

Developing a Statewide 311 System in New Jersey

A Feasibility Study
Prepared by the

National Center for Public Performance
E-Governance Institute
Rutgers University, Newark

September, 2007

School of Public Affairs and Administration
University Heights • 701 Hill Hall •
Newark • New Jersey 07102-1801
Tel: 973/353-5093 • Fax: 973/353-5907

This study was supported by grants from the Alfred P. Sloan Foundation and
Rutgers University's Research in Service to New Jersey Initiative



Developing a Statewide 311 System in New Jersey Disclaimer

The following report contains data about 311 systems and practices collected from municipalities which volunteered such information. This report and the presentation of the data is not a reflection of all 311 systems and their performance. The data is intended solely as snapshot of current 311 practices from which other government entities may learn.

Developing a Statewide 311 System in New Jersey

A Feasibility Study
Prepared by

Project Director

Dr. Marc Holzer, Director, National Center for Public Performance
Dean, School of Public Affairs and Administration, Rutgers University -
Newark

Research Coordinator

Dr. Tony Carrizales, Associate Director, E-Governance Institute
Assistant Professor, School of Management, Marist College

Research Staff

Dr. Richard Schwester
Assistant Professor, John Jay College of Criminal Justice

Dr. James Melitski

Assistant Professor, School of Management, Marist College

Dr. Robert Shick

Assistant Professor, School of Public Affairs and Administration
Rutgers University - Newark

Table of Contents

Abstract

Introduction

Background

Survey of Existing 311 Systems

New York City's 311 System

Criteria for Effective 311 Systems and General Budget Estimates

Implementing a New Jersey Statewide 311 System

Conclusion

Bibliography

Appendix

A. Survey of Existing 311 Systems

B. New Jersey 2-1-1 System

C. 311 System Criteria Checklist

D. State of Georgia 311 RFP

E. Software Vendors

Abstract

The National Center for Public Performance at Rutgers University - Newark, through its E-governance Institute, conducted a feasibility study for developing a Statewide 311 System for the State of New Jersey. The project researched innovative uses of technology to advance the interaction of citizens with their governments throughout the country. Specifically, the study investigated options and alternatives for the deployment of 311 systems to improve efficiency and responsiveness of local, county and state level public officials. The analysis of existing 311 systems at the city and county levels produced evaluation criteria and data for existing 311 systems. In particular, the investigation included the use of those criteria and other evaluative techniques to produce a feasibility analysis addressing the issues related to the development of a statewide 311 system in New Jersey. The study concluded that it is feasible for New Jersey to develop a statewide 311 system which would service all municipalities, counties and state agencies. We estimate the start-up costs would range from \$1 to \$12 million depending on whether it is implemented statewide or in the City of Newark, and the annual operating expenses would be \$26 million, or about \$3 per resident. The success of such a system will depend on the commitment of senior level government officials to this effort, proper planning based on the experiences of other

governments with 311 systems, the unique characteristics of New Jersey, and adequate financial resource.

Introduction

The concept of 311 is revolutionizing the way government connects with citizens by providing a single, easy-to-remember phone number to call for information or to request a service from any government agency. It enables a “city to do more with less by providing the mayor and governmental officials with real time data on requests, complaints and services made,” allowing for “better and immediate allocation of resources and personnel,” and helping to put “people in touch with city government” (How 311 Works, 2005). In the long term, the data generated by 311 will “improve the city’s ability to allocate resources and personnel across agencies...improve governmental efficiency by replacing processes performed on paper with computerization and providing technology and training to many agencies” (How 311 Works, 2005). Overall, it facilitates the accountability of government to its citizens.

Initially, 311 systems were developed to shed the load from 911 systems that were being overused for non-emergency purposes. Over time, 311 systems have evolved and been transformed to provide access to government by citizens and as a management tool to enhance the delivery of public services.

Thus, 311 is being increasingly viewed as a tool to enhance citizen access to and accountability of government services, expanding its

original “police non-emergency” role. This public service approach for 311 reflects the nation’s move towards community-oriented government. 311 has the potential to support such community-oriented government by establishing a direct, citizen-driven link to other service agencies and providing citizens with a way to track responses to their requests (COPS Fact Sheet: 311 for Non-Emergencies, 2005).

Political analysts and government oversight groups concur that 311 may be making government more open and more civilized. “There’s not a strong tradition in New York of city managers taking feedback from citizens,” said Charles Brecher, research director for the Citizens Budget Commission. “So I think the direction is a very positive one. The real issue is how well they’re implementing it” (as cited in *The New York Times* 2003).

The significance of 311 systems is highlighted by Michael Bloomberg, Mayor of the City of New York: “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.” (as cited in *The New York Times* 2003).

While 311 systems have been developed in different cities, there is variation in the capabilities of these systems. Some of the 311 systems provide information to citizens and enable users to make requests for services. The information function is the most frequent use of the systems, while the service request function requires more sophisticated

technology and the integration of the 311 systems with operations of other city agencies. In addition, in some cities citizens can track the status of a service request through the use of tracking numbers, while in other cities this is not possible. 311 systems are more useful to citizens when this tracking capability is present.

In planning 311 systems, cities have had to make a choice between including an extensive amount of information in the system, which enables the system, through its operators, to answer a wide variety of questions for a large set of services. The other option is to have the 311 operators transfer callers to other agencies and have these agencies respond to the callers' questions. These two approaches require a different level of both financial commitment to a 311 system and integration and coordination of the efforts of city agencies.

The following report reviews the performance of and services offered by current 311 systems nationwide as a means to best examine the opportunities and potential issues associated with the implementation of a New Jersey statewide 311 system. Questions this report attempts to answer include:

- What are the origins of the 311 system?
- What factors gave rise to 311 non-emergency systems?
- What is 311 and when should people call 311?
- What are the ways in which customers can interact with the 311 service?

- How does the 311 system enhance efficiency of government agencies?

How do 311 systems differ throughout the country?

This report draws on data from a survey of existing 311 systems, an in-depth examination of New York City's 311 system, the results of a national conference on 311 systems, existing 311 literature, and interviews with the State of New Jersey Office of Information Technology, the United Way's "211 New Jersey" system, and technology experts.

Background

A. Factors in the Rise in the Demand for 311 Non-Emergency Systems

The report "Moving Oakland Forward" (2002) found that government agencies across the country typically encounter severe bottlenecks in responding to citizens:

1. The 911 emergency response system is inundated by calls from people calling to complain about non-emergencies. According to *U.S. News and World Report* (June 1996), across the nation an estimated 50 to 90% of all calls to 911 are not emergencies (as cited in *COPS Fact Sheet: 311 for Non-Emergencies*, 2005).
2. Non-emergency calls to 911 systems delay the delivery of emergency services. These non-emergency calls can cause backlogs and

inefficiencies for law enforcement agencies, leading to frustration and sometimes deadly consequences for callers with emergency needs (as cited in *COPS Fact Sheet: 311 for Non-Emergencies*, 2005). The availability of a 311 non-emergency telephone number will reduce the number of these calls to the 911 system, thus improving emergency response times.

Secondly, the frustration of citizens with local government customer service operations is significant. Recent surveys conducted in urban centers throughout the United States show that most constituents report frustration with local government customer service operations. Front line employees, the first point of contact for customers, echo these frustrations.

Customer service complaints generally fall into the following categories (*Moving Oakland Forward*, 2002):

1. Ease of Use – Without question, the most frequently repeated message from constituents is that they often have trouble figuring out whom to contact when they have a question, complaint or request. For instance, the City of Los Angeles found that fully one-half of all calls to the city are transferred two or more times before the caller receives an answer or submits a request.
2. Timeliness – Customers feel it takes too long to reach someone and to receive follow-up once a request is made. For example, callers to the Los Angeles Bureau of Sanitation wait an average of four minutes

before they reach a service representative and 10% of calls are abandoned before an operator answers.

3. Service – Across the board, customers prefer the “personal touch” of a live operator to an automated system with too many options and no way to quickly find the right one. In fact, when discussing tradeoffs, a number of constituents said they would be willing to tolerate a long hold time if they could then talk to a pleasant live operator who could provide the right information or process a request.
4. Accessibility – Across the nation, customers expect to be given accurate information about when their service request will be fulfilled. They also expect to be able to track that request until it is fulfilled. As companies like FedEx have discovered, providing tracking capabilities to allow customers to check on the status of a service is a valuable tool to demonstrate accountability to customers.

311 systems were initially developed to address the concern of overloading 911 systems with non-emergency calls, but have evolved to focus on other citizen concerns of ease of use, timeliness, service, and accessibility. The broadening of the goals of 311 systems is placing them at the center of citizen involvement with government.

B. 311 Systems Origins and Results

Mazerolle et al (2003) contended that non-emergency calls had been a major problem for local police for over 20 years. Police had

attempted three strategies to address the problem. The first was to reallocate internal resources to equalize officer workloads and free up time for proactive work. The second approach was to divert calls that came into the police so they did not immediately go to officers and so that some other calls could be handled without a patrol response. The third approach, far more common in Canada than in the United States, was to wean the public from using the telephone to report non-emergency concerns.

The origins of the 311 system date to 1996, when in “Sacramento President Clinton called for a national *community policing* number to help alleviate the abundance of non-emergency calls flooding the 911 emergency system” (Mazerolle et al, 2003). Non-emergency use of 911 had reached a magnitude that required national attention and President Clinton challenged the Department of Justice (DOJ) to relieve 911 systems of congestion due to unnecessary calls. The White House and the Office of Community Oriented Policing Services (COPS Office), U.S. Department of Justice, announced their intention to take corrective action. The COPS Office first requested the Federal Communications Commission (FCC) to set aside 311 for use as a national help number for non-emergencies (Building a 3-1-1 System for Non-Emergency Calls: A Process and Impact Evaluation, 2005). In 1997, the Federal Communication Commission (FCC) agreed, and established the

abbreviated telephone number 311 for non-emergency local government services (*Moving Oakland Forward*, 2002).

At that time, many police departments across the U.S. were in the process of reviewing or implementing technological approaches, as opposed to management approaches, to relieve emergency 911 systems. San Jose, California, for example, implemented a 311 system, and a consortium of agencies in Southern California were studying implementation problems and alternative systems for reducing calls to 911. The Seattle Times reported, "King County was studying the addition of 311 to help siphon off a 43% increase in calls to 911 since 1991. Similar efforts were also underway in Anchorage (Alaska), South Bend (Indiana), and Birmingham (Alabama)" (as cited in Mazerolle et al, 2003). By 2002, more than a dozen U.S. cities had implemented 311, including: Baltimore, MD; Dallas, TX; San Jose, CA; Chicago, IL; San Antonio, TX; Hampton, VA; and Bethel, AK (*Moving Oakland Forward*, 2002).

Thus, in order to respond to the increasing demand for quality customer service, cities across the nation have been implementing 311 (one point of service) customer call centers. The nation's first 311 call center was launched in Baltimore, Maryland, and the Baltimore Police Department recorded the following improvements after launching 311 in October 1996 (as cited in *COPS Fact Sheet: 311 for Non-Emergencies*. 2005):

1. Average answer time for 911 calls was reduced by 50%;

2. Abandoned 911 calls were reduced by 50%;
3. Average time between incoming 911 calls increased from 70 to 143 seconds;
4. 911 calls receiving a recorded message were reduced from 18% to 4%;
5. Average “total position busy” time was reduced by 169 hours each month and the percentage of time operators were busy on calls was reduced from 59% to 41%; and
6. From September 1996 to September 1999, the number of police calls dispatched to field units was reduced by 12.38%.

The International City Managers Association (ICMA) recently conducted a survey of 311 systems of municipalities with populations of 25,000 and over. The results showed that 15% of the municipalities had implemented a 311 system and another 34% are considering implementing one. Improving service to citizens despite the increased costs due to the system was the principal reason for implementing a system. Some other interesting findings which show both the consistency and diversity of 311 systems, were:

1. 44% do not use a single access number;
2. 38% use a central call staff to handle calls and another 28% have central staff make a record of the call and then connect the caller to the appropriate agency;

3. public works, code enforcement, city management, and parks and recreation are the agencies most often integrated into the system;
4. 71% provide a tracking number so citizens can follow-up on their request; and
5. 47% use customer satisfaction surveys of the system.

C. Two Cities' Experience with 311 Systems: Washington, D.C. and Los Angeles

What is 311 and under what situations should people call 311?

The District of Columbia has described 311 as a “toll-free number that allows people to request police services in non emergency situations. Because it is easy to use and easy to remember, 311 can help the Metropolitan Police Department (MPDC) improve its services to residents, workers and visitors in the District of Columbia” (311 Non-Emergency Number, 2005). Further:

1. The 311 system allows people to request non-emergency police services more easily, and allows the MPDC to handle those requests more efficiently.
2. Because 311 is a toll-free number, people can use a pay phone, free of charge, to request both emergency (911) and non-emergency (311) police services. This is especially important for visitors and residents who do not have residential phone services.

3. The 311 system will help improve the District's emergency 911 system.

As more people call 311 for non-emergencies, 911 will be available for what it is designed to handle—real emergencies.

4. By handling requests for police service more efficiently, the MPDC and its officers will have more time to work with the community to prevent crime.

The 311 Service Concept (City of Los Angeles 3-1-1/E-Government Services Project, Final 3-1-1 Design Report, 2000) for the City of Los Angeles has the following key characteristics:

1. A single point of contact is provided for all non-emergency public services, including information and service requests.
2. The service is available 24 hours a day, 365 days of the year.
3. The service is available through conventional phones and TTY.
4. The service is accessible in English, Spanish and other languages.
5. The service is accessible to all residents of the City without charge to the caller.
6. The average speed to answer a call is less than three rings (20 seconds).
7. Most calls are handled in the 311 center without transfer to the Departments.
8. The caller will experience no more than two transfers before obtaining service.

In addition, the 311 Service also provides easily accessible information about government services. For example, the City of Los Angeles' "One Call to City Hall" 311 Service gives Los Angeles residents and businesses direct access to information about 1,400 city services. Los Angeles is the largest city in the United States to implement a non-emergency 311 information resource for its residents and businesses. The Citywide Services Directory (CSD) provides accurate information about city services, locations, phone numbers, hours of operation, and other general information from one centralized repository. The CSD supports the 311 Center, and is also available over the Internet at www.lacity.org. 311 is expected to help ease the number of non-emergency calls currently received each year through the city's 911 Emergency system (City of Los Angeles "One Call to City Hall" 3-1-1 Fact Sheet, 2005).

In its broadest sense, 311 is one simple number which enables people to request and receive information and government services. It is either:

1. Operated by the police department to field non-emergency calls and to help reduce the number of non-emergency 911 calls, or
2. Operated by a local government (public works, independent service agency, etc.) to field non-emergency service calls such as potholes, fallen trees, street or traffic signals not working, etc.

According to the District, “Calls to 311 are routed either to a separate center and handled by the non-public safety personnel, or routed to the same center that handles 911 and other public safety calls.”

The District of Columbia also highlights instances when people should call 311: to report situations that are not serious, not life-threatening or not currently in progress. In addition, they can use 311 to request general information from the Police Department. Examples of typical 311 calls include (311 Non-Emergency Number, 2005):

1. Property crimes that are no longer in progress and are absent the offender. These include crimes such as vandalism, thefts, graffiti, stolen autos, and garage burglaries.
2. Animal control problems.
3. Illegally parked vehicles or vehicles blocking alleys or driveways.
4. Minor vehicle crashes where there are no injuries and traffic is not blocked.
5. Phone numbers, addresses, hours of operation, etc., of MPDC units or programs.
6. Reporting of a less serious crime over the telephone.

What information do 311 centers require? This depends on the service a citizen needs. For instance, to assist a resident with a trash pick-up request, the 311 agent might need to access:

1. Ordinances and Department procedures for sanitation services (fees, recycling requirements, etc).
2. Names and phone numbers of staff handling escalated complaints about trash pick-up service.
3. Schedules of trash pick-up and routes.
4. Status of trash pick-up service requests.

D. Citizen Interaction with 311 Call Centers

Customers can interact with the 311 service in more than one way. For example, the 311 design for the City of Los Angeles (City of Los Angeles 3-1-1/E-Government Services Project, Final 3-1-1 Design Report, 2000) includes a call handling process that is structured so that, once customers move past the initial contact process, they can interact with the 311 service in one of two ways:

1. Speaking with a live agent: An agent who speaks directly to the caller and provides the appropriate assistance to complete the request while the customer is on the line handles the call.
2. Dealing with Interactive Voice Recognition (IVR): The call is handled by an IVR system that provides interactive information and services. For those services that have been scripted via recordings and voice forms, callers will be routed to the IVR system by an operator, and will be prompted by the system to respond to questions to obtain information electronically. The caller will have the option to go back to

a live operator at any time if they cannot obtain the information needed electronically. IVR calls have minimal involvement (less than half a minute) from a live agent.

E. Benefits of 311 Systems

Systems for 311 have the ability to enhance citizen access to services, improve the ability of government to manage these services and to increase the accountability and efficiency of government agencies. Martin (2004) outlines these benefits as follows:

1. Centralizing the point of contact for citizens makes it easier for them to get service. A 311 system is also viewed as a “proactive management tool” that allows the officials to see the volume and type of calls, and how long it takes for them to be dealt with. Data from incoming calls can be tracked and reviewed with customer relationship management (CRM) software.
2. Eliminating phone-answering duties for department workers with more pressing tasks is an immediate benefit of 311 call centers. A 311 system helps departments free up resources to handle their core functions rather than having people work on getting callers in touch with whomever they need to speak with. Having skilled workers spend their workday on projects for which they have been trained is clearly more cost-efficient than having them answer phones and forward calls.

3. Freeing up resources within departments can help jurisdictions deal with budget strains.
4. Consolidation of call answering services also saves governments scarce funds.
5. As more and more data from 311 is fed into CRM systems, public officials find that by analyzing the details they can begin to make strategic decisions on how resources – and services -- can be better managed. Not only does the data give officials precise information that can be acted upon, such as pinpointing persistent illegal dumping problems, but it can also be used to set service standards for government agencies.
6. Savings and efficiencies gained from a central call center become much easier to recognize over time. For example, Chicago's water department used system data to pinpoint which fire hydrants were opened most frequently, then placed locking caps on those hydrants to insure water pressure.
7. All of the information in the system provides management support for decision-making and the allocation of resources. For instance, sometimes graffiti can be painted over, and sometimes it needs to be blasted off the surface. By analyzing data about graffiti calls, 311 managers have an idea of how many painters versus blasters are needed.

- 8.** The 311 system has also resulted in revenue enhancement. In Baltimore, 311, CitiTrack and CitiStat have combined for real-time management and accountability, allowing for more efficient cost expenditures. An example of revenue enhancement is evident in the improvements in how the water department (Baltimore) handles leaks. Earlier, when the water maintenance crew found an outside meter that had a leak, it would put in a bypass pipe and refer meter replacement to another division in the water department. With CitiStat, the 311 managers learned about tens of thousands of instances in which people were waiting for bypasses to be replaced with meters. Now when the maintenance crew installs a bypass, the CRM tool automatically generates a request to the meter shop. By tracking these, the number of bypass pipes has been reduced by thousands, which has turned into millions of dollars of recaptured water revenue.
- 9.** The real-time reports and streamlined nature of 311 systems allow for faster response from both officials and citizens. For instance, in bad weather 311 officials can pinpoint areas that have more water on the streets and predict potential flooding.
- 10.** A 311 system allows agencies to measure average response time. They can use this information to set performance standards within an agency and provide citizens with realistic expectations as to when a complaint will be addressed, a problem solved or a service rendered.

11. A 311 system can improve the way cities deliver services. For example, in New York City the system has helped reduce the waiting time for scheduling the appointment for new construction inspections with the Department of Buildings from weeks to days.

Survey of Existing 311 Systems

We conducted a survey of municipalities which have implemented 311 systems. The questions and summary data cover a range of information related to services offered and performance measures. Thirty-two municipalities with 311 systems were identified, and a survey mailed to each. The following fourteen municipalities responded:

Chattanooga, TN; Hampton, VA; Louisville, KY; Austin, TX; Orlando, FL; Somerville, MA; Rochester, NY; Riverside, CA; San Jose, CA; Akron, OH; Minneapolis, MN; Houston, TX; San Antonio, TX; and Birmingham, AL.

Based on the surveys of the existing 311 systems, the most common services where the issue is directly resolved through the 311 system, or information is provided, or callers are forwarded to appropriate agencies, are:

Service	Percentage of City 311 Systems
Street Repair	100%
Permit Information	100%
Public Safety	93%
Sanitation	93%
Senior Citizen Issues	93%
Utility Issues	93%
Employment Information	93%
Animal Matters	86%
Health Issues	86%
Housing	86%
Motor Vehicle/Transportation	71%
Visitor Information	71%

The Service table above highlights the vast array of topic areas that 311 systems address. However this table only indicates a base level of service for each of the topic areas. Municipalities may resolve issues relevant to animal matters, for example, by providing basic information to a caller, or the call center can process a request. The second system represents a more integrated 311 system. The following survey results

focuses on the overall performance of 311 systems, with more integrated and accessible systems receiving the highest score/rankings.

A. Method and Criteria

This research uses four categories to evaluate the 14 municipal 311 systems. They are: usability, service, operations, and system measures. Each category has specific criteria and is weighted according to its importance in evaluating a 311 system. Table 1 below provides a description of each of the four categories and shows how each performance category is scored. The detailed scoring method is outlined below for each section. The scoring methodology replicates similar research done in the area of e-government (Carrizales et al., 2006) where content areas are differentiated by topic and a scoring scale of “0” to “2” is utilized to differentiate performance of individual characteristics within the content areas. Specific examples of scoring methodology are provided below, but the complete listing of questions and scored results of all fourteen municipalities are provided in Appendix A. Table 1, below, provides an overview of the scoring for each of the four categories. The key concepts in each category are listed and the highest possible raw score is also provided. See Appendix A for the full results of the survey.

Table 1

311 System Performance Categories

311 Category	Key Concepts	Raw Score	Keywords
Usability	10	10	User-friendly, wait-time, multi-lingual, call-in hours, call routing, citizen tracking
Service	18	36	Health, social, and community services, housing, legal, transportation, permits, sanitation, utility, visitor and employment
Operations	13	10	Call routing, database, training, walk-in inquires, online, self-service web channel
System Measures	8	8	Busiest time of day, calls per agent, feedback system, security/privacy, population
Total	49	64	

Usability

The first section highlights the relationship between the caller and 311 system's usability. This category, Usability, has ten key concepts with a scoring scale of "0" and "1" for each concept. When citizens call into a 311 system, the ease of use is a critical part of the experience and sustained use by citizens. Transfers to other departments or within the 311 system may be a necessary aspect of the system, but excessive transfers can become a deterrent for future use of the system. In addition,

wait-time and being able to speak to a live operator all represent a higher level of usability performance within a 311 system. Questions outlined below highlight their recoding into the scoring scale of “0” and “1.”

What are the hours for call-in live operation? The response to this question can vary, ranging from 8:00 a.m. to 5:00 p.m. five days a week, to 24 hours a day, seven days a week (24/7). Any 311 system that practiced a 24/7 schedule of live operation received a score of “1.”

What is the average amount of wait time before a caller speaks to a 311 representative? For average response times less than a minute, a score of “1” was indicated in the survey performance score. Three questions are associated with multi-language capabilities. One question in particular, *“How many calls are unable to be addressed because of language barriers?”* was responded to as a percentage of incoming calls. A response of less than five percent was reported as a “1.” Finally, two questions are associated with tracking and whether citizens are able to track a service request via a call-in service number, the web, or an automated IVR.

Service

The second category, Service, represents the broad range of service deliverables by the 311 system. In some cases a call-in request may be seeking information only, while in other cases a call-in request requires processing so that a particular service can be addressed. The

number of services offered varies by each municipality's 311 system, but some of the most prominent associated with public services are included in the scoring and surveying. A total of eighteen service possibilities were included in the survey, with possible scores of "0," "1," and "2." For service requests that are addressable by the 311 center, without transfer, the 311 system receives a score of "2." This represents the highest possible score for the service category by a municipality with highly integrated systems with internal processing mechanisms. However, those 311 systems still in the earliest stages of performance received a score of "1." Those systems were only able to address service requests via transfer or simply providing information.

Operations

The third category, Operations, focuses on the internal operations of the 311 system. There are only thirteen key concepts associated with the category of Operations, ten of which are used for scoring, each with a possible score of "1" for a total raw score of ten. The area of internal operations includes the call routing and the ability to route based upon time of day or week. The ability to have walk-in and online service requests via call centers and websites also represent the operations of a 311 system. Additionally, the 311 system's ability to automatically determine service area based on GIS and physical address information is an advantage.

What is the length of the initial training for 311 staff? Responses to this question can range from a few days to eight weeks of training. The responses were coded so that 10 days or fewer resulted in a score of “0,” and any period of training that went beyond 10 days would receive a score of “1.” The survey instrument also included questions regarding the operating costs and budget, but these are solely for information purposes. The results of the budget and operating costs were not translated into a performance measure and score. Also included in the operations survey section, but for information only and not scored, is the existence of other phone systems within the municipality, such as 211, 411, and 511.

System Measures

The fourth area of 311 system evaluations is System Measures. This category covers much of the data associated with measurable outputs by the 311 system. This does not include whether the system was utilizing performance measurement based on the data collected by the 311 systems. Numerous questions associated with the survey instrument were information only, such as busiest time and day of the week, as well as the type of calls that are made: service or information. Additional information collected under system measures includes population served and cost savings data. For those questions associated with a performance score, we included the percentage of calls an Interactive Voice Response system handles. A response of 10% or lower received a score of “1.” The

average number of calls received per an agent in an eight hour period is another system measure, with responses of an average of 100 or more receiving a score of “1.” Finally, under system measures, we assessed the existence of a feedback mechanism for citizens.

Results

Usability

Survey data regarding 311 system usability indicate that Somerville (MA), Louisville (KY), Orlando (FL), Houston (TX), San Antonio (TX) ranked relatively highly. Somerville and Louisville each received usability scores of eight, while Orlando, Houston, and San Antonio received scores of seven (of a possible score of 10). In contrast, Akron (OH) and San Jose (CA) both received scores of three.

All but one of the 14 municipalities (Austin, TX) have 311 systems where calls are transferred to other individuals within the 311 call center, and if a caller is transferred, that person is connected to a live person rather than going back into another queue. Only Birmingham (AL) tracks calls after a transfer takes place. Of the 14 municipal 311 systems, only Hampton (VA), Somerville (MA), Houston (TX), and San Antonio (TX) notify callers regarding their position in the queue or their expected wait time. Louisville, Somerville (MA), Rochester (NY), San Jose (CA), and San Antonio provide 24/7 live 311 operation. Of the remaining nine municipalities that do not provide 24/7 live service, five provide an

automated information system. Eight of the 14 municipal systems provide multi-lingual assistance. Twelve municipal systems afford citizens the ability to track service requests. Of those 12, nine municipalities maintain a call-in service number, while the remaining three use web-based tracking.

Table 2

Municipal 311 Usability Scores

		Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
Section Score (total possible= 10)		3	5	6	5	5	7	8	6	7	4	5	7	3	8

Service

Results indicate that Hampton received the highest score for service area (27 out of a possible total score of 36). Somerville, Minneapolis, and Louisville all scored well, having merited section scores of 26, 25, and 24, respectively. Our survey focused on the following service areas: animal control matters, child and youth services, community services, education, emergency issues, health issues, housing services, legal aid, motor vehicle/transportation, parks and recreation, permit information, public safety, sanitation and street repair, senior citizen

issues, utility issues, visitor information, and employment information. The more important survey data indicate the following:

- Seven of the 14 municipal 311 systems address children and youth services by transfer and three provide information.
- The 311 non-emergency systems in five municipalities address community services by transfer, while four municipalities provide only information.
- Six 311 systems address educational issues via transfer. Two municipalities use 311 to provide information regarding educational issues, while the remaining six municipalities do not address educational issues through 311.
- Emergency issues are addressable through 311 non-emergency systems via transfer in 11 of 14 municipalities.
- Seven municipalities address health issues through 311 via transfer. Only Somerville is able to process health issues through its 311 system.
- In six municipalities, housing services are addressable through the 311 non-emergency systems via transfer, while three municipalities provide information about housing services through 311.
- Three municipalities address legal issues via 311 call center transfer. An additional three municipalities provide information, while the remaining eight municipalities do not address legal issues through 311.

- Five of the 14 municipalities surveyed address motor vehicle and transportation questions via 311 transfers. In four municipalities, the 311 non-emergency systems provide information about motor vehicle and transportation problems.
- The 311 systems in five municipalities provide and disseminate information about recreation and park issues. Four municipalities are able to transfer out of the 311 system to a department that can address recreation and park issues.
- Six municipalities address public safety issues through 311 transfers. The 311 systems in five municipalities provide information about public safety issues. Only Louisville and Somerville process such issues directly via 311, while Chattanooga does not address safety issues.
- Sanitation Issues are addressable through seven of the 311 systems. Three municipalities provide only information about sanitation issues, while an additional three municipalities address such issues via 311 transfers.
- Street repair services are directly processed through the 311 systems in nine municipalities. Three municipalities address street repairs via 311 transfers.
- Five municipalities provide visitor information by transferring callers to other departments. Three municipalities are able to process visitor information through the 311 call center directly.

- Six of the 14 municipalities surveyed indicated that employment information is available via 311 transfers to other departments. An additional six municipalities use 311 to make employment information available.

Table 3

Municipal 311 Service Scores

No = 0 Yes, provide information or address via transfer = 1 Yes, processed via 311 Call Center = 2	Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
Section Score (total possible = 36)	11	19	16	14	27	17	24	25	18	17	10	21	17	26

Operations

Survey results show that Chattanooga and Birmingham received the highest operations score (9 out of possible 10). Hampton, Orlando, Riverside, and Minneapolis scored favorably in this performance area as well, all having received scores of seven. Rochester scored poorly, having received an operations score of two. Not all municipalities necessarily require practicing such operations as routing, but we asked questions specifically about capabilities of their technologies. For operations, the data indicate:

- Only Chattanooga, Hampton, and San Antonio are able to route calls to multiple locations based on geographic area from which the call originated.
- Nine of the 14 of the municipalities surveyed are able to route calls based upon time of the day or the day of the week. Five of the municipalities are unable to route calls based on time or day.
- Ten of the 14 systems include online internet submissions/requests, while eight call centers allow for walk-in inquiries. Nine of the systems have methods in place to drive simple requests for information through a self-service or web channel.
- The vast majority of 311 Call Centers place a premium on staff training, as 12 of 14 municipalities provide at least two weeks of staff training. Minneapolis and Orlando provide eight weeks of training, while Louisville and Houston provide six weeks.
- Seven 311 systems have technology that support tracking service requests through telephony or electronic channels for citizens, while nine have systems that automatically determine service areas based upon GIS or physical address information.

Table 4

Municipal 311 Operations Scores

	Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
Section Score (total = 10)	5	3	9	9	7	6	5	7	7	7	2	7	3	6

System Measures

Houston received a system measures score of six (out of eight), and both Minneapolis and Hampton received scores of five. In contrast, Riverside and Akron received scores of one. The data further indicate:

- The vast majority of the 311 systems emphasize keeping caller wait time to a minimum. Specifically, nine of the 14 systems have average wait times that are 60 seconds or less.
- Accountability and security/ privacy are points of emphasis as well. Nine call center systems provide mechanisms whereby citizens can provide feedback regarding the quality of 311's customer service. Moreover, eight municipalities have a security/privacy policy associated with the 311 system.
- Only Chattanooga, Minneapolis, and Houston have 311 systems that perform "intelligent" capture of information generated. That is, those

systems learn on an ongoing basis in the course of delivering information and services.

Table 5

Municipal 311 System Measures Scores

	Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
Section Score (total = 8)	1	2	3	4	5	6	2	5	3	1	4	4	2	4

Summary of Results

Overall, the data indicate that Hampton, Minneapolis, and Somerville's 311 call center systems were most highly rated, each receiving a total performance score of 44 out of a possible 65. Louisville and San Antonio fared well, as both merited scores of 39. In contrast, Akron and Rochester received scores of 20 and 21, respectively.

From a usability perspective, Louisville and Somerville are models in that both systems allow for transfers to other people in the 311 center/group or to other departments. Also, when a caller is transferred, that person does not go back into another queue. Rather, they are directed to a live person. Somerville further notifies caller as to their expected wait time or their position in the queue. Louisville, Somerville, Austin, Rochester, and San Antonio provide 24/7 service. Of the

remaining nine municipalities that do not provide 24/7 311 service, four provide an automated information system. The growing diversity of the American population increases the need for multi-lingual center representatives. As such, eight systems have agents in place that are multi-lingual. Furthermore, giving callers the ability to track service requests is an important usability function of 311. Twelve of the municipal systems examined here provide such a function.

From a service perspective, Hampton, Louisville, Somerville, and Minneapolis are best practices. The common thread among these municipal systems is they are able to process a significant number of service requests directly through their 311 Call Centers. In other words, they do not have to transfer a caller to another department in the hopes that the service request will eventually be filled. Directly processing a service request is far more efficient and convenient for the citizen.

With regard to operations, Birmingham received the highest operations score (10 out of possible 11). Chattanooga, Hampton, Orlando, Riverside and Minneapolis scored favorably in this performance area as well. Some of the common threads among these six municipal systems include: call routing based upon time of day or day of week; the 311 center database is SQL¹ in nature; the 311 system includes online internet submissions/ requests; the system technology tracks service requests

¹ SQL refers to Structured Query Language that allows for efficient and effective management and retrieval of data.

through telephony and/or electronic channels. Furthermore, each of these best practices, with the exception of Riverside (10 days), require at least two weeks of training for Call Center representatives. Minneapolis and Orlando require eight weeks of training.

In terms of system measures, the better 311 systems: (1) keep caller wait times to a minimum, (2) insure that only a small percentage of calls are handles via Interactive Voice Response, as opposed to a live agent, (3) provide callers with a means of providing customer service feedback, and (4) have a means of safeguarding a caller's privacy.

Table 6

Summary of Survey Results

	Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
Section Score (total possible= 10)	3	5	6	5	5	7	8	6	7	4	5	7	3	8
Section Score (total possible = 36)	11	19	16	14	27	17	24	25	18	17	10	21	17	26
Section Score (total = 10)	5	3	9	9	7	6	5	7	7	7	2	7	3	6
Section Score (total = 8)	1	2	3	4	5	6	2	5	3	1	4	4	2	4
TOTAL SCORE (total possible =64)	20	29	35	32	45	36	39	44	36	30	22	39	26	45

New York City's 311 System

New York City developed its 311 system beginning in 2002. Since that time, the system has provided New Yorkers with a single access point to inquire about city services and make requests to address problems with these services. It has matured from a system that only collected data on caller inquiries to one that is used as a management tool for the performance of city agencies. New York City's 311 system can be considered a model for such systems in large urban areas. The following description of the NYC 311 system is based on interviews with personnel from all aspects of the system: administration, hardware, software, and call center, as well as a tour of the system. Additional information was also gathered about the system through the city's website under the Department of Information Technology and Telecommunications (DOITT) at www.nyc.gov/html/doitt/.

A. Origin of the System

The New York City 311 system was initiated through the efforts of Mayor Michael Bloomberg. He initiated the system as a means to provide citizens input to government and thereby learn what was on the minds of these users of city services. Mayor Bloomberg, a very successful private sector businessman, appears to be approaching the management of government as he did managing the private sector – to be successful your

primary concern should be to satisfy the customer. In the case of government, the customer is the citizen or the user of public services.

Soon after Mayor Bloomberg assumed office, he started the planning and development of the 311 system, the mission of which is to:

- Provide the public with quick, easy access to all New York City government services and information while maintaining the highest possible level of customer service.
- Help agencies improve service delivery by allowing them to focus on their core missions and manage their workload efficiently.
- Provide insight into ways to improve government through accurate, consistent measurement and analysis of service delivery citywide.

The Mayor was also insistent that 311 callers have access to a live operator/representative of the city in as short a time as possible. The Mayor charged the city's Department of Information Technology and Telecommunications (DOITT) with developing and implementing the system in eight months and signed an Executive Order creating the system. The Mayor also mandated that other city agency commissioners cooperate in the development and implementation of the 311 system.

B. Planning and Development of New York City's 311 System

The planning for the system included surveying other cities that had 311 systems and then developing decision factors that would have to be

considered in planning New York City's 311 system. The results of this survey included the following decision factors:

- Purchase a Customer Relationship Management (CRM) system from a vendor or design one internally.
- Purchase needed hardware.
- Obtain staffing for hardware maintenance, software maintenance, a call center and training.
- Learn core business functions of each agency to determine which should be built into the 311 system.
- Obtain information on caller response systems currently in use by city agencies.
- Insure a smooth interface between the 311 and the 911 systems.
- Determine whether the 311 system should primarily tabulate data based on customers or incidents.
- Determine whether the 311 system should cover all agencies by obtaining some data from each of them, or from a few agencies by obtaining in-depth data from those agencies.
- Assure callers' privacy.
- Determine the volume of calls the system should be built to handle.
- Respond to callers who speak languages other than English.
- Provide quick and direct access to any caller.
- Insure that all people should have access to system.

- Avoid layering with Interactive Voice Responses.

C. Implementation

The city addressed each of these issues and developed the 311 system in nine months. The overall strategy was to build on knowledge that had been used by other cities and to meet the goal of having the system operational within the established timeframe.

Some of the important decisions the city made were:

- On-going involvement and emphasis on the 311 system by the Mayor.
- Purchase of an existing CRM system from Siebel and making some modifications to meet the city's requirements.
- Purchase the required hardware.
- Overbuild the system to handle more calls than expected.
- Build the system to interact with various systems, some of which were legacy systems, at each of the other city agencies.
- Have 24/7 capability.
- Collect some information from all agencies rather than in-depth information from a small number of agencies.
- Hire senior personnel with experience in private sector call center management.
- Maintain privacy of callers by maintaining data only on a caller's telephone number.

- Tabulate data by incident and not by caller, which is also another way to maintain caller privacy.
- Provide a tracking number for each incident and have the capability to give callers an update on the progress of resolving their service request.
- Transfer staff from existing agency call response centers to the 311 call center.
- Minimize IVRs to the most frequently requested information, such as parking and traffic rules in effect on a given day.
- Establish a goal of 30 seconds in which calls will be answered by a live operator.
- Mount an extensive advertising campaign in print and other media informing the public of the 311 system and differentiating it from the 911 system.
- Build a state of the art call center with a strong training component.
- Employ the vendor Language Line to respond to calls in other languages.
- Establish a contract with an outside vendor to handle overflow calls in the case of a city emergency.

D. Performance of New York City's 311 System

After four years of operation, New York City's 311 system has exceeded expectations. The system has responded to more calls than

was originally planned, with 13.2 million calls in FY2006. The wait time also met or exceeded its target of 30 seconds with an average of 14 seconds in FY2006. The level of language assisted calls for the same year was 2.2 %.

The following represents the breakdown of the type of inquiries handled by the 311 system and the actions taken to process these calls:

- 47% - caller provided with all requested information for their specific inquiry and no further action is required.
- 32% - caller is transferred to the appropriate agency or is referred to and provided with the appropriate agency's telephone number.
- 9% - caller's request is entered into the City's Citizen Service Center tracking system and the request is forwarded to the appropriate agency for completion.
- 2% - call is deemed an emergency, a crime in progress, or a Police Department 911 matter and is immediately transferred to 911.
- 10% - calls to follow-up on an existing service request or those that are not completed prior to the caller disconnecting the call.

The top 10 Citywide 311 Inquiries of the 31.2 million inquiries in FY2006 in number and percentage of all inquiries are:

- December 2005 *Transit* Strike Inquiries - 716,302 6.9%

- Noise Complaints (all inquiries) - 351,780 2.5%
- Heat and Hot Water Complaints - 330,970 2.3%
- Chlorofluorocarbon (CFC) and Freon Removal - 273,201 1.9%
- Bus or Subway Information - 262,492 1.8%
- Landlord Maintenance Complaints – 247,538 1.7%
- Parking Violation Ticket Assistance - 246,581 1.7%
- Missing Vehicle Towed - 202,887 1.4%
- Garbage Pickup - 159,168 1.1%
- Streetlight Defect - 135,466 1.0%

These data demonstrate the success of the New York City 311 system in being accessible and responsive to its citizens and demonstrating the issues that are of most concern to them.

E. Cost of the New York City 311 System

The cost to develop New York City's 311 system was approximately \$27.0 million for both personnel services (PS) and other than personnel services (OTPS). The costs for the system from for FY2004 until FY2007 in millions are as follows:

	PS	OTPS	Total	Number of Calls
FY2004	\$11.0	\$16.4	\$27.4	8.1 million
FY2005	\$11.4	\$12.3	\$23.7	12.5 million
FY2006	\$13.0	\$16.4	\$29.4	13.2 million
FY2007	\$13.5	\$18.1	\$31.6	14.4 million*

** Estimate based on data from July 2006 to May 2007.*

The cost of the system has increased by 15.3% from FY2004 to FY2007 while the number of calls grew by 77.8% for the same period. The city's population was 8.2 million in 2005. Therefore, the number of 311 calls per person in the city for that year was 1.54.

F. Future of New York City's 311 System

With the successful implementation of New York City's 311 system over the last four years, the city is now moving into a new phase in terms of the accessibility of the system, performance of the system, and how the system can be used to drive performance in city agencies.

The city is planning to incorporate internet and cell phone access in the 311 system. This uses current technology to enable citizens to register and track inquiries over the internet, without using live call operators. The efficiency of the system is increased for the callers and it enhances the convenience of callers when they use the 311 system. The city also plans a survey of citizens to measure satisfaction with the 311 system and then use this information to improve performance of the system.

Another new area is that DOITT, which manages the 311 system, will enter into Service Level Agreements (SLA) with other city agencies for calls that require agency follow-up to address an inquiry. For example, for

potholes, the city's Department of Transportation will enter into an SLA which commits the agency to fill 85% of reported potholes within a specified time. SLAs will be negotiated with other city agencies for their respective responsibilities. Each agency's performance will be monitored through the 311 system by having agencies enter additional tracking information into the 311 system. The SLAs become mechanisms to standardize agency performance on issues that are of concern to citizens and make government more responsive. Information from the SLA's can become part of the city's overall performance tool, the Mayor's Management Report, which semi-annually reports on performance indicators for every city agency. When these latest plans to enhance New York City's 311 system are implemented, it will contain all of the elements of an effective system.

The city recently announced (August 16, 2007) another 311 innovation, SCOUT, the Street Conditions Observation Unit, which is a fifteen member team that will patrol the streets in three-wheeled vehicles, identifying problems such as potholes, clogged catch basins, damaged bus shelters, and graffiti. These problems will be transmitted to the 311 system with BlackBerry technology along with global positioning software to locate the incident. These incidents will be processed and followed by the 311 system.

Criteria for an Effective 311 System and General Budget Estimates

The criteria for an effective 311 system and the general budget estimates are based on our survey of existing 311 systems, an in-depth examination of New York City's 311 system, and the results of a national conference on 311 systems and the existing 311 literature. These criteria should be used in developing a Statewide 311 system for New Jersey.

Criteria for an Effective 311 System

The criteria for an effective 311 system can be divided into three areas: leadership, usability, and systems. In addition to implementing these specific criteria, a 311 system should, in general, emphasize management, performance, and accountability.

A. Leadership

- Strong commitment is required, in terms of attention and resources from the Chief Executive, to establish a 311 system and to set goals for the system. Consistent commitment and attention is needed from the highest levels of government to reinforce the importance of the successful development of a 311 system.
- The Chief Executive needs to devote on-going attention to implementing the system and securing the cooperation and commitment of other government agencies in this effort.

- The project should hire people with call center experience who will be knowledgeable about the management of the operation of call centers. It may be necessary to recruit people with private sector experience, where call centers have a long history.
- A strong advertising campaign about the 311 system and the difference between it and the 911 system will facilitate implementation. This is particularly important as one of the primary reasons for the development of 311 systems is the overload of the 911 system due to the volume of non-emergency calls.
- Call staff should be transferred from each agency to the 311 system. This will enable the 311 call center to operate with a minimum of additional staff and each agency to concentrate on its core functions.
- Management must determine how to use the 311 system to measure agency performance in response to calls. Data from the 311 system can be used to establish performance standards and improve the functioning of government.
- The system must insure proper training of staff. Training is critical to the successful operation of a 311 system.

B. Usability

- The design must provide 24/7 access to the 311 system with a live operator on the other end. 24/7 access to a live operator enables citizens to contact their government at any time and provides citizens

with the feeling that the government is there to address their issues at any time.

- There must be a clear goal for wait time from the time the IVR ends to the time a call is answered by a live operator. This establishes a benchmark for performance for the government's call center. It also insures that a prompt response to callers is a priority of the 311 system.
- Notification must be made to callers as to their positions in the queue or the expected wait time. This provides information to the caller and demonstrates consideration for the caller.
- A caller must receive a tracking number for an incident. The tracking number tells the caller their issue has a unique identification number and that the caller can refer to it in future communications.
- The system must have the capability to transfer callers to other individuals and/or agencies that can respond to them. This enables the caller to speak directly to the individual and/or agency that can address the caller's issue.
- The system must provide multi-lingual assistance which allows non-English speakers to communicate with the 311 system and receive the same service as that provided to English-speaking callers.

C. System

- Decide if the system is incident-based or caller-based. The incident based system is organized to track the specific issue the caller identifies. Since data is maintained by incident, this system is better at maintaining the privacy of callers. A caller-based system that maintains information by caller is more focused on the caller rather than the issue that needs to be resolved.
- Build in excess caller capacity. Excess capacity allows the system to handle increasing volumes of calls as citizens become more familiar with 311, and it insures that calls will be answered in a shorter period of time.
- Select a computer CRM package which needs as little customization as possible to reduce development time and costs. The selection of the CRM package is based on a government understanding the needs of their 311 system and deciding on the system that most meets these needs. This will reduce both additional costs, which can be considerable depending on the amount of customization, as well as development time.
- Select a goal of broad agency coverage versus a goal of information. Broad coverage will insure having some 311 information about the issues at each agency. This provides callers with access to most or all agencies, even though the information may be limited. Starting with

broad agency coverage provides a basis to collect more in-depth information about each agency as the 311 system develops. Beginning the 311 system with in-depth information usually means that most or all agencies will not participate because too many of them will not have the infrastructure to collect in-depth information.

- Focus on caller privacy. Caller privacy is an important issue for a 311 system as it can discourage citizens from contacting the system and it challenges one of the systems goals of encouraging participation from as many citizens as possible. There is also a special concern about privacy in a post-9/11 world.
- Provide a capability for IVR messages. While IVR messages affect the time it takes for a caller to contact a live operator, these messages usually address the most common reasons callers contact the 311 system. Overall, this reduces the time for callers to receive the information they need. IVR messages should be used after careful consideration.
- Build in a GIS capability. The primary use of GIS capability in 311 systems is to insure the information received about an address is correct so that the issue can be resolved. This capability is not intended to interfere with the privacy of callers.
- Link to Homeland Security. Establishing a link of a 311 system to Homeland Security is an important capability as it provides a means to quickly refer calls that need special attention.

- Use the Internet for access to the system and to track incidents by caller. A 311 system that has Internet access will encourage more use of the system by citizens who prefer that mode of communication. It will also provide ease of communication to track a specific issue.
- A 311 system should be independent of but interactive with 911. A 311 system should not be located within a 911 department. The 311 system should be an independent entity that reports directly to an IT Director or Governor/Mayor, as opposed to a 911 Director. The 911 and 311 call centers should, however, maintain remote connections so that if one goes down, the other can provide support services. The interaction of the 311 and 911 systems is essential for referring callers who have dialed the wrong service. Emergency calls made to the 311 system can be quickly routed to the 911 system. Establish excess capacity with an outside vendor for extraordinary call volume. Excess call capability is important when there is a situation—an emergency or a unique event such as a subway strike—when the 311 system will receive more calls than it can handle in a reasonable amount of time. In order to avoid longer wait times and provide callers with the information they need in these difficult situations, an outside vendor can be engaged to handle the excess calls.
- Understand and plan to interact with other agency legacy systems. This is an important element in the development of a 311 system as

the new system must be able to communicate with agency legacy systems in order for the 311 system to be effective.

- Provide callers with a feedback mechanism regarding the quality of a 311 system. Feedback on citizen experience with the system provides knowledge of what is and what is not working. This enables the system to be improved and will increase participation and citizen involvement with the 311 system.
- Support the capture of information on the performance of agencies in resolving the issues raised by callers to the 311 system. For example, was the pothole fixed and how long did it take to fix it? The capability of capturing performance information of agencies should be incorporated into a 311 system in the planning stages whether or not this information is collected in the initial phase of the system. Once performance information is in a 311 system, it can be more easily activated in a later phase of the system than modifying the system to collect this data.
- Implementation timetable should be gradual. A soft start is recommended to begin the implementation of a 311 system. Any advertisement of a 311 system's functionality should follow an initial stage of testing. Initial stages would allow for calls traditionally intended for a municipality to be forwarded to 311. A second stage of implementation would allow for minimal advertisement of the 311 system, followed by eventual full implementation and advertisement.

General Budget Estimates for a 311 System

The general budget estimates for a 311 system are based on available data collected from cities with 311 systems covering average calls per month, calls per capita and costs per capita.

311 Calls	Per Month	Per Capita
New York City, NY	1,100,000	0.14
Hampton, VA	21,000	0.14
Minneapolis, MN	48,000	0.13
Houston, TX	210,000	0.11
Akron, OH	18,000	0.09
Austin, TX	45,000	0.06
San Antonio, TX	90,000	0.06
Orlando, FL	27,000	0.02

Average 311 Calls		0.09
-------------------	--	------

Annual 311 Budget	Per Capita
San Antonio, TX	\$1.06
Orlando, FL	\$1.25
Birmingham, AL	\$1.72
Somerville, MA	\$2.50
Houston, TX	\$2.55
New York City, NY	\$3.12
Akron, OH	\$3.80
Hampton, VA	\$3.85
Minneapolis, MN	\$7.10

Average 311 Budget	\$2.99
--------------------	--------

This budget data, with the population of any government entity, can be used to estimate the number of 311 calls per month and the required budget to operate a 311 system for that entity.

Implementing a Statewide System: New Jersey

Currently neither the state of New Jersey nor any of its 566 municipalities have 311 systems. The City of Newark, however, is currently considering developing a 311 system. The New York City 311 system (with its planned enhancements) can serve as a model for New Jersey as their populations are approximately the same size, and New York City has one of the most well developed 311 systems in the country. A 311 system offers New Jersey all of the benefits that other governments have experienced: improved citizen access, more accountability for government activities, increased information for managing government and less intrusion of the 911 emergency system. A statewide system for New Jersey also presents challenges compared to existing 311 systems for a single municipality as information would have to be accessed for each of the 566 municipalities in the state.

There are currently three statewide response systems in New Jersey:

1. An emergency response system, 911, provided by the Office of Emergency Telecommunications Services;
2. A transportation information system, 511, provided by the New Jersey Department of Transportation; and
3. A human services system, 211, provided by a non-profit organization (United Way) in conjunction with the support and resources of the New Jersey Department of Human Services.

The 911 emergency service system is the oldest of the three call-in state services. The 211 community service communication number is described in further detail in Appendix B. The 511 transportation communication number is the newest telephone service for New Jersey and has been designed primarily as an information dissemination mechanism, although further services related to transportation may be incorporated later on.

In order for New Jersey to move forward with a statewide 311 system, it would have to address the criteria for an effective 311 system in the three areas of leadership, usability and systems. The threshold, if New Jersey is to move forward with a 311 system, is for elected officials, particularly the governor, to publicly recognize the benefits of a 311 system, believe that such a system is feasible in New Jersey, and then provide leadership in terms of direction and funding for the system.

The body of this study presents detailed information on 311 systems in a variety of cities and presents a set of criteria that must be addressed by the state of New Jersey in order to successfully implement a 311 system. These criteria are summarized in a checklist in Appendix C.

A major challenge to implementing a statewide 311 system in New Jersey, and any state attempting to develop a 311 system, is the collaboration that will be required with the 566 municipalities and perhaps hundreds of other entities (counties, special districts, school districts, etc.) within the state. New Jersey, with over 1300 such units of government,

would need to establish a basis for services that can be addressed. A statewide 311 system would not only focus on state services; many of the issues that are of concern to callers are local in nature. The role of the state government and its offices is critical to the implementation of a statewide 311 system, particularly in coordinating the participation of other levels of government in the system.

A statewide 311 system presents an opportunity for New Jersey to integrate and more efficiently and effectively communicate in a single system concerns about the necessary steps citizens of the state should take in case of terrorist attacks or large scale natural disasters. The Department of Homeland Security for the state can communicate with the citizens via a 311 system, which can provide up-to-date and critical information. The state is currently exploring this opportunity, but such efforts can best be incorporated into discussions of a statewide 311 system.

The State's Office of Information Technology (OIT), as in cities that have implemented 311 systems, is best suited to be the lead agency in this effort. The OIT has the requisite expertise in information technology and can be the focal point of designing the system to achieve the benefits of a 311 system outlined earlier in this study, selecting the CMR software vendor, selecting the hardware, organizing a call center, working with the new CMR software and working with state agencies and other government entities in the state that will be part of the 311 system.

Options for Implementing a New Jersey Statewide 311 System

There are three options that New Jersey should consider to implement a 311 system. The first option is to build a statewide 311 system on the existing 211 system platform. The second option is to develop a statewide 311 system by purchasing a new CRM system from one of the existing vendors in the field (four vendors have been identified). The third option is to have the City of Newark pursue their current efforts to develop a 311 system and use that system as a platform for other municipalities and local units of government, as well as counties and special districts, and perhaps for state agencies as well.

The first option is to use the well established New Jersey 211 system platform as a foundation for a statewide 311 system (see Appendix B). The infrastructure of telecommunications and coordination for that system is already in place. Although the 211 services currently offered are predominately information dissemination in nature and stop short of traditional 311 services, their infrastructure allows for expansion of scope and cost-efficient support. One of the objectives of a statewide system would be to eliminate various numbers and create a “one-stop” call number. Having both 211 and 311 systems, however, will present a challenge for both systems as citizens will have to differentiate between what services are offered by each number. Not all states have a 211 system. For those, like New Jersey, that do, collaboration is a highly feasible step. This option requires the integration and coordination of other

local government entities into the system. Integration and coordination will cost somewhat less than the development of a full statewide 311 system due to the existing 211 platform and infrastructure. The cost of operating a statewide system built on the 211 platform is estimated to be \$26 million per year, plus estimated start up expenses of \$1-2 million. This estimate is based on the per capita cost of \$2.99--the average of 311 systems surveyed as cited earlier in this study as extended to New Jersey's population of 8.7 million people.

The second option is to develop an entirely new statewide 311 system, including purchasing a CRM system from a vendor, purchasing the hardware, developing a call center and then integrating other local and state government entities into the system. This is a more ambitious effort, but it can also take advantage of current 311 technology from systems in other government entities and will not be bound by the 211 platform. One method to integrate information from other government entities into the statewide data base is to create a data entry form for each service, such as sanitation, and have each locality enter this information on the statewide data base. As 311 calls are received in the statewide call center, information can be provided to the caller from the data base or the call can be transferred to the locality. In addition to the estimated operating costs of \$26 million per year, the cost of this system is estimated to be between \$10-12 million in start up costs such as a facility, equipment, training, and

customized systems capacities necessary to serve state, county and local government entities.

The third option is to support the City of Newark in the development of its own 311 system and use that as a platform for systems in other cities, in counties and in state agencies. This may be the most cost-effective option, and perhaps the most realistic. Newark is presently considering the development of such a system, and initially would not have to deal with the integration and coordination of information from other local government entities. A Newark-based system would be more focused, but at the same time it would delay the introduction of 311 systems in other parts of the state and within state agencies. Because Newark has a 911 system in place, with excess capacity, hardware and start-up costs might be as little as \$1 to \$3 million. After establishing a functioning system in Year 1, in Year 2 Newark could then offer 311 services to surrounding municipalities on a contractual or shared services basis at an estimated charge of \$3 to \$5 per resident. Participating municipalities would avoid start up costs and would offset per capita charges by redeploying personnel who now answer a broad range of queries. This option also has the twin advantages of not requiring state funds for a major investment or substantial, recurring operating costs, as well as very possibly providing an income stream to New Jersey's largest city.

There are three possible alternatives for financing the New Jersey 311 system:

1. The first is to have the state fund the entire system's capital and operating costs.
2. The second is to have the state provide funding to get the system up and running, with each local government paying, on a voluntary basis, a per capita fee of \$3 to \$5 annually for the service, benefiting from the statewide 311 system to the extent they would devote fewer staff to answering routine calls that would now be handled by the state. A variation on this alternative is to provide the 311 service to municipalities on a reduced fee basis, with the state supplementing the operating costs of the service.
3. The third alternative is to assist Newark in establishing a 311 service, which it would then offer on a contractual basis to other municipalities and to state agencies in New Jersey.

No matter which alternative New Jersey pursues, prior to a decision and implementation a project team should review selected systems, observing their operations and establishing working relationships with their staffs. In particular, the project team should consult with:

1. New York City's 311 system. That system may be the nation's most advanced, and in terms of population served and scope of services covered is almost identical to New Jersey in terms of scope of services and population served.

2. The State of Georgia's statewide system, which is in the early stages of development and for which an RFP (see Appendix D) was issued in 2006.
3. Selected, smaller 311 systems, such as Louisville's.
4. Commercial vendors offering CRM/311 software packages. A list of those vendors we consider "best of breed," based on their work and reputation, appears in Appendix E, as well as a list of all vendors attending an "Offeror's Conference" in Georgia last fall in response to the Georgia state RFP. Those vendors are categorized as either consultants, software vendors or telephony contractors.

Each of these options has arguments in favor of its implementation, and each presents different challenges. The implementation of any of these options will bring New Jersey into the 311 environment, and the benefits it brings will make government more responsive to its citizens with enhanced cost-effectiveness, accountability, and performance.

Summary

The number of 311 systems operating in government has grown significantly and rapidly. This has occurred in large cities such as New York as well as smaller cities such as Hampton, Virginia. The pressure for this growth is that stakeholders have observed the benefits of 311 systems in terms of citizen accessibility, responsiveness to the concerns

of citizens, improved management of government services and enhanced accountability and performance of these services.

New Jersey has an opportunity to benefit by implementing one of the three 311 system options presented in this study: building a statewide 311 system on the existing 211 system platform, developing a statewide 311 system by purchasing a new CRM system from one of the existing vendors in the field, or having the City of Newark pursue their current efforts to develop a 311 system and use that system as a platform for 311 systems in other cities in New Jersey and/or a statewide system.

The development of each of these 311 system alternatives for New Jersey is feasible based on the data collected and research conducted for this study. In order for New Jersey to be successful in this effort, there must be leadership and commitment from the governor and legislature to implement a 311 system. The 311 system criteria checklist found in Appendix C should be consulted to insure proper planning of the system in order to receive all the benefits a 311 system has to offer. Additional information on existing 311 systems should be gathered from other cities as they implement 311 and used in the detailed planning of New Jersey's 311 system. The development of this system and the financial commitment for its completion needs to be in place for an extended period of time, such as five years. This is a system that requires time to develop and to introduce to the public. This will be as wise an investment as it has

been for other government entities, and the citizenry and government will both benefit.

Bibliography

311/Citizen Service Center Reports. (2005). Retrieved June 13, 2005 from http://www.nyc.gov/html/ops/html/311/311_most_freq_inq_apr_05.shtml

311 Fact Sheet. (2004). Retrieved May 10, 2005 from [www.nyc.gov](http://www.nyc.gov/html/ops/html/311/311_fact_sheet.shtml)

311 For Non-Emergency NYC Services. How 311 Works. (2005). Retrieved June 13, 2005 from http://www.nyc.gov/html/311/html/how_311_works.html

311 Houston Service Helpline, FY 03 Performance Report. (2003). Retrieved June 13, 2005 from <http://www.houstontx.gov/311/fy03.pdf>

311 Non-Emergency Number. (2005). Retrieved May 10, 2005 from http://mpdc.dc.gov/mpdc/cwp/view,a,1237,q,547613,mpdcnav_gid,1554,.asp

3-1-1 Project Charter. Retrieved May 10, 2005 from <http://www.lacity.org/call311/c311pc1.htm>

311 System: Innovations in American Government Awards. (2003). Retrieved July 23, 2005 from <http://www.innovations.harvard.edu/awards.html?id=3670>

Brewer, Gale. (2004). "Using 311 to Combat Neighborhood Noise." Retrieved July 24, 2005 from <http://www.gothamgazette.com/article/issueoftheweek/20040710/200/103>

Building a 3-1-1 System for Non-Emergency Calls: A Process and Impact Evaluation. Retrieved May 10, 2005 from <http://www.cops.usdoj.gov/default.asp?Item=1275>

Carrizales, T., Holzer, M., Kim, S-T., and Kim C-G. (2006). "Digital Governance Worldwide: A Longitudinal Assessment of Municipal Websites," In *International Journal of Electronic Government Research*, Vol 2(4).

City of Chicago's Award Winning 311 System Focal Point of International Symposium. (2004). Retrieved June 13, 2005 from http://www.motorola.com/governmentandenterprise/contentdir/en_US/Files/PressReleases/PR_2004May11_city_of_chicago.pdf

City of Los Angeles 3-1-1/E-Government Services Project, Final 3-1-1 Design Report. (2000). Retrieved May 10, 2005 from <http://www.lacity.org/call311/pwc-report/plan.pdf>

City of Los Angeles "One Call to City Hall" 3-1-1 Fact Sheet. (2005). Retrieved May 10, 2005 from <http://www.lacity.org/call311/c311sc1.htm>
City of New York Department of Information Technology and Telecommunications (2007). Retrieved June 27, 2007 from <http://www.nyc.gov/html/doitt/html/home/home.shtml>

COPS Fact Sheet: 311 for Non-Emergencies. (2005). Retrieved June 20, 2005 from <http://www.cops.usdoj.gov/default.asp?Item=510>

Community Training Resource Center Fact Sheets. (1996). Retrieved July 17, 2005 from <http://www.tenant.net/Rights/CTRC/ctrctf201.html>

Crackdown On Illegal Dumpers. (2003). Canarsie Courier. Retrieved July 20, 2005 from http://www.canarsiecourier.com/News/2003/0918/Front_Page/040.html

Fact Sheet: The City of Chicago's 311 System. (2005). Retrieved June 13, 2005 from http://www.motorola.com/governmentandenterprise/contentdir/en_US/Files/SolutionInformation/Chicago311_brochure.pdf

Full Schedule of Seminars, New 2nd Vice President Elected. (2001). Retrieved May 10, 2005 from <http://www.dispatchmonthly.com/apco2001/wednesday.html>

Hu, Winnie. (2003). "311 Hotline Is Making the Most of Complainers." *The New York Times*. Retrieved July 19, 2005 from http://councilalbanytripod.com/nyc_help_desk.htm

Martin, W. Eric. (2004). "Point of Contact." Retrieved June 13, 2005 from <http://www.public-cio.com/story.print.php?id=90220>

Mazerolle, Lorraine, Dennis Rogan, James Frank, Christine Famega, and John E. Eck. (2003). "Managing Citizen Calls to the Police: An Assessment of Non-Emergency Call Systems." Retrieved May 10, 2005 from <http://www.ncjrs.org/pdffiles1/nij/206256.pdf>

Moving Oakland Forward. (2002). Retrieved May 10, 2005 from <http://www.oaklandnet.com/movingforward/8CRecommendationsDetailed.pdf>

Ooyen, Marcel Van and Brewer, Gale A. (2004). "Issues Regarding the 311 System." Retrieved July 17, 2005 from <http://webdocs.nyccouncil.info/attachments/62892.htm>

Taylor, Curtis L. (March, 2005). "Nyers are using 311 more than ever." Retrieved June 13, 2005 from <http://www.nynewsday.com/news/local/newyork/nyc3110331,0,3603205.story?coll=ny-main-tabheads>

Wade, Beth. (2001). "TELECOMMUNICATIONS/311 system takes the pressure off emergency center." Retrieved June 17, 2005 from http://www.americancityandcounty.com/mag/government_telecommunications_system_takes/

Appendix A: Survey of Existing 311 Systems

The detailed tables of information gathered in the survey of cities with 311 systems is contained below by the four criteria of: usability, service, operations, and system measures.

Table 2

Municipal 311 Usability Scores

		Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
a. Do transfers occur to other people in the 311 center/group or to other departments?	0=No 1=Yes	1	0	1	1	1	1	1	1	1	1	1	1	1	1
b. If transfers occur, does the citizen go back into another queue or do they get a live person?	0= Queue 1=Live	1	0	1	1	1	1	1	1	1	1	1	1	1	1
c. Are calls tracked after transfers take place?	0=No 1=Yes	0	0	1	0	0	0	0	0	0	0	0	0	0	1
d. Are citizens notified of queue position or expected wait time?	0=No 1=Yes	0	0	0	0	1	1	0	0	0	0	0	1	1	0
e. What are the hours for call in live operation	1= 24/7 0= other	M-F 7am - 11p m	24/7	M - F 6 a m - 6 p m	8am - 6pm	7am - 11p m	6am - 12p m 365 day s	24/7	M-F 7am - 11p m	7am - 11p m	M-F 7am- 7pm S-S 8am- 5pm	24/ 7	6am- 12pm 365 days	24/ 7	M-F 6am - 6pm
f. If you do not provide 24hrs/day live operation, do you have an automated	0=No 1=Yes	0	0	1	1	0	1	0	1	1	0	0	1	0	1

information providing system?															
g. Are agents multi-lingual?	0=No 1=Yes	0	1	0	0	0	1	1	1	1	0	1	1	1	0
h. Does the 311 system route for different language by (A) incoming phone #, (B) IVR Prompt, or (C) by live agent transfer?	1= A,B,C 0= other	0	1	1	0	0	1	1	1	1	0	1	1	1	1
i. What percentage of calls are unable to be addressed because of language barriers?	1= < 5% 0= other	n/a	0	n/a	0	0	n/a	0	n/a	3	< 1	n/a	n/a	0	n/a
j. Are citizens able to track service requests: (A) Call-in service number? (B) Via the web? (C) Automated IVR via phone?	1= A,B,C 0= other	1	1	1	1	1	1	1	1	1	1	0	1	1	1
Section Score (total possible= 10)		3	5	6	5	5	7	8	6	7	4	5	7	3	8

Table 3

Municipal 311 Service Scores

No = 0 Yes, provide information or address via transfer = 1 Yes, processed via 311 Call Center = 2	Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
a. Are Animal Matters addressable though the 311 non-emergency system?	1	2	2	2	2	0	2	2	2	1	1	2	0	2
b. Are Children and Youth Services addressable though the 311 non-emergency system?	0	1	1	0	2	1	1	1	1	1	0	2	1	1

c. Are Community Services addressable though the 311 non-emergency system?	0	1	1	0	2	1	1	1	1	1	0	1	1	2
d. Are Educational Issues addressable though the 311 non-emergency system?	0	0	1	0	1	1	0	1	0	1	0	1	1	1
e. Are Emergency Issues addressable though the 311 non-emergency system?	1	2	1	0	1	1	1	1	1	1	1	1	1	1
f. Are Health Issues addressable though the 311 non-emergency system?	1	1	1	0	1	1	1	1	0	1	1	1	1	2
g. Are Housing Services addressable though the 311 non-emergency system?	0	0	1	1	1	1	2	2	1	1	0	1	1	1
h. Are Legal Issues addressable though the 311 non-emergency system?	0	0	0	1	0	1	0	0	1	0	1	0	1	1
i. Are Motor Vehicle/ Transportation Issues addressable though the 311 non-emergency system?	0	0	0	0	1	1	1	2	1	1	1	1	1	1
j. Are Recreation and Park Issues addressable though the 311 non-emergency system?	1	1	0	2	2	1	2	1	1	1	0	1	1	1
k. Is Permit Information available though the 311 non-emergency system?	1	1	2	1	2	1	2	2	1	1	1	1	1	1
l. Are Public Safety Issues addressable though the 311 non-emergency system?	1	1	1	0	1	1	2	1	1	1	1	1	1	2
m. Are Sanitation Issues addressable though the 311 non-emergency system?	1	2	0	2	2	1	2	2	1	1	1	2	1	2
n. Are Senior Citizen Issues addressable though the 311 non-emergency system?	1	1	1	1	2	1	1	1	1	1	0	1	1	1

o. Are Street Repair Services addressable though the 311 non-emergency system?	1	2	2	2	2	1	2	2	2	1	1	2	1	2
p. Are Utility Issues addressable though the 311 non-emergency system?	1	2	1	0	1	1	2	2	1	1	1	1	1	2
q. Is Visitor Information available though the 311 non-emergency system?	0	1	0	1	2	1	1	2	1	1	0	1	1	2
r. Is Employment Information available though the 311 non-emergency system?	1	1	1	1	2	1	1	1	1	1	0	1	1	1
Section Score (total possible = 36)	11	19	16	14	27	17	24	25	18	17	10	21	17	26

Table 4

Municipal 311 Operations Scores

		Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
a. Are calls able to be routed to multiple locations based on geographic areas from which the calls originated?	0=No 1=Yes	0	0	0	1	1	0	0	0	0	0	0	1	0	0
b. Can call routing occur based upon time of day or day of week?	0=No 1=Yes	0	0	1	1	1	1	1	1	1	1	0	1	0	0
c. Is the 311 center database SQL in nature?	0=No 1=Yes	0	0	1	1	1	0	0	1	1	1	0	0	0	0
d. Does the 311 system include online internet submissions/ requests?	0=No 1=Yes	0	1	1	1	1	1	1	1	1	1	0	0	0	1

e. What is the length of the initial training for 311 staff?	1= 2 weeks or >	2 wks	6 wks	4-6 wks	4 wks	2-4 wks	6 wks	4-6 wks	8 wks	8 wks	10 days	n/a	4-6 wks	8 wks	2 wks
f. Does the 311 center allow for walk-in inquiries?	0=No 1=Yes	0	0	1	1	0	1	1	0	0	1	1	1	0	1
g. Do you have any methods in place to drive simple requests for information through a self-service, web channel?	0=No 1=Yes	1	1	1	1	1	0	0	1	1	0	0	0	1	1
i. Are there statistics to measure service effectiveness?	0=No 1=Yes	0	0	1	1	1	1	0	0	0	1	0	0	0	1
j. Does the 311 technology support tracking service requests through telephony or electronic channels for citizens?	0=No 1=Yes	1	0	1	0	0	0	0	1	1	1	1	1	0	0
k. Do the existing municipal service technologies include 911?	0=No 1=Yes Info only no score	1	0	0	1	1	1	1	1	1	1	1	1	1	0
l. Do the existing municipal service technologies include 411?	0=No 1=Yes Info only no score	0	0	0	0	0	0	1	0	1	0	0	0	0	0
m. Do the existing municipal service technologies include 211?	0=No 1=Yes Info only no score	0	0	0	0	0	0	1	0	1	0	0	0	0	0
n. Does the system automatically determine service areas based upon GIS information or physical address?	0=No 1=Yes	1	0	1	1	0	1	0	1	1	1	0	1	1	0
Section Score (total = 10)		5	3	9	9	7	6	5	7	7	7	2	7	3	6

Table 5

Municipal 311 System Measures Scores

		Akron OH	Austin TX	Birmingham AL	Chattanooga TN	Hampton VA	Houston TX	Louisville KY	Minneapolis MN	Orlando FL	Riverside CA	Rochester NY	San Antonio TX	San Jose CA	Somerville MA
a. What is the average wait time before speaking to 311 representative?	1= < 60 sec	0 sec	< 60 sec	30-60 sec	3 min	20 sec	n/a	1:12	12 sec	16 sec	n/a	38 sec	12 sec	32 sec	9 sec
b. What percentage of calls does an Interactive Voice Response (IVR) handle?	1= 10% or less	n/a	n/a	5-20 %	n/a	0%	n/a	n/a	0%	n/a	0%	0%	n/a	n/a	0%
c. What is the average number of calls received per agent in an 8 hour period?	1= 100 or more per agent	40	90	100	144	100-110	100-150	n/a	60-70	70	80	n/a	160	n/a	45
d. Is there a feedback system for citizens to comment on the 311 system?	0=N 1=Y es	0	0	0	1	1	1	0	1	1	0	1	1	1	1
e. If there is a feedback system, are citizens able to rate service on a particular trouble ticket request?	0=N 1=Y es	0	0	0	1	0	1	0	0	0	0	1	0	0	0
f. Does the system perform "intelligent" capture of information generated that is learned on an ongoing basis in the course of delivering information and services?	0=N 1=Y es	0	0	0	1	0	1	0	1	0	0	0	0	0	0
g. Is there is a security/privacy policy associated with the 311 system?	0=N 1=Y es	0	1	1	0	1	1	1	1	0	0	0	1	0	1
h. Does your 311 implementation service multiple municipalities, or any separate entities under a 'shared services' type arrangement?	0=N 1=Y es	0	0	0	0	0	1	1	0	1	0	0	0	0	0
Section Score (total = 8)		1	2	3	4	5	6	2	5	3	1	4	4	2	4

Appendix B:

New Jersey 2-1-1 System

Optimal opportunities for a 311 endeavor might utilize an existing infrastructure. In the State of New Jersey, 2-1-1 New Jersey call-in service is such a statewide system with the potential of incorporating services that go beyond the traditional human service focus. 211 systems have a presence in 41 states, and seventeen states, including New Jersey, offer complete statewide coverage of 211. According to the United Way, “2-1-1 is an easy to remember telephone number that connects callers to information about critical health and human services available in their community.”

Focusing on a statewide 211 New Jersey system as means of expanding services to municipalities through the existing infrastructure might well serve as an opportunity for providing basic 311 services. It might also minimize confusion among citizens as to what number to call for which particular service they need. Moreover, 2-1-1 New Jersey has already explored expanding its services to include some traditional 311 system services, and coordinating with various local municipalities for these expansions. The following includes an overview of 2-1-1 New Jersey, as well as some specific responses by the director of 2-1-1 New Jersey to the expectations, challenges and goals of a broader system.

Overview

The following summary of 2-1-1 New Jersey is taken from the website www.nj211.org. Although the system is relatively young in New Jersey, it derives from existing 211 systems throughout the country.

On February 10, 2005, New Jersey's 2-1-1 system was launched statewide. 2-1-1 is operational statewide by landline, cell phone and Internet. Eleven officially designated 2-1-1 Call Centers are united through a Virtual Private Network, utilizing broadband connections and a statewide host server for database integration. The system is handling over 150,000 inquiries. 2-1-1 is managed by the New Jersey 2-1-1 Partnership, a subsidiary of the United Ways of New Jersey which, in 2002, was designated by the Board of Public Utilities as sole administrator.

Most recently, 2-1-1 demonstrated its value during a time of crisis. 2-1-1 was used as a portal for Hurricane Katrina evacuees from the Gulf States seeking assistance with their relocation. Through 2-1-1, evacuees have been connected with Care Managers who make sure they are referred to the appropriate agencies and receive every service they require. Concurrently, 2-1-1 is an effective management tool. The system generates real time data on requests, complaints, and services. Over time, 2-1-1 data will improve the quality of programs and services by making it possible to harvest essential information on resource allocation and use it for policy decision-making and budgeting.

The foundation for 2-1-1 New Jersey to serve as a statewide citizen service resource is well established. The infrastructure of telecommunications and coordination are in place. However those services currently offered are predominately information dissemination in nature and stop short of traditional 311 services in which action can be

taken to resolve an issue. The following, also from their website, outlines services currently offered.

Basic Human Needs Resource: food banks, clothing closets, shelters, rent assistance, utility assistance.

Support for Seniors and Persons with Disabilities: adult day care, congregate meals, Meals on Wheels, respite care, home health care, transportation, homemaker services.

Support for Children, Youth and Families: childcare, after school programs, Kids Care (health insurance programs), family resource centers, summer camps and recreation programs, mentoring, tutoring, protective services.

Physical and Mental Health Resources: health insurance programs, Medicaid and Medicare, maternal health, Children's Health Insurance Program, medical information lines, crisis intervention services, support groups, counseling, drug and alcohol intervention and rehabilitation.

Employment Supports: financial assistance, job training, transportation assistance, and education programs.

2-1-1 New Jersey

The following is a summary of responses by the director of the 2-1-1 New Jersey system to questions we posed. In an effort to improve their current system, a few of their objectives currently include: adding T1 line capability to each of the call centers, and additional supervisory software that will allow for call recording and screen tracking, ultimately reinforcing their infrastructure with technology upgrades. These upgrades would allow for an increase in the "ability to measure and improve customer service,

better measure call wait times, call abandonment rates” and overall improved management of call centers.

How was the initial load of knowledgebase of the information necessary to fulfill service requests compiled?

“Deputizing” existing information and referral services as 2-1-1 Call Centers integrated locally developed databases into one common database supplemented with the State Department of Human Services database. The integrated databases were made rational and consistent by common agreement and adoption of key words and protocols for data maintenance and new entries.

What were the most effective methods of making citizens aware of the 311 service, publicity, advertising methods, etc.?

Our strategy to build awareness and call volume for 2-1-1 has been to do some paid advertising through transit ads and to look for “earned” advertising by partnering with not-for-profits and government units looking to promote a particular program and needing an easy-to-use inbound telephony fulfillment procedure.

Funding

Basic 2-1-1 New Jersey website funding is provided by New Jersey’s United Ways, and the State of New Jersey, county grants and the Verizon Foundation have generated more than \$2.2 million in resources to support those 2-1-1 operations in New Jersey.

Appendix C:

311 System Criteria Checklist

Leadership

1. Strong commitment in terms of attention and resources from Chief Executive to establish a 311 system and to set goals for system.
2. On-going attention of Chief Executive in implementing system and securing cooperation and commitment of other government agencies to implement system.
3. Hire senior people with call center experience.
4. Strong advertising campaign about 311 system and difference between 911 system.
5. Transfer call staff in each agency to 311 system.
6. Determine how to use 311 system to measure agency performance in responding and caller incidents.
7. Insure proper training of staff.

Usability

1. 24/7 access to 311 system with a live operator on the other end.
2. Clear goal for wait time from the time the IVR ends to the time a call is answered by an operator.
3. Notification to caller as to their position in the queue or expected wait time.
4. Caller receives a tracking number for incident.
5. Caller can obtain information on progress in resolving incident through tracking number.
6. Capability to transfer callers to other individuals and/or agencies that can respond to caller.
7. Provide multi-lingual assistance.

System

1. Incident based or caller based.
2. Build in excess caller capacity.
3. Select computer package which needs as little customization as possible to reduce development time and costs.
4. Select goal of broad agency coverage versus depth of information.
5. Degree of caller privacy.
6. Capability for IVR messages.
7. GIS capability.

8. Link to Homeland Security.
 9. Use of Internet for access to system and track incident by caller.
 10. Interaction of 311 and 911.
 11. Excess capacity with outside vendor for extraordinary call volume.
 12. Understand and plan to interact with other agency legacy systems.
 13. Provide callers with feedback mechanism regarding quality of 311 system.
- Support capture of information on performance of system.

Appendix D

State of Georgia 311 RFP (2006)

(Selected Text)

1. INTRODUCTION

1.1. Purpose of Procurement

The purpose of this Request for Proposal ("RFP") is to acquire the services of a qualified Offeror who will function as a Systems Integrator to provide, manage, implement, install, and maintain a statewide managed services, Multi-Channel Contact Center (MCCC) and Customer Relationship Management (CRM) solutions that is most advantageous to the state. The objective of this procurement is to ensure that Georgia can achieve its vision of providing the "**best** Customer Service of any state in the Nation," by creating a focus on customer service: making access to state services faster, friendlier, and easier with better results. The project will set statewide standards and expectations for efficient processes as well as foster superior customer service. The contract resulting from this procurement will be a Georgia Technology Authority (GTA) agency contract, available for use by authorized state entities.

GTA would like to leverage the current market capabilities of providing solutions that allow the ability to deploy a scalable, Multi-Channel Contact Management and Customer Relationship Management solution. The planned approach is to have the solution located at the GTA Data Center that is supported, managed and maintained by the Managed Service Provider. This solution will contain common contact center solutions such as ACD, IVR, e-Mail, correspondence tracking, WEB Chat etc. **solutions.** It should be an integrated, turnkey, Commercial off the Shelf (COTS) solution, which is low in cost and easy to maintain. The system will be easy to administer on a day-to-day basis by non-technical contact center supervisors and managers. The state does not desire a capitol outlay for the system. Offeror will be required to provide a solution that will be paid for on a subscription basis and the pricing will be based on a per seat, per month basis. The state does not want to own the solution; however the state may consider a lease with an option to buy if it becomes economical to the state.

The state desires the MCCC solution will be integrated with a CRM solution.

SCOPE OF PROCUREMENT

This RFP will allow qualified Offerors to propose their best possible technological solution and provide pricing for the implementation, support, management and service of a Multi-Channel Contact Center (MCCC) and Customer Relationship Management (CRM) integration services and integrated solutions. The Successful Offeror should be able to provide the integration of MCCC and CRM solutions, throughout the state. The state will select the solution that is the most advantageous to the state.

The State of Georgia currently has a total of seventeen (17) separate state managed Call Centers, utilizing different technologies ranging from ACD, IVR and Automated Attendants, to as simple solutions as Multi Line Hunt. It is desired through the procurement effort that more modern, less costly, more scalable and compatible solutions can replace the current array of diverse systems.

The recommended solution is to develop a statewide General Information Center and bring the state's (8) largest call centers to industry best practices by state fiscal year 2009. The states' largest call centers answered more than 4 million calls in Fiscal year 2005, this does not include IVR call volume. Consolidation of the existing state's call handling services and smaller call centers into one of the (8) improved State call centers, is also being considered. The Governor's Office of Customer Service (OCS) is the business owner of the GIC and will coordinate the implementation of the solution with selected State call centers. GTA will require a Managed Services Provider to provide a solution to manage the state call center infrastructure. The Managed Service provider should provide a managed system environment that encompasses all administrative functions, system monitoring functions, billing, call tracking, reporting including applications development, system integration, release management, operations management, security, and help desk.

Call Center Technologies include but are not limited to:

- **MULTI-CHANNEL CONTACT CENTER (MCCC)**

- Call tracking and routing, ACD, Web Chat, E-mail, Recorded monitoring, Random announcement, IVR, Auto Attendant, Remote work, Reporting and Administrative tools

- **CRM – CUSTOMER RELATIONSHIP MANAGEMENT**

- Is a company-wide business strategy designed to reduce costs and increase profitability by solidifying customer loyalty. True CRM brings together information from all data sources within an organization (and where appropriate, from outside the organization) to give one, holistic view of each customer in real time. This allows customer facing employees in such areas as sales, customer support, and marketing to make quick yet

informed decisions on everything from cross-selling and up selling opportunities to target marketing strategies to competitive positioning tactics.

- Once thought of as a type of software, CRM has evolved into a customer-centric philosophy that should permeate an entire organization. There are three key elements to a successful CRM initiative: people, process, and technology. The people throughout a company-from the CEO to each and every customer service rep-need to buy in to and support CRM. A company's business processes should be reengineered to bolster its CRM initiative, often from the view of, How can this process better serve the customer? Firms should select the right technology to drive these improved processes, provide the best data to the employees, and be easy enough to operate that users won't balk. If one of these three foundations is not sound, the entire CRM structure will crumble.

1.2. DEFINITION OF TERMS

AA – Automated Attendant

Agency – office, agency, department, board, bureau, commission, institution, authority, or other entity of the State of Georgia

ADA – The Americans with Disability Act

CTI – Computer Telephony Integration

DOAS – Department of Administrative Services

GTA – Georgia Technology Authority

Georgia Offeror Manual – Information for conducting business with the State of Georgia is located at:
http://statepurchasing.doas.georgia.gov/vgn/images/portal/cit_11783501/37106725Offerormanual.pdf.

IM –Instant Messaging

IVR – Interactive Voice Response

MOS – Mean Opinion Score

MTBF – Mean Time between Failures

MTTR – Mean Time to Repair

OCGA - Official Code of Georgia Annotated (State Statute)

OCS – Governor’s Office of Customer Service

Offeror – Respondent to this Request for Proposals

Outsourced Managed – Vendor located systems and managed services

QoS – Quality of Service

RFP - Request for Proposals

SLA – Service Level Agreement

TDM – Time Division Multiplexing

Teleