovations in service delivery to be documented, analyzed, and shared. The IDB brings together these cases and the lessons learned into a discussion paper series titled: "Innovations in Public Service Delivery."

This first issue showcases the 311 Programs in New York City and Chicago, two leading 311 centers in the United States. "311" is the universal toll-free number for non-emergency government communications in the United States. It provides citizens with a single point of entry to a wide array of information and services in major cities. New York City 311, the largest city call center in the United States, has evolved into a case of best practice of public service management. Chicago 311 has pioneered the use of 311 data in a predictive way, working with citizens and entrepreneurs to anticipate and solve concrete problems. This publication provides an overview of these programs, analyzing their design and implementation, results and impacts, and identifying their success factors. It concludes by highlighting certain elements that policymakers and public officials should consider when developing similar solutions.

The author of the paper, Jane Wiseman, leads the Institute for Excellence in Government a nonprofit consulting firm based in Boston, Massachusetts (United States) dedicated to improving government performance. She provides technical assistance to the inaugural five winning cities from Bloomberg Philanthropies' Mayors Challenge 2013. She has 25 years of experience in helping to governments to improve their overall operations. Her previous consulting work has included organizational strategy, performance management, and e-government strategy with IBM, Accenture, and Price Waterhouse. Ms. Wiseman holds a bachelor's degree in government from Smith College and a master's in public policy from the John F. Kennedy School of Government at Harvard University.

This discussion paper series is coordinated by Pedro Farias, Principal Modernization of the State Specialist in the IDB's Institutional Capacity of the State Division (ICS). Pedro is spearheading the Bank's work on government modernization, administrative simplification, and service delivery. Catalina García de Alba, Laura Bocalandro, María José Jarquín, Alejandro Pareja, and Miguel Ángel Porrúa have provided insightful comments and thoughtful recommendations to this paper. I would like to thank Prof. Stephen Goldsmith and the Ash Center of Harvard Kennedy School for their support in the selection and analysis of the background case studies, some of which will be part of this series. I would also like to acknowledge the technical and financial support of the IDB's Institutional Capacity Strengthening Fund (ICSF), with funding from the Government of the People's Republic of China, which made this publication possible.

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This case study describes the two premier 311 call centers in the United States, in New York City (NYC) and Chicago. New York City's 311 system (NYC311) is the largest city call center in the United States and among the most successful customer service operations in government. Chicago is the leading city in the application of 311 data to predictive analytics. The purpose of this case study is to describe the implementation of 311 in these two cities and to share lessons for other cities considering implementation of a 311 program.

"311" is the toll-free number designated by the U.S. Federal Communications Commission (FCC) for non-emergency government communications. In the 1960s, the FCC designated 911 as the simple, universal emergency services number. This represented an innovation in simplifying—with a single, toll-free three-digit number—the ability to summon government help during an emergency. Across the United States, this number is now used for immediate reporting of fires, crimes, medical emergencies, accidents, and other incidents requiring immediate help. Use of this number has saved countless lives over the years.

The simplicity of dialing a single number for immediate government assistance had a downside as well. Decades in, 911 became overused. By the 1990s, non-emergency use of 911 was threatening to impede success in addressing true emergencies because the number was being used to report stray cats or to inquire about library hours, school closings, and parking regulations. In 1996, the White House took action and asked the FCC to reserve 311 as the national number for non-emergency government service. The federal government then provided seed funding to 13 jurisdictions for pilot projects to test whether 311 service could divert non-emergency calls from 911 centers.

While 311 had its roots in diverting non-emergency calls from 911, in the nearly two decades since its launch, it has evolved into a tool for government innovation in customer service. In fact, while many 311 operations were started as a part of the 911 emergency operations organization, the most common organizational home for a 311 center today is within the office of the mayor or city manager.

This single abbreviated number can be a point of entry to all government information for callers and can serve as the basis for performance management in government. Today, 311 is a customer-focused tool to provide a wide variety of government information to residents. No longer just a phone number, 311 is a multichannel tool offering a range of options from self-service via phone interactive voice response (IVR), web, and mobile app; to direct interaction by email, online chat, and social media; as well as walk-in customer service counters. City 311 centers can serve as the locus of continuous innovation

because they are the first touch point with customers and can be used to spot trends and anticipate emerging customer needs.

Today, most large and many mid-sized American cities have some type of 311 system in place. There are nearly as many reasons to create a 311 center as there are cities. The earliest 311 centers (such as Baltimore and Chicago) were created to relieve the burden on 911 systems; some cities (such as NYC) have created 311 primarily to make government more customer-friendly; other 311 centers have been created to reduce the perception of corruption in government (such as Philadelphia) or to reduce costs (such as Charlotte-Mecklenberg). No two city 311 systems are alike. Each has been built to unique local customer attributes and demands. Nearly all 311 systems can provide citizens with information via telephone, which is the most common use of 311, often 80 to 90 percent of call volume. Many systems also allow users to make requests for city services either by describing the situation to the call-taker or by entering the request directly into the system through the web or mobile app. In some cities, users can track the status of their service requests. In the most powerful 311 systems, the call generates a work order that is automatically transferred to the responsible agency. For example, a caller who reports a pothole can provide the address and when the call-taker enters the address, a work order is generated in the back-end work order management system of the department responsible for street paving and repair.

Generally, large city 311 systems rely on a technology backbone such as a customer relationship management (CRM) system. There are many layers of technology involved, from the software that manages and routes incoming calls, to the knowledge management base from which call-takers draw answers to caller questions, to the management reporting tools used to analyze call and service delivery data. Managing the multiple technology pieces can be a challenge. Typically 311 staff manages all the technology components. Cities are only beginning to migrate toward cloud-based solutions for their 311 enterprises. Atlanta has already done so and Chicago plans to do so in the coming years.

While often viewed as a technology initiative, and often managed at least at the outset by the city's information technology department, a 311 center is a point of entry into a broader management philosophy and a platform for government innovation. Data from 311 forms the foundation for city-wide management efforts, often led by the mayor or city manager rather than the 311 staff themselves. For example, NYC uses 311 data for agency performance

"The challenge wasn't the technology; the challenge was using the technology to change working attitudes and behaviors."

Stephen Goldsmith
Former New York City Deputy Mayor for Operations

management and Chicago uses 311 data for predictive analytics. Thus, 311 not only enables management innovation, it is an innovation in itself. In the words of former New York City Deputy Mayor for Operations Stephen Goldsmith, "The challenge wasn't the technology; the challenge was using the technology to change working attitudes and behaviors."

311 systems are a powerful tool to make government more responsive to customer needs. NYC311 and Chicago 311, the two most sophisticated examples of 311 systems in the United States, demonstrate continuous innovation, and thus are discussed in more detail below.

The leading example of excellence in municipal government customer service operations in the United States is NYC311.

Design and Implementation

New York City is called the "city that never sleeps." Neither does its call center, which operates in 180 languages 24 hours a day, every day of the year. New Yorkers can be demanding of themselves and of their government. Running the 311 call center to answer New Yorkers' questions is no small task. Doing it with customer service ratings that exceed all other government call centers and many private sector call centers (according to the American Customer Satisfaction Index) is nothing short of miraculous. NYC311 serves 50,000 callers a day plus residents, businesses, and visitors who use self-service tools or visit walk-up customer service centers.

As a mayoral candidate, Michael Bloomberg spotted a leaking fire hydrant. He asked his staff how he would go about reporting it. When he was told that he would have to report it to the Department of Environment Protection, he wondered, "DEP? What citizen would guess that? You see a fire hydrant and associate that with the fire department, don't you?"

Once he was elected, Mayor Bloomberg made it a top priority to simplify the maze of city agencies a resident would have to navigate to solve problems. At that time there were 4,000 entries on 11 pages of the phone book for city agencies. There were 45 call centers scattered across city government, with 1,000 employees and each agency using its own technology tools to track information and calls.

The NYC311 center was up and running by the spring of 2003, just over a year after the mayor publicly announced the project. The mayor designated NYC Chief Information Officer (CIO) Gino Menchini as the project leader and kept close watch on progress. The mayor placed a high priority on the success of the 311 launch. The original goals were to make city government easier to navigate and to make quality of life better for New Yorkers. One goal was to reduce constituent frustration with bureaucracy and replace the patchwork of phone numbers with a central, all-purpose phone number that could efficiently and effectively bring government to the people, whether to provide information, to file a complaint, or to request a service.

Planning for the system included reviewing the progress of Baltimore's and Chicago's existing 311 efforts. The city agency with lead responsibility for the project was the Department of Information Technology and Telecommunications (DoITT). To assist in planning and implementing the project, DoITT selected Accenture as consulting partner and Siebel as the technology platform. An ambitious undertaking, there had never been as large a scale Siebel implementation

in municipal government to date. Careful planning and attention to building the knowledge base was a key to success. Planning, building out the space, acquiring the hardware and software, and creating the call-taker scripts took eight months. A three-month soft launch before the official public launch assured that problems could be worked out before call volumes increased.

By using a CRM system such as Siebel, NYC311 integrated the front and back ends of the system seamlessly. Thus, a call-taker has a single source for both the call-taking scripts and the underlying content in the vast knowledge base. Using a CRM also provides comprehensive tracking information about each call, as well as trend data on types of calls, duration of calls, and emerging trends. The wealth of information captured by the system has enabled management reporting on trends in service delivery, which means the city can use the data for predictive purposes. Today, 311 data is published on the city's portal and is open to the public, improving government transparency.

The 311 center consolidated the operations of existing city call centers into one space, located near public transportation, and a five-minute walk to city hall. This location near the nexus of city government is important to the success of the project. It helps to build the morale of the team and reinforce that they are important to the mayor and to the city. The 45,000-square-foot operations center can house 450 call-takers; a backup facility is available for overflow or system outages.

Originally staffed by bringing in personnel from city agencies, NYC311 is now staffed mostly with call-takers hired specifically for this purpose. Many of the original staff members were individuals who worked in the agencies and handled multiple tasks in addition to answering phones. Most of them did not primarily identify themselves as customer service agents, which presented a cultural and organizational challenge for the 311 center. Today, call-takers are trained for four to ten weeks and receive mentoring and supervision to develop both technical and customer service skills. Part of the training impresses upon call-takers the difference they make in the customer's life. Executive Director Joseph Morrisroe says, "[NYC311] call-takers provide an invaluable service to the community. We want them to be aware of that."

One of the key early tasks was to consolidate the information from the different call centers into a single, easily searchable knowledge base. A key decision of the NYC311 team was to require that city agencies (rather than the 311 team) own the content of the knowledge base and be responsible for its accuracy and for updating it with any changes in policy. The NYC311 Agency Relations team works with the various agencies across city government to update and correct content on an ongoing basis. This team has direct system access to update information and to simplify the process of keeping the system accurate as policies change. This keeps the internal and external knowledge bases in synch. While DoITT is responsible for the technology, the Agency Relations team is responsible for the content.

Today's NYC311 is the culmination of over a decade of consistent innovation and represents best-in-class performance. Morrisroe came to NYC311 with nearly two decades of experience in private sector call center operations and an aptitude for continuous improvement. From the initial launch in 2003 to today, more customer-focused features continue to be added. Beginning with a call center and web portal, NYC311 now also offers 3,600 kinds of

city service requests, as well as neighborhood-level service request maps, a mobile app for reporting problems, and an easy self-service request tracking system. With its Notify NYC opt-in alert system, NYC311 users can sign up to receive automatic notifications tailored to their needs via their preferred method of communication (phone call, email, text message). NYC311 was the first to allow constituents to send in pictures and videos with their service requests. NYC311 now also leverages social media, with a Facebook presence and 81,000 Twitter followers. Emerging channels such as this represent a future growth area, but the primary method of contact for NYC311 customers continues to be the phone.

One innovation was the creation of neighborhood maps layering all the service request types by exact location. For the first time this allowed a community group to see all the city activity and services provided in their neighborhood. The service request map provides a color-coded view of every service request mapped to the community level, showing volume of complaints filed in each neighborhood, with the ability for the user to drill down and view the map by specific address, intersection, community board, city council district, or zip code. This allowed community groups to partner with the city to monitor progress and proactively solve problems or bottlenecks if they arose. This fundamentally altered the relationship between community groups and the city.

Human services information and referral, done in some cities separately using a 211 line, is now done by specially trained NYC311 call-takers. This makes NYC311 the largest social services information and referral center in the world, with 30 call-takers accessing information from a knowledge base including 1,000 social service agencies and 1,300 non-profit organizations.

The system also provides real-time integration with agency work order management systems so that, when a pothole or broken street light is reported, the agency responsible automatically receives the needed information to send a crew to repair it. This integration into agency work order management systems allows complete transparency of tracking—a constituent can see where a work order is in the queue and can opt in to automatically be notified when the agency closes the case. Considered by many to be one of the great achievements of the term of Mayor Bloomberg, he considers it important and believes that 311 "has truly revolutionized how people deal with government." Today, customers can contact NYC311 by phone, email, teletypewriter (TTY), social media, text, or Skype, or they can walk into a customer center.

The 311 center is a vehicle to provide information to a wide variety of people on a range of topics and can be activated quickly to respond to emerging needs. For example, during flu season, nurses are made available to answer calls and help callers determine if they need to seek medical treatment for their flu symptoms. When same-sex marriage was first legalized in NYC, the 311 call center was the designated number to call to book an appointment for a marriage with the City Clerk. Shortly after his inauguration in January 2014, Mayor Bill de Blasio wanted to support the rollout of the federal Affordable Care Act. So the 311 center developed a push message (an automated outbound call to customers from the 311 center) to alert residents about signing up for health insurance. This resulted in 5,000 additional calls to 311 to inquire about how and where to go to get help with enrollment.

Additional innovations in city government have come about because of the vast troves of 311 data available for analysis. The city now has a proactive team of inspectors drawn from various city agencies (including environmental protection, transportation, sanitation, buildings, and housing preservation and development) who canvas the city streets seeking problems and then directly reporting them using handheld devices that have a direct wireless connection to the 311 system. Regardless of the type of violation they spot, they can instantly create the necessary work order instead of waiting for a resident to notice and report it. The inspectors are trained to look for potholes, sidewalk litter, overflowing trash cans, graffiti, missing or damaged lights or signs, leaking fire hydrants, and abandoned vehicles.

While originally part of the city's DoITT, NYC311 is now part of the Mayor's Office of Operations. The performance data created by the 311 system is a key component of the mayor's performance management efforts. Performance data for 311 and for all city agencies is shared monthly in the Citywide Performance Report, which is posted on the city's web site and is available at http://www.nyc.gov/html/ops/html/data/data.shtml. The current organizational structure encompasses the call center and the city's web portal, as well as data from customer interactions. The following table describes the 311 center departments.

