The use of 311 and similar mechanisms of non-emergency call management systems has emerged as a viable alternative for increasing citizen access to government, and improving government responses to the issues of greatest concern to citizens. This article describes the state of best practices for 311 systems and suggests ways to extend those successes throughout state and local government. Improving technology allows the exploration of widespread adoption and integration with other systems. Challenges and alternatives of designing and offering a 311 system are provided as recommendations to assist public managers in decision-making.

Introduction

Government responsiveness is a foundational concern of elected officials, public managers, citizens, the media and watchdog organizations. Finding appropriate ways to monitor government performance, provide mechanisms for citizen feedback and complaints, and document government responsiveness has a long history. Measuring public sector performance efforts, for example, has been defined and shaped by the Good Government model, Planning-Programming-Budgeting System, Total Quality Management, service scorecards, measurement of efficiency and effectiveness, and other strategies geared toward promoting productivity and performance improvement. More recent calls for “doing more with less,” promoting a public sector that is results-oriented, and boosting public trust through accountability and responsiveness have reinforced interest in performance measurement systems at all government levels.

Technology is accelerating the use of mechanisms that can open the lines of communication between citizens and their governments. The use of 311 and similar mechanisms for non-emergency call management systems provides a viable alternative for increasing citizen access to government and improving government response to issues that are most important to citizens. The integration of Web-based services into 311 systems can enhance the responsiveness, effectiveness and efficiency of government entities endeavoring to provide citizens with better services.

In addition, new applications of technology support integration of existing systems and the Web. That integration provides opportunities for the consideration of statewide 311 system deployment across jurisdictional boundaries to accomplish fiscal and scheduling efficiencies for smaller municipalities and government entities.

This article addresses the widespread implementation of 311 systems in the context of government performance improvement, with examples of best practices throughout the United States. Highlighting successful applications of 311 in large cities and presenting modified versions of 311 at the state level, we demonstrate that this mechanism offers citizens a convenient way to contact government for information and services and provides government managers with performance measures to assure that problems are resolved in a timely manner. Challenges and alternatives for state implementation are presented to assist public managers and elected officials with adoption and implementation decisions.

The Origins of 311

By 1996, non-emergency calls to 911 had reached a level that required national attention. President Clinton challenged the Department of Justice (DOJ) to relieve the 911 systems of congestion resulting from unnecessary calls. The White House and the Office of Community Oriented Policing Services (COPS Office) of the DOJ sought corrective action. The COPS Office requested that the Federal Communications Commission (FCC) set aside 311 for use as a national help number for non-emergencies (Solomon and Uchida, 2005). In 1997, the FCC established the abbreviated telephone number 311 for non-emergency local government services (Moving Oakland Forward, 2002). A 311 system is operated either by the police department in order to reduce the frequency of non-emergency 911 calls, or by a municipality or county to address non-emergency calls regarding service delivery. (See Figure A.)

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In addition to alleviating bottlenecks caused by non-emergency calls made to 911 systems, 311 systems have emerged as a means of enhancing citizen access to government services, expanding the traditional “police non-emergency” role. This service approach for 311 reflects the nation’s move toward community-oriented government. Typically, 311 systems have the potential to support community-oriented government by establishing a direct, citizen-driven link to government service agencies (Harris, 2005). Responding to the increasing demand for quality customer service, municipal and county governments across the United States are implementing 311 customer call centers.

According to Martin (2004), 311 systems could potentially enhance government efficiency by centralizing the point of contact between government and citizens. That is, 311 systems have been characterized as “proactive management tools” that allow government officials to monitor the volume and types of calls received via that system. Data from incoming calls can then be tracked and reviewed using customer relationship management (CRM) software.

Such 311 systems allow government departments and agencies to more effectively address their core functions. That is, such systems minimize instances where a government worker must take time to answer a citizen’s general query or transfer that citizen to the appropriate government department or agency. All too often, government workers must act as switchboard operators, constantly transferring citizens to other departments. Experience suggests that 311 decreases such instances.

Practice indicates that 311 systems are ideal in terms of gathering performance data relevant to government service delivery. Data collected via 311 may be fed into CRM systems, thereby allowing city officials to utilize that data to make better-informed strategic decisions on how city resources should be deployed and how services could be more effectively managed. An added benefit of 311 systems is the capture and strategic use of data as a tool to allow government officials to measure average response time. Categorizing the types of calls and requests, along with response times, allows government to set performance standards within a department or agency and provide citizens with realistic expectations as to when a complaint will be addressed, a problem solved, or a service rendered.

311 Models and Outcomes

Several large cities have successfully deployed 311 systems. Offloading workload from 911 systems and improving the response time to citizens in an array of service areas are key outcomes of implementation.
The following examples highlight successful applications of 311 in large cities as well as 311 modifications for implementation in states.

**Baltimore**

Baltimore was the first city to implement a 311 system in October 1996. The 311 system was specifically designed to siphon calls from the 911 system and create more opportunities for police officers to engage in community- and problem-oriented policing activities (Mazerolle et al., 2003). The Baltimore Police Department recorded the following improvements subsequent to launching 311 (Harris, 2005):

- Average answer time for 911 calls decreased by 50 percent.
- Percentage of abandoned 911 calls decreased by 50 percent.
- Average time between incoming 911 calls increased from 70 to 143 seconds.
- Percentage of 911 calls receiving a recorded message decreased from 18 to 4 percent.
- Average “total position busy” time decreased by 169 hours each month and the percentage of time operators were occupied with calls decreased from 59 to 41 percent.
- From September 1996–September 1999, the number of police calls dispatched to field units decreased by 12 percent.

**New York City**

Launched in March 2003 at a cost of $21 million, New York City’s 311 system averages 1 million calls monthly. It is the largest 311 system in the country. Citizens previously had to navigate an 11-page directory of city government phone numbers and often found it challenging to determine which government agency to contact about a specific matter. From January 2004 to February 2005, the system had logged nearly 13 million calls, more than double the number of calls annually to city departments and agencies prior to the consolidation to a single 311 help line. This 24-hour, seven-days-a-week service handles more volume and reduces waiting time for callers to register complaints and receive action. Under the old system, New Yorkers in need were forced to navigate a labyrinth of city hotlines, departments and agency phone numbers (Taylor, 2005).

**Dallas**

In December 1997, the city of Dallas implemented a holistic non-emergency call system. The city consolidated 28 customer service numbers and seven call-taking centers under the fire department to accept citizen requests for the vast majority of city services. While Baltimore’s non-emergency system was designed to specifically reduce non-emergency calls to the police, the Dallas non-emergency system was implemented to provide citizens with easier and more efficient access to a wide range of city services (Mazerolle et al., 2003). The consolidated non-emergency call center allowed citizens to call 311 for the following city services: animal control (e.g. animal cruelty, unrestrained animal, noisy animal); sanitation (e.g. missed garbage, illegal dumping); streets (e.g. street and shoulder repair, drainage repair, storm drain cleaning); public works and transportation (e.g. illegal parking, street lighting, traffic signals); code compliance (e.g. junk auto, high weeds, property damage, litter, graffiti); economic development (e.g. building permits, motor repairs); parks (e.g. tree trimming, park maintenance); environmental and health services (e.g. noise pollution, air pollution); city controller (e.g. cable television, electric); housing (e.g. human services, housing programs); and water (e.g. main break, sewer leak, burst pipe). The Dallas non-emergency call system was designed to provide citizens with accurate information about city services, eliminate bureaucratic red tape and provide citizens with the city services they need in a timely and efficient manner.

**Chicago**

Chicago implemented the 311 system in January 1999 in an effort to create a “one stop shopping” center for access to all city and non-emergency police services, which eliminated the need for a number of smaller call centers. In May 1999, Chicago replaced its outdated mainframe system with a modern PC-based system that would improve communication among departments, reduce response time regarding resident requests, and generate management reports to ensure a more efficient service delivery system for all departments. The system is fully transparent and gives residents the ability to track the progress of their complaints. Thus, 311 City Services has given Chicago residents a direct link to city services and information (Gorecki, 2004).

**Houston**

In August 2001, the 311 Houston Service Helpline successfully met the challenge of operating an advanced technological call center that consolidated staff and responsibilities from the Citizens’ Assistance Division, City Switchboard, Municipal Courts Administration, Public Works and Engineering and
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Solid Waste Management departments. The 311 Houston Service Helpline provides a single point for customers to contact the city departments and agencies for a variety of needs, including service requests, trouble reports and answers to frequently asked questions (City of Houston, 2003).

State-level Applications

The promising use of technology to serve a broad range of citizen interests is already being explored. Transportation systems and social services access are joining 311 systems as viable tools for improving government service, streamlining operations and strategically using data. The FCC has established 211 dialing for use by government agencies providing social services, and 511 dialing for transportation networks. These systems may well serve as templates for statewide mobilization of resources in the integration of phone- and Web-based 311 services.

The state of New Jersey, for example, established a 211 system to provide “all residents of New Jersey with a single, easy to use system for information and assistance” (United Ways of New Jersey, 2005). On Oct. 3, 2002, the New Jersey Board of Public Utilities approved the use of 211 dialing for community information and referral purposes and recognized the NJ 211 Partnership as the sole administrator of 211 in New Jersey. Working with nonprofit service providers, counties and state agencies, the New Jersey 211 Partnership hopes to create a virtual response center through an alliance of information providers and referral services. Those organizations have joined to design and implement a comprehensive statewide database so every New Jersey resident has immediate access to health, human and community services information (United Ways of New Jersey, 2005). Call specialists for 211 provide comprehensive information and referral services to callers about a variety of issues, including basic human needs resources, physical and mental health resources, children’s health insurance programs, and more.

Some departments of transportation are now implementing 511 traveler information numbers, which are currently in use in 14 states. At the request of the U.S. Department of Transportation and a host of transportation planning organizations, the FCC designated 511 as the national travel information number on July 21, 2000. This easy-to-remember number permits travelers to call a single number, from any location in the United States, to learn local traffic and transit conditions. These systems also incorporate automatic toll-payment transponders equipped in some areas to monitor the time between toll booths and thus provide an automated measure of traffic flow. The FCC did not mandate the dedicated use of 511 as a telephone number for travel information, but it did reserve this number for transportation agency use, which has spawned several 511 systems across the country.

The 511 system serves as a portal to a variety of travel-related information systems in the state of Washington. Developed by the Washington State Department of Transportation (WSDOT), the main dialog menu prompts callers to select from the following: real-time traffic for the central Puget Sound area, roadway conditions and construction information, road restrictions and conditions of mountain passes, ferry information and other information such as public transit phone numbers, passenger rail phone numbers, airline telephone numbers, and adjacent states and provinces (WSDOT, 2005). Current Washington State highway hotline call volumes average 387,000 per month, with the capacity to address a call volume of more than 500,000 per month (WSDOT, 2005).

Challenges and Alternatives

With the success of 311 system deployments at the city level, broader jurisdictional applications are being considered. Alternative forms of 311 are being considered for state and regionalized federal services. The existing large city models may provide the needed insight to accomplish this goal. For example, the scope of New York City’s system encompasses departments and agencies covering a broad geographical area and multiple purposes. Other cases highlighted above can also serve as a template for assessing system capacity to address statewide functions and call handling.

In addition to offering citizens a convenient way to contact state and local government for information and services, a 311 center integrated with Web-based services has the potential to provide government managers with performance benchmarks to assure that problems are resolved on time. A statewide 311 system that integrates municipalities over a number of jurisdictions would underscore the emphasis on customer service. It would function as a proactive management tool to highlight the volume and types of calls, and the length of time it takes to deal with them. Information and data based on incoming calls could be tracked and reviewed with the software tools already in use in several cities. Such information provides actionable measures of performance and problem identification for public managers.

There is growing consensus of the benefits to be gained from statewide 311 system deployment. As
promising practices are evaluated and considered, several issues are being addressed:

1. Integrating Technology: Statewide systems need to handle a myriad of requests from a large number of jurisdictions and departments. Integrating Web requests into phone service responses will be critical to ensuring response times at an efficient price point. Integrating access and responses will also provide the opportunity for better data management and the creation of databases to be used by government at all levels for assessing performance.

2. Integrating Existing Systems: The deployment of 211 and 511 systems provides both a challenge and an opportunity. Integrating call handling operations potentially provides an efficient use of deployed capital and trained call management workers. A review of existing call centers and information sources in a state may yield alternatives to creating parallel operations.

3. Jurisdictional Boundaries: Each state operates with a subset of jurisdictions at the county, city and even “authority” level, such as water districts with separate independent authority status. Ensuring the sharing of information and accountability for response times is the basis of an effective 311 system. Large city deployments in New York, Los Angeles and Dallas can provide insight to typical challenges and potential solutions.

Scale and leverage brought about by a statewide effort to integrate call management with Web access provides the opportunity for speed and financial savings. An enhanced 311 system spanning jurisdictions and integrating phone and Web-based technology can illustrate a new model for state collaborations with communities. The creative application of e-commerce technologies to traditional government functions can then enhance the abilities of states and communities to better serve their constituents. Although the technology has rapidly evolved and is commercially available, design and deployment deficiencies, as well as investment and human resource constraints, are often barriers to implementation.


About the Authors

Marc Holzer is professor and chair of the Graduate Department of Public Administration. Since 1975 he has directed the National Center for Public Productivity, and he is the founder and editor in chief of the Public Performance & Management Review. His recent publications include the Public Productivity Handbook (edited, second edition in press, 2004). He is a past president of the American Society for Public Administration and a fellow of the National Academy of Public Administration.

Richard W. Schwester received his doctorate from the Graduate Department of Public Administration, Rutgers University-Newark Campus. Schwester’s research interests include citizen participation, e-government, and urban revitalization projects. Schwester is a senior research associate for the National Center for Public Productivity (NCPPP) at Rutgers-Newark, assistant editor of Public Performance & Management Review and associate editor for the Journal of Public Management and Social Policy.

Angie McGuire is a doctoral candidate in the Graduate Department of Public Administration at Rutgers University-Newark Campus. As a senior research associate for the National Center for Public Productivity, she works to develop outreach mechanisms, fundraising initiatives, and partnerships with organizations with similar interests and goals.

Kathryn Kloby is a doctoral candidate in the Graduate Department of Public Administration at Rutgers University-Newark Campus. As a researcher and project coordinator for the National Center for Public Productivity, she works to deliver online classes to public managers in Public Performance Measurement and design performance measurement systems in New Jersey Municipalities.
Performance measurement is a process by which an organization monitors important aspects of its programs, systems, and processes. In this context, performance measurement includes the operational processes used to collect data necessary for the performance measures. Performance management is a forward-looking process used to set goals and regularly check progress toward achieving those goals. In practice, an organization sets goals, looks at the actual data for its performance measures, and acts on results to improve the performance toward its goals. Performance measures should be distinguished by Level Measurement. Smarter measurement supports more efficient, safer and more sustainable operations, extending service life and enhancing uptime, whatever the industry sector. Behind the scenes, it is also helping to maintain global infrastructure operating reliably, day-in and day-out. The significance of level measurement in this context cannot be overstated whether for Industrial Process Measurement and Control or in Inventory Tank Gaging. In Applications like Custody transfer, the accuracy of the measurement becomes the vital parameter whereas in the other Process Industrial application PPS receivers utilize measurements at the two frequencies to reduce the effect of ionospheric refraction, and accuracy levels, where these levels can be broadly characterized as follows: these reasons, the PPS provides a horizontal accuracy of around 20 m (95 percentile level). Even though the Standard Positioning Service (SPS), Civilian users P code is published, the Department of Defense may be guaranteed access to a 1-MHz spreading code (the invoke "antispoofing (AS)" at a