Department name	**Responsibilities**
Content & Agency Relations (CAR)	Manages the day-to-day relations with agency partners and develops and updates content in the knowledge management system used by both the call center and 311 Online.
Performance Management	Increases efficiency of customer service in NYC by facilitating data-driven performance management, providing insight into performance through standard reports, a comprehensive business intelligence tool that delivers a full range of analytics, and reporting capabilities.
Training	Prepares new call center employees to serve NYC with quality customer service and helps more seasoned employees further hone necessary skills. The training team approach includes multi-disciplinary instruction methodologies and the design of instructional material to teach computer systems, customer service standards, and call center policies and procedures.
Quality Assurance	Increases efficiencies and customer satisfaction through effective tools and resources. Ensures correct, clear, and professional interactions between customers and call center representatives.
Operations	Supports and teaches employees how to effectively and efficiently assist its customers. Operations uses different monitoring and measurement tools to obtain data and to provide routine feedback.

Source: http://www.nyc.gov/html/ops/html/311/311.shtml

Results and Impact

Within three months of operation, NYC311 had received over 1 million calls, and to date, close to 200 million calls have been answered. During a snowstorm in January 2011, the center received its highest one-day call volume—276,827 calls, or nearly one call for every 30 New Yorkers. The web portal is available in 50 languages and call-takers can serve constituents in 180 languages from Amharic to Zulu. The majority of customer contacts are by phone (80 percent last year), with an increasing number of contacts coming via the web portal and mobile apps. Generally, the trend has been that when new methods of contact are added, they reach new users who had not previously contacted the 311 center, rather than diverting existing users to a new method of contact. Telephone remains the dominant driver of volume, with the number of monthly users of the mobile apps being approximately the same as the number of callers in just one day.

Since implementing 311, 911 call volume has decreased. There was a decrease of 4 million calls to 911 from 2003 to 2009, allowing for faster response times to 911 calls and the allocation of resources to the most urgent public safety needs.

Another mark of success is the high morale of 311 workers and their low rate of turnover. Employees who leave the 311 center tend to leave for other jobs within city government rather than leaving for private sector jobs. One unofficial indicator of the morale of employees and the positive organizational culture is that, during snowstorms and other city emergencies, absenteeism is lower than on other days. Workers at the 311 center clearly have a feeling that their work matters to the public.

Response times are impressive for NYC311, with 83 percent of calls answered within 30 seconds and an average wait time of 23 seconds. Customer satisfaction is well above the federal government and private sector averages for call centers. Based on a survey using national standards for public and private sector call centers, NYC311's score of 83 for 2013 was up four points from the baseline set in 2008, was 11 points above the federal government average for call centers, and was 6 points above the private sector average. Staff at NYC311 achieved impressive survey results too, with a composite score 91 for being perceived by callers as highly professional and personable, and excellent communicators. Michael Bloomberg sums up the significance of 311 as a management tool: "311 is not just a citizen service hot line, it is the most powerful management tool ever developed for New York City government. I can't imagine running the city without it."

Using 311 data to manage the performance of city agencies has been a powerful way to assure that department leaders are meeting their service level agreements (SLAs). The data in the 311 system tracks the amount of time from the report of the issue to its closure. Service level agreements are assurances to complete service within a specified amount of time, such as the number of days after a pothole is reported that it is repaired, or the number of days it takes to tow an abandoned vehicle or fix a broken street light. Service level agreements are established by agency leadership and the mayor's team and are recorded in the 311 system. Typically, SLAs are set based on agency resource levels and the risk to the public of not fixing

the problem—safety hazards are addressed with the highest priority. While NYC311 collects the data and works with the agencies to develop the SLAs, it does not manage or oversee agency compliance with them. This strategic separation of duties reduces the potential for contentious relationships between city agencies and NYC311 than if NYC311 were seen as policing compliance with SLAs and thus agency effectiveness.

Data from NYC311 powers one of the largest public sector accountability and transparency efforts in government. NYC Open Data is an initiative to make city government agency datasets available to the public and to developers. There are over 1,100 government-produced, machine-readable data sets covering topics for arborists to zoologists. There is detailed data on city buildings and trees, as well as parking tickets, noise complaints, and population density. Researchers, students, and technology developers can use the data to create their own analysis tools or mobile apps. NYC311 data powers many of the underlying city datasets available on the NYC Open Data portal.

With regard to the cost to implement and the return on investment, this is a complex question. The NYC311 center was not designed to be a cost reduction measure, but rather to improve the quality of customer service and the transparency of government. While implementation costs can be calculated, it is quite challenging to quantify the benefits of improved customer service and accountability. For a review of comparative cost data from several American city 311 implementations prepared by the Pew Charitable Trust, Philadelphia Research Initiative, see Appendix A. Data for this analysis was collected in 2009. The cities vary widely in size and in the goals of their 311 systems, so caution is advised in drawing conclusions. Simply put, 311 costs vary considerably and are difficult to compare from one jurisdiction to another.

NYC311 has achieved significant benefits in streamlining operations by consolidating 45 disparate call centers into one. Rather than continually updating 45 separate IT, knowledge base, web site, staffing, and telephone systems, it is all one integrated system with far greater call volume and surge capacity than the prior patchwork of call centers. Also, in some cases, NYC was able to eliminate duplicate or overlapping of services where multiple agencies were performing the same task.

Simplifying the experience for a caller is hard to quantify. Before 311 was implemented, a survey showed that 52 percent of callers had to make two to ten calls and that 37 percent

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> Michael Bloomberg
> Former Mayor of New York City

spent 20 minutes or more before reaching the right agency to solve their problem. Now, there is one number to dial and the caller does not need to know how the government solves the problem. In the words of NYC311 Director Morrisroe, the system puts "the burden on the city to solve the problem, not the citizen." A caller does not need to know the difference between a pothole, a sinkhole, and a cave-in. They simply report it and the appropriate agency fixes it.

Another intangible but quite valuable result of NYC311 is the ability to quickly respond to emergencies. During Hurricane Sandy, call volume surged and other city agencies provided staff to the 311 center to meet the increased need. Early after the launch of 311, there was a blackout in the city. After receiving a series of calls from diabetics who weren't sure if they could use their insulin if their refrigerator was off, the 311 staff reached out to the Health Department and was then able to get accurate information out to anyone who needed it. They then shared the information with the media so that the benefit could be spread far beyond the reach of those who called the 311 center.

Success Factors

Factors critical to the success of NYC311 are described below. Selected elements of the Analytical Matrix for Innovations in Service Delivery created by the Inter-American Development Bank (IDB) are used, including the leadership model, technology solutions, managerial tools or models, institutional factors, and customer and culture issues. Success factors are discussed after listing selected relevant key questions from the matrix. Some questions have been modified to be more relevant to this case study.

Leadership

What role did senior executive leadership play in the success of the program?

The success of NYC311 can be credited to a large team of individuals, from the DoITT project leadership to the agency staff dedicated to the project to the contracted technology firms. However, credit for the vision and for the critical support without which the project could not have succeeded is with Mayor Bloomberg. The mayor announced just after taking office that he would create the 311 center and promised to bring a customer-centric, data-driven approach to government. His passion for using business acumen to re-orient government cannot be understated. The mayor made it a priority and put the necessary attention and resources into the project. When difficult decisions had to be made to advance the project, such as designating agency staff who would be transferred to the centralized call center or establishing and codifying SLAs, the DoITT team had the full force of the mayor when exhorting cooperation from the agencies. Without this very strong support, the project could easily have become mired in indecision, stonewalling, and procrastination. An aggressive timeframe and public announcements from the mayor kept pressure on the entire team to produce and to get the 311 center launched on time. One interviewee said, "Without the mayor we never could have gotten it done."

Similarly, in Philadelphia, Mayor Michael Nutter publicly declared that the 311 center would launch in his first year in office, and he put the right people on the project so that it would get done. Somerville, Massachusetts, a much smaller city, demonstrates again the importance of senior level leadership from the mayor in getting a 311 center up and running quickly. Without mayoral leadership, it would be difficult for a technology or operations team to make the difficult choices and decisions needed to maintain the momentum of such a large project.

Technology

Was new technology produced for this program or was it deployed "off the shelf"?
Does the technology require regular maintenance or upgrades, or is it self-sustaining?
Are partnerships being employed with companies, non-profits, other departments, or other governments?
Is the knowledge that can be shared explicit or tacit? Has it been translated into new technologies such as programs or platforms that can be shared?
Has the program used technology to allow for increased citizen participation?
Does the program depend on citizens having certain technology or technological literacy?

A critical component of the success of the initial launch of NYC311 was the choice to use an existing software package rather than to build from scratch. By using Siebel, a CRM package with a long history of success in the private sector, NYC311 was able to build on experience from outside of government in enterprises of similar scope and complexity to NYC. When asked what advice he would give to someone newly embarking on a 311 effort, NYC311 Executive Director Morrisroe says of the technology, "Thou shalt not customize." His opinion is that the more customization a city makes to a standard software package, the more time and cost will be involved in the initial launch, and the more cost and complexity will be involved in each software patch or upgrade.

All technology products require upgrades and refreshes as standards change and as generations of prior technologies become antiquated. The key question is how often to upgrade. NYC311 is in the process of seeking an upgrade to its technology a dozen years after implementation. Since launch, the underlying technology has not fundamentally changed, even as additional services have been added. Choosing a scalable technology allowed this.

Partnerships with technology providers have been essential to the success of the program. Using city procurement procedures allowed vendors that met city requirements to be selected. Managing the number of technology partners (e.g., telephony, knowledge management, call routing, case tracking, case management, reporting, and business intelligence) has required a team of highly trained professionals with the skills to understand technology as well as procurement and business management. Each manager of the NYC311 program is required to develop a technology roadmap on an annual basis.

The knowledge base required to operate the 311 center is twofold: the management knowledge to oversee the operations and the knowledge required to serve customers through

> "We can't be right some of the time, we have to be right 100 percent of the time."
>
> Joseph Morrisroe
> Executive Director NYC311

the call center and self-service options. The management knowledge to run the 311 center is routinely shared by the 311 director and his team through briefings to delegations from around the world. These hosted delegations have covered hundreds of visitors from dozens of countries spanning six continents. The knowledge base used by customer service representatives to answer calls is a single repository of information that resides in the CRM system. This knowledge base was populated initially based on the collective wisdom and the institutional knowledge of the workers transferred from agencies into the 311 center. They used their experience of speaking with customers in their agencies as the source for the initial knowledge base. Over time, this knowledge base has been updated and improved. As Director Morrisroe said, "We can't be right some of the time, we have to be right 100 percent of the time."

The Agency Relations team is constantly updating the knowledge base with any changes in policy or new programs from the agencies. The team publishes any content updates simultaneously to the internal knowledge base used by call-takers and also the external self-service web pages accessed by constituents. This assures that there are no discrepancies in the information provided to the public.

As more and more technology enhancements are made to the system (including interactive voice response, web, Skype, text, and video), the core service delivery methods remain unchanged. Many constituents want to be able to pick up the phone and have a live voice provide them an answer. Even for the most common question—"Is alternate side parking in effect?", for which NYC311 has an answer each day on its recorded greeting message—many callers stay on the line and wait to hear the live voice tell them the very same answer they heard on the recording. These calls are not going away. Neither is the walk-up service at customer service counters in city agencies and in the 122 police precincts around the city. This allows constituents who may be part of underserved populations (e.g., low income, elderly, and new immigrants) to access the same high-quality service as those who choose the newer technology delivery methods.

Managerial Tools or Models

Does the program shift power and discretion up or down through layers of government?

What regulations, procedures, or conventions were created, changed, or utilized by the new program?

Does the program enact or fulfill citizen service charters?

Did new technology introduced allow for new or different kinds of quality management?

The NYC311 program realigns power. By offloading to a central call center the time-consuming and often repetitive task of answering constituent calls, agencies can focus on more complex tasks. This may very well improve morale in the agencies, which can now focus on the core task of their organization rather than responding to customers. For the 311 center, this separation of duties allows the call-takers to specialize in customer service and to excel at problem solving. Front line call-takers are empowered to solve problems for constituents and have access to a deep knowledge base to enable them to do so.

To create the 311 center and the knowledge base that supports it, a governance structure had to be created between NYC311 and city agencies. The core of such governance is the Agency Relations team and the knowledge base it creates. In some cases, the agencies were reluctant to give up their information to NYC311 for fear of losing their value to constituents. But they changed their perspective when they realized they were also offloading the work of answering the phones and that, when they provided accurate information to the 311 center and the public-facing web portal, they could focus on their core business. The SLAs between the agencies and NYC311 form the basic compact for customer service. If a call-taker says the pothole will be filled in a certain number of days, the customer will expect it to be. Meeting the agreed SLAs is important to meeting customer service expectations.

The 311 program does not directly address citizen charters. However, by entering into SLAs, each agency commits to a certain level of performance for customers. The management reports to the mayor on compliance with SLAs provide the feedback necessary to monitor agency performance.

The new technology has allowed a greater level of granularity in quality management than had previously been possible. With 45 disparate call-taking systems and no standardized SLAs, there was no way to systematically compare the ability to meet the needs of customers across city departments. Now, city-wide performance reporting allows not just quality management within the city, but also transparency and accountability to the public.

Institutional and Organizational Factors

Is the innovation serial (structural, cultural change that yields continuous small innovations) or one-off (operational change that yields one large innovation)?

Does this program deliver an existing service better, or deliver an entirely new service?

Is the program part of a larger movement of improvement? If so, what is it?

What regulations, procedures, or processes were created for the new program?

Does the program require cooperation from the recalcitrant and the unwilling in addition to the willing?

Does the program have a self-contained business model, or is it dependent on annual budget allocations that may change?

The launch of NYC311 was a revolution in city government, putting the customer at the core of the process and forcing the various traditional silos of city government to collaborate to identify solutions. Rather than align the knowledge base around city agencies, all topics were

entered into the knowledge base by customer question and topic area. The caller's issue or problem became the navigational key rather than the government agency. For an example, see Appendix B for the dozen different agencies that might be responsible for tree removal in one jurisdiction. The NYC311 knowledge base would key on "tree removal," not on the name of the agency, thus eliminating the caller's need to know the name of the agency with jurisdiction over the problem. Each subsequent enhancement to the system has been an incremental innovation, yet building on the foundation of a truly revolutionary approach to government, with the customer at the core.

Rather than delivering a new service, 311 is a means to coherently manage and monitor all city services under a single umbrella and with a consistent technology platform. What is innovative is the ability to track and monitor progress in real time on service level targets.

The program is part of a larger shift in management implemented by Mayor Bloomberg to measure and monitor progress on key performance metrics. Accountability to the public was reinforced by reporting the performance data on the city's web portal. By creating SLAs for each of the services tracked in the 311 system, the mayor could monitor progress on solving customer problems. He could then hold managers accountable by measuring how closely the performance of their agency tracked their SLAs. For example, if the police department had agreed to tow abandoned cars in x number of days, their performance could be measured based on the percent of 311 cases closed in that number of days. This management method was embraced wholeheartedly by some managers and was resisted by others. All organizational change presents challenges. For agencies unaccustomed to transparency and accountability and to having their service monitored and measured, it was a difficult organizational change.

To create the 311 center, each participating agency had to contribute to the knowledge base so that call-takers could accurately provide information to the public. As a result, the agencies had to work in partnership with NYC311's Agency Relations team to develop standard answers to common questions and to create both the internal knowledge base and the external self-service web portal content. As customers began to use the self-service content, the quality and accuracy improved. Each time a customer asked a question, the team could see where clarity was needed in the customer-facing information on the portal. The governance structure created was critical to the success of the program. The Agency Relations team worked with each agency to create and update the content. The agencies also developed SLAs for how quickly they would address each type of service provided to the constituent. The teams documented all these, and the mayor compelled participation by the agencies. This facilitated the work of NYC311's Agency Relations team in gaining buy-in from the agencies.

The 311 center is not designed to be a financially self-sustaining operation. There are no customer fees extracted for calls. In fact, 311 is a toll-free number. Annual city appropriations support the 311 center. For a comparison of costs to build and operate 311 centers in a variety of U.S. cities, see Appendix A: "How Much Does 311 Cost?"

Customer and Culture

Does the program engage the citizen as a customer?

Does the program intentionally emphasize service delivery to underserved populations?

Does the program restore confidence in government?

Not only does NYC311 engage the constituent as a customer, each customer call is logged and can be recorded for quality assurance purposes. The input from these calls is one of the key drivers of priority setting for new enhancements and new features to the system. All day, every day, call-takers hear from callers about what confuses, frustrates, or concerns them. Some customers even offer ideas or suggestions for system improvements. Further, NYC311 staff meet on a regular basis with community groups to gather their input on new enhancements to the system so that it will continually be improved to be more responsive to customers.

While new technologies serve an increasingly tech-enabled customer base, NYC311 will always serve individuals in underserved populations, such as low income, elderly, and limited English proficient individuals. The 311 center can serve individuals with live phone assistance in 180 languages at any time of day or night. Many other 311 centers serve customers of different languages only during the business day. Further, NYC311 provides translation of self-service web pages in 50 languages. The 311 center is also a human services information and referral agency, with specialized call-takers who serve those in need of special assistance such as individuals dealing with domestic violence and homelessness.

It is safe to say that those who have interacted with NYC311 have been satisfied with their interactions. Call-takers received a score of 91 for their performance and courtesy, and the call center scored 83 for its overall performance, higher than most federal government call centers and higher than the private sector average. While there is not yet a measure of whether this system has restored confidence in government, it has certainly put in place the means to measure customer satisfaction both with the customer service representative who handles their call, and with the resulting service delivery provided by the city.

Chicago is the leading example of leveraging the vast volume of 311 call data for cutting edge analysis, such as predictive analytics.

Design and Implementation

Chicago was the first major U.S. city to launch a 311 program. In 1999, Chicago launched its 311 system after a thorough research and planning phase. While Baltimore is widely credited as launching the first 311 center, Chicago began planning first but took longer from planning to launch because it is a larger city with greater complexity of operations. While the Baltimore 311 system was intended primarily to offload non-emergency police calls from the 911 call center, Chicago's ambitions were far broader—to create a comprehensive customer service center for any question or problem that city government could address.

A desire to better serve customers was paramount in building 311 in Chicago. However, a desire to modernize the underlying technology was also a factor since the year 2000 (and the associated technology concerns) was approaching and city systems needed updating. Building a management information system to track city performance was also an important goal. The city sought to create an effective management tool that could generate real-time reports to help departments manage staff, track trends, highlight and monitor performance, and in general improve the efficiency with which it allocated scarce resources.

Another key reason to develop the 311 center was to reduce the overlap and potential conflict of city services. Overlapping jurisdiction and priority setting could mean that the same city street was dug up repeatedly over a short period of time if there were repairs to electrical, water, and other utility services. Each time the street was dug up, it had to be re-paved, costing taxpayers each time. A single, consolidated view of city services could prevent such repeated expense and disruption to constituents. As Mayor Rahm Emanuel has said, "Let's just dig one hole."

At the time of the initial launch, 311 was a new idea that needed to be explained; therefore, the city engaged in an aggressive marketing campaign to explain the system. The message to constituents was "Burning building? Call 911. Burning question? Call 311."

> "Burning building? Call 911. Burning question? Call 311."
>
> Rahm Emanuel
> Mayor of Chicago

Educating the public was very important because if callers used 911 instead of 311, they would be bogging down the city's emergency response capability. Each non-emergency call made to 911 rather than 311 directly slows down response time to true emergencies.

To ease the transition to 311, constituents were allowed to make their requests in person at community policing centers and various other city agencies. In addition, the locally elected neighborhood representatives of each community, the aldermen, offered constituents both walk-up and telephone access to 311 during business hours. While the role of locally elected city council members (as they are called in some cities) or aldermen (as they are called in other cities) varies among American cities, Chicago aldermen can be quite powerful in their communities, and thus offered 311 an important ally in reaching constituents accustomed to accessing city services through their local alderman's office.

The technology platform for Chicago 311 was custom-built for the city by Motorola. At that time there was no "off-the-shelf" government CRM offering available. Building from scratch using the Motorola platform meant that custom code could be built for the workflow and processing of various types of service requests in city government. A handful of city agencies that had no work order processing systems of their own had tracking and processing built right into the 311 system. Building the system required more time than using an existing product, but it also allowed for more customization to the exact needs of the city.

Today, Chicago offers multichannel access to constituents by phone, web, email, text message, and social media. Users can also monitor the status of their service requests any time of day using the online service tracker tool.

Chicago is in the process of updating its technology platform for 311 and anticipates in the coming years to implement a cloud-based solution with a completely integrated knowledge base connected to customer self-service information city web sites. The result will be a world-class system that is transformative in its ability to deliver high-quality customer service, consistent across channels.

Results and Impact

Chicago's 311 center handles 3.9 million calls a year and is available to residents, businesses, and visitors 24 hours a day, every day of the year. If needed, call-takers have access to a language bank to request the assistance of translators, who provide translation for more than 100 languages. A call to the 311 center generates a request for service that can then be automatically routed to the appropriate city agency for response. A tracking number is produced for each case, allowing the caller to monitor the progress of his or her request. The single, 3-digit number as a centralized source of information for city government was a major improvement for Chicago residents. Previously, they had to dial 10 digits for each government agency, which was further complicated by the fact that city government spanned two area codes.

The winter of 2013–14 was particularly cold and snowy in the Chicago area, and each time there was a storm, the 311 center was ready with information for the public on school closings, transportation updates, plow truck locations, and emergency cancellations of all sorts.

Chicago 311 offers constituents a variety of ways to connect: phone, web self-service, and text. The new channels of access have broadened the reach of 311; however, the most frequent means of contact is phone, with 88 percent of total volume coming through the call center. Of all calls received, between 60 and 75 percent are for information only, with the remainder including calls to register a complaint or request a city service.

The 311 center also takes 100,000 non-emergency police calls a year. Conditions under which it is appropriate to call 311 for police reporting include crimes that have already taken place and in which the offender has already left the scene. The most common types of police reports handled by Chicago 311 are theft, motor vehicle theft, lost property, telephone threats, burglary (garage), harassment by telephone, and assault. Chicago Police Department Alternative Response officers are located at the 311 center and can enter crime reports directly into their own system. Other types of police-related questions handled by the 311 center include information about which police beat a neighborhood is in and when the next community police beat meeting is. This offload of calls from police headquarters has been a major help to the police department, allowing officers to be deployed to true emergencies rather than being diverted to minor crimes or administrative report-taking.

Recognizing its leadership in technology, operations, and management, in 2003, Chicago 311 received the prestigious "Innovations in American Government Award" from the Ash Institute for Democratic Governance and Innovation at Harvard University's John F. Kennedy School of Government.

One major accomplishment of Chicago 311 is its staffing. All call-takers are trained on customer service and receive continued coaching to support their high level of customer service orientation. Turnover has been low and morale has been high. Management makes a concerted effort to put on morale-boosting team events, and the mayor has publicly thanked the 311 employees for their service. Some staff members have been city employees for over 30 years. One downside of having such experienced staff is that a great deal of accumulated knowledge is stored in their heads rather than in the formal knowledge base.

One major benefit of a devoted staff is that when a major city incident occurs, the 311 center remains staffed. For example, when the teacher's union went on strike a few years ago, there was a major disruption for parents. The 311 center was able to bring public school officials into the call center to help take calls.

There are no part-time 311 call center staff because of collective bargaining rules. So, in order to staff up for emergencies, voluntary overtime is used. When insufficient numbers volunteer, management can resort to compulsory overtime. Also, a corps of volunteer call-takers can be accessed only in the case of a declared emergency. Volunteers must be trained and certified by the city and can only be used in emergencies.

As a city, Chicago has been a leader in embracing an open data policy. The 311 data is available through Open311 for developers to create their own apps. Open311 is also the basis for the new ChiTEXT app, which allows users to submit service requests using text messaging and to attach photos to their service requests. Users can now access an online service request tracker that allows them to see exactly where their request is in the process

of being fulfilled, and they can opt to receive notification when their service request is completed.

Since the launch of the 311 center, Chicago has become a leader in the country and in the world for the use of data for predictive analytics. An early example of this predictive power relates to a heavy rainstorm shortly after the system went live. After receiving a series of "water in the basement" calls, the Department of Sewers was able to pinpoint areas of heavy flooding and adjust the sewer system. During a heavy storm the following year, they were able to proactively adjust the sewer before the "water in the basement" calls peaked, thereby alleviating damage to constituent property. Another example involved city inspectors who reviewed "no heat" complaints about landlords from the prior winter and proactively warned them in the fall. This helped prevent the problem even before the tenant needed heat.

A more recent example relates to how 311 data was used to more effectively allocate resources in the city's rodent baiting program. Using 311 data, an algorithm was developed to predict where there might be an increase in the need for rodent baiting. The algorithm used data ranging from stray animal calls to vacant and abandoned properties to restaurant and noise complaints. In the first weeks of the pilot, an address with no prior rodent calls was identified by the predictive algorithm and it turned out to be a place with significant need for service that never would have been addressed using traditional methods. Data from the 311 system is being used to develop new ways to improve public services in Chicago to make the city safer, cleaner, and a better place to do business.

Yet one more example of the power of 311 data to make government more efficient comes from a problem with flooding. The Federal Emergency Management Agency can offer local government cash assistance when a state of emergency is declared, but they need specific data about the locations and severity of flooding. The IT staff at the 311 center were able to quickly alter the intake script for flooding complaints so that they gathered the appropriate data to submit to that agency. This changed a manual process that took weeks into a simple process automated by the 311 system.

With the launch of the new 311 technology platform, and with additional predictive analytic capabilities, Chicago is poised to be the leader in data-driven decision-making and accountability for agencies in meeting service delivery standards.

The 311 center is part of the Office of Emergency Management and Communications, which is also responsible for 911 operations and for all emergency management in the city. The 311 center serves as backup for the 911 center, with full functionality to take emergency calls. Being part of the same organization facilitates collaboration and cooperation to plan and respond to major events, such as weather or public safety events. There are three units within the 311 organization: Operations, Advocacy, and Administrative. The Operations unit staffs the call center and trains new staff. Advocacy works with the mayor's office, the Office of Budget and Management, and with city departments to analyze and evaluate the data and performance measures for their departments. Staff in this unit maintain regular contact with their peers in city agencies regarding programs, services, and events; they evaluate system usage, track city services trends, and analyze system needs; and they serve as the point of contact for the agency into the 311 center.

Success Factors

Factors critical to the success of Chicago 311 are described below. Selected elements of the Analytical Matrix for Innovations in Service Delivery created by the Inter-American Development Bank (IDB) are used, including the leadership model, technology solutions, managerial tools or models, institutional factors, and customer and culture issues. Success factors are discussed after listing selected relevant key questions from the matrix. Some questions have been modified to be more relevant to this case study.

Leadership

What role did senior executive leadership play in the success of the program?

One of the key lessons regarding leadership for the launch of Chicago 311 was the importance of involving the aldermen's offices in the design of the system. Prior to the launch of the 311 system, constituents viewed their relationship with their alderman as the primary means of getting services from the city. Once the system was launched, and accountability and transparency of service delivery was created, constituents no longer had to "know somebody" to get city services; they simply had to call 311 to make a service request, then they could track that request until it was fulfilled. Partnership with the aldermen's offices was also key to making constituents feel like they were part of the process. Today, they can call their alderman and have the staff in that office log a service request for them. Also, aldermen's offices can view service requests by filtering the data in the 311 system by their district. In this way they become partners rather than competitors with Chicago 311 in meeting constituent needs.

Technology

Was new technology produced for this program, or was it deployed 'off the shelf'?
Does the technology require regular maintenance or upgrades, or is it self-sustaining?
Are partnerships being employed with companies, non-profits, other departments or other governments?
Is the knowledge that can be shared explicit or tacit? Has it been translated into new technologies such as programs or platforms that can be shared?
Has the program used technology to allow for increased citizen participation?
Does the program depend on citizens having certain technology or technological literacy?

The technology for Chicago 311 was custom-built by Motorola. The benefit of custom-built technology is that it meets the unique needs of the customer; the downside is that there are no standard upgrades to newer, faster, better versions as overall technology platforms improve. The marketplace has changed significantly since the launch of Chicago 311. At that time there were no standard off-the-shelf software packages for customer call centers in government. Today there are many options, including offerings from large, mid-sized, and

smaller software firms. Specialized firms now have expertise in planning and implementing government customer service call centers.

While the underlying technology has not been fundamentally updated since launch in 1999, Chicago has continued to innovate. Significant recent technology enhancements include launching Open311, adding ChiTEXT, and the online service tracker capability. Code for America, a non-profit civic technology innovation network, selected Chicago as one of its partner cities in 2012 and placed four fellows in Chicago to help support development of open source applications such as the service tracker.

One significant challenge with the migration to a new technology platform will be incorporating the accumulated knowledge "between the ears" of seasoned call-takers. Many call-takers simply know the answers to constituent questions and do not have to locate the answer in a knowledge base. The searchable electronic knowledge base needs to be created so that the institutional knowledge of more experienced workers who retire will not be lost but will be codified and shared with the entire team.

Managerial Tools or Models

Does the program shift power and discretion up or down through layers of government?
Does the program fulfill citizen service charters?
Did new technology introduced allow for new or different kinds of quality management?

One interesting power shift that resulted from implementation of Chicago 311 is the relationship between aldermen's offices and city agencies. Before 311, many constituents called their alderman to request city services such as removing graffiti, collecting garbage, or fixing a streetlight. Aldermen liked having that direct relationship with their constituents and the ability to solve their problems. Some aldermen feared that, with the rollout of 311, they would lose their customer service relationships in the community. Because of this concern, the 311 implementation included the ability for staff in Aldermen's offices to enter service requests directly into the 311 system. The win–win is that the requests are handled more efficiently since they are all electronically routed to the responsible departments, and the aldermen's office can continue to solve constituent problems. The benefit is that, at the end of the business day, when the aldermen's offices close, constituents can still call 311 to register or follow up on service requests.

Chicago 311 has also built bridges to agencies in the area that are not in direct control of the mayor, such as the transit authority, the housing authority, O'Hare Airport, and the parks department. These agencies have been given access to the 311 system and can enter and track their own service requests directly.

Chicago does not have citizen service charters, but for each service type there is an SLA that is part of the 311 system. In this way, the call-taker can let the caller know how long they can expect the service to take. SLAs are agreed to by the responsible agencies and the city uses regularly published reports as a way to manage departments to meet the stated customer service standards.

Institutional and Organizational Factors

Does this program deliver an existing service better, or deliver an entirely new service?
Is the innovation serial (structural, cultural change that yields continuous small innovations) or one-off (operational change that yields one large innovation)?
Is the program part of a larger movement of improvement? If so, what is it?
Does the program have a self-contained business model, or does it depend on annual budget allocations that may change?

When originally created, Chicago 311 was a major change in the way the city interacted with residents, businesses, and visitors. It delivered a new service—centralized call answering and service request tracking—but did it better than the previous process of separate agencies taking their own calls. Today, Chicago 311 can be seen as an incremental innovation, with adaptations and improvements added over the years. The change is part of a larger management change toward more data-driven decision-making and greater emphasis on customer service in government. Further, the 311 data provides the foundation for predictive analytics, a new innovation in data-driven government.

The innovation of centralizing customer service is not one that allows a separate business model because constituents do not typically pay for customer service in government. Therefore, the Chicago 311 center is funded by annual city appropriations. Because it is the backup for the 911 center, there is some funding that comes from the fees paid on phone usage that supports 911 operations. Additionally, the Chicago 311 operation now supports O'Hare Airport, the transit system, and other public agencies not under control of the mayor or part of the city budget. Charging user fees to these agencies offsets some of the costs, but city appropriations continue to be the core source of operating funds.

Customer and Culture

Does the program engage the citizen as a customer?
Does the program intentionally emphasize service delivery to underserved populations?
Does the program restore confidence in government?

Chicago 311 engages the citizen as customer through many channels: constituents can interact with the city and ask for services by phone, email, or mobile app. Also, they can now track the status of their service request any time of day or night using the service tracker.

Underserved populations will always be able to access in-person customer service centers located in community policing centers, aldermen's offices, and other city agencies.

Given the many ways Mayor Emmanuel has recently and very publicly engaged with constituents using the new mobile and self-service channels for Chicago 311, it is likely that the system and its recent enhancements have improved customer confidence in government. However, no hard data is available to support this hypothesis.

When considering implementation of a 311 system, it may be intimidating to look at NYC's or Chicago's centers. These two cities have a collective history of 26 years in operation, 30 years since planning began. Both of these cities were early adopters of 311. A recent survey showed that only 10 percent of all current 311 city call centers were opened as early as the Chicago and NYC centers. In each city, the level of sophistication of the 311 operation has increased incrementally over time.

The most helpful question to ask when looking at these two examples is, "What components of this world-class customer-centric multichannel system are most important to my constituents?" For some cities it will be most meaningful to help customers navigate the complex maze of government agencies. In other cities the highest priority will be to reduce redundancies in parallel call center operations across agencies.

It is worth noting that states, federal government agencies, and other public entities use customer contact center models similar to 311 centers to varying degrees and for a variety of purposes. This document assesses two cities in particular and extrapolates to other cities from their experience. However, the key issues remain the same regardless of the type of agency considering a 311 implementation.

Whatever the reason to implement a 311 system, the most important things to remember are to begin with a clear vision and to build functionality incrementally over time. Some key words of advice follow.

Dedicated Executive Leadership Matters

Implementing a 311 system is a complex project involving both technology and people from a variety of agencies across all of government. An experienced project manager must lead the project and that person must have the backing of the key executive. The strong and vocal public and private support of Mayor Bloomberg in NYC made a critical difference at key points in the implementation of NYC311 and his insistence on the project being done right helped gain buy-in from reluctant agencies.

Define Scope Precisely

There are a variety of things a 311 call center can do after answering the call—provide information, transfer the call to another entity, or take the information from the caller and create the work order. Deciding which of these to do and in what order is important. It is also important to decide whether to launch as a multichannel service or to roll out in phases by type of channel (e.g., phone, web, and text).

Set Clear Goals

Some cities will want their 311 center to be the customer service focal point for city government. Other cities may see 311 as a cost-savings strategy. Setting a clear goal can facilitate important decisions. For example, if the goal is to make the 311 center as low-cost as possible, then it will be important to drive customers to the lowest-cost method to answer their questions. The less time a call-taker needs to spend answering a question the lower the cost. Reducing cost means using self-service methods such as interactive voice response, web self-service reporting, and tracking of service requests. Care should be taken in setting a goal of being a low-cost self-service channel for customer input, as most 311 centers receive 80 to 90 percent of their volume by traditional phone call rather than self-service online channels.

Plan Thoroughly and Test the System Before Launch

Chicago and Atlanta both spent considerably more time planning their systems than other cities and they have reaped many benefits. In NYC, the call center was tested for months with a "soft launch" so that additional planning could be done for a smooth public rollout of the call center. Lessons learned in the soft launch were incorporated before the full rollout.

Build the Content First

Getting the content right and building a strong knowledge base is another key to success. As NYC311 Executive Director Morrisroe says, "Content is king." In NYC they built the dataset behind the public portal before opening the phone lines. The goal was to create "credible, consistent, current" content. By putting the single city portal out first, they created the infrastructure that later the social media, text, and chat functions could be built on.

Partner with City Agencies

The departments that own the content needed for the knowledge base must be true partners if the effort is to be a success. Cross-agency teams consisting of 311 center and agency staff must work together on the content, focusing on customer questions not city agency roles, and the cross-agency teams must continually refreshed the content. In NYC, the Agency Relations team continually updates content to reflect new city initiatives and policies. In Chicago, frequent training updates provide call-takers with current content from the agencies.

Employee Training and Morale Are Key

New York City built its center near city hall and close to public transit. Employee morale was positive from the beginning as a result of being accessible to transportation and to the nexus of

> "Don't underestimate the power of your people. You can't overinvest in that."
>
> Joseph Morrisroe
> Executive Director NYC311

government. Good morale translates into positive attitudes that promote good customer service to the public. As Director Morrisroe says, "Don't underestimate the power of your people. You can't overinvest in that." Chicago helps support employee morale with team-building activities and through executive presence and consistent accolades.

Collective Bargaining Agreements

One important consideration in staffing is whether there is an option to use non-union staff. Neither Chicago nor NYC had that option. In other cities where it has been an option, it has provided greater flexibility in staffing, with the ability to use part-time staff and flexible shift times. A recent survey shows that across the United States 56 percent of call center agents are represented by a collective bargaining unit. Supervision ratios average nine call-takers to one supervisor. Further, outsourcing to a private entity for surge capacity overflow staffing could be beneficial. However, this is often not an option with a strong collective bargaining culture. Some limited use of private contractors is possible when specialized skills cannot be found in the general workforce, such as for language translation services.

Build Back-end Integration Early

Once callers begin to use the 311 number to report issues, they will expect results. Building the back-end integration to agency work order systems is critical to managing the workflow around such requests as fixing potholes and streetlights, and removing graffiti. Failing to complete work orders could result in lower customer satisfaction since the lack of service becomes more obvious.

Minimize Custom Design of Off-the-Shelf Software

When buying packaged software solutions, it can be tempting to customize the package to suit the unique needs of the organization. But each customization adds to the complexity, time, and cost to get from idea to implementation, and each customization is one more step in each upgrade. Changing your process to meet the standard of the software only has to happen once; changing the software to meet your process has to be done every time there

is an upgrade or patch. Further, each update has costs associated with purchased or internal development time, as well as staff training and system documentation.

Hours of Service

NYC and Chicago operate 24 hours a day, every day of the year. Many call centers in the United States do not. A recent survey showed that only 66 percent are open continuously. Many are open during business hours only or only weekdays. For those that are not open continuously, the primary reason was the budget.

Use the 311 Data as a Management Tool

Data that results from 311 calls can be a powerful management tool to make a city more focused on its constituents. Using the data and making it public can improve transparency and accountability in ways not previously possible. A 311 center may own the data but not necessarily have the ability to get the customer service requests done, so it takes city-wide leadership to make the 311 data a powerful tool. Explaining the difference between her role and the operations roles of agencies, Joann Butler, 311 Director for Atlanta says, "We specialize in counting things and the agencies specialize in doing things." City budget analysts can use 311 data to analyze trends in the public's need for city services—which can be helpful in setting city budget priorities—and as agencies pursue new initiatives and seek funding for them, 311 call data can be an important source to document customer needs.

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Interviews

In-person

Steve Craig, Director of Constituent Services, City of Somerville, Massachusetts, June 9, 2014.

Joseph Morrisroe, Executive Director NYC311, June 18, 2014.

Brenna Berman, Chief Information Officer, City of Chicago, July 2, 2014.

Audrey L. Mathis, Director Chicago 311, July 2, 2014.

Gary Schenkel, Executive Director Chicago 311, July 2, 2014.

Telephone

Joann Butler, Office of the Mayor, ATL311/CRM Director, June 17, 2014.

Ken Dircks, former Accenture project lead for NYC311, now Consulting Services Executive, Public Sector, IBM, June 11, 2014.

Scott Frendt, Senior Director, Public Sector and Tax & Revenue Management, Public Sector Industries Business Unit, Oracle Americas, June 10, 2014.

Jeffrey Friedman, former Co-Director, Philadelphia Mayor's Office of New Urban Mechanics, current Director of eGovernment Business Development, Microsoft State & Local Government Solutions, June 10, 2014.

Stephen Goldsmith, former NYC Deputy Mayor for Operations, now Daniel Paul Professor of the Practice of Government, Ash Center for Democratic Governance and Innovation, Harvard University, June 23, 2014.

Other Helpful Resources

311 Synergy Group. A professional network of 311 managers in the United States that hosts periodic information-sharing and educational webinars, has an annual conference, and conducts periodic member surveys. http://www.csweek.org/311SynergyGroup/Index.htm

The Association of Government Contact Center Professionals. Hosts an annual conference and serves as a network for government managers of contact centers. http://www.agccp.org/

Personnel and technology costs vary widely among 311 systems because each locality sets its own distinctive service goals, meaning that any city-to-city comparison should be made with caution. Most localities in the study reduced their budgets in 2009 because of the recession. The goal of many 311 systems is to help city departments operate more efficiently and responsively, although few have documented any actual savings. More complete statistics are available at www.pewtrusts.org/philaresearch.

City or County	Number of employees at year end[1]	Change in employees from previous year	311 budget[2]	% change in budget from previous year	% of city budget spent on 311[3]	Average cost per call[4]	First-year operating cost[5]	Start-up capital costs
Baltimore	82	-13.7%	$4,700,000	-19%	0.35%	$5.41	$4,700,000	N/A
Charlotte[6]	134	0.8%	$7,278,861	2.3%	0.40%	$4.37	$2,500,000	$4,600,000
Chicago	81	-12.9%	$4,965,897	N/A	0.16%	$1.15	N/A	$5,300,000
Columbus, oh	16	-27.3%	$1,583,158	4.8%	0.24%	$5.49	$900,000	N/A
Dallas	89	-4.3%	$3,700,000	-17%	0.36%	$3.72	N/A	N/A
Denver	27	-6.9%	$1,500,000	0%	0.16%	$3.39	$1,200,000	$3,700,000
Detroit	9	-60.9%	$1,548,421	-28.2%	0.10%	$7.78	N/A	N/A
Houston	92	-2.1%	$5,000,000	N/A	0.26%	$2.22	$5,300,000	$4,500,000
Los Angeles	52	-28.8%	$3,128,980	-29.3%	0.07%	$2.69	$6,800,000	$4,900,000
Miami-Dade	133	9.9%	$10,971,000	-5%	0.22%	$4.30	$9,800,000	$6,100,000
New York	545	-6.8%	$46,000,000	-8%	0.08%	$2.57	$19,700,000	$29,800,000
Philadelphia	63	-10%	$2,830,914	37.5%	0.08%	$2.20	$2,100,000	$4,000,000
Pittsburgh	6	0%	$199,951	31.1%	0.05%	$4.08	$120,000	(donated)
San Antonio	31	-6.1%	$1,700,000	-5.3%	0.07%	$1.39	N/A	N/A
San Francisco	95	-15.2%	$10,952,000	-7.1%	0.38%	$3.15	$6,700,000	$9,200,000
Median		-6.9%	$3,700,000	-5.3%	0.16%	$3.39	$4,700,000	$4,600,000

[1] Full-time equivalents, as authorized in local budget.
[2] All figures for latest fiscal year, except San Antonio, where numbers are for 2008/09.
[3] As a percent of general fund or operating budgets, as reported on locality's web site.
[4] For purposes of comparison, per-call costs are based on budget figures adjusted to match the period of the last available call volume.
[5] Launch-year spending figures are inflation-adjusted to 2009 dollars.
[6] Charlotte center also covers Mecklenburg County, North Carolina.

Source: Pew, 2010.

A Tree...Is a Tree...Is a Tree?

1. For a tree impacting a utility line, contact the Utilities Department.
2. For a tree associated with fire mitigation, contact the Fire Department.
3. For a tree related to "defensible space," contact the Defensible Space Program.
4. For a tree infested with or at risk of being infected with bark beetles, contact the Cooperative Extension Service.
5. For a permit to sell or information on where to buy a Christmas tree, contact the Community Development Department.
6. For a tree on U.S. Forest Service property, contact the U.S. Forest Service.
7. For a tree impeding traffic or traffic visibility, contact the Traffic Division of the Engineering and Project Management Department.
8. For a tree obstructing a sidewalk, contact the Pavement Division of Public Works.
9. For a tree on the Los Alamos National Laboratory (LANL)/U.S. Department of Energy (DOE) land, contact LANL/DOE.
10. For recycling of trees, contact the Solid Waste Division of Public Works.
11. For a tree in a county park, including a request to plant a memorial tree, contact the Parks Division of Public Works.
12. For a tree on state land, contact the New Mexico Environment Department.

Source: ICMA, 2008.

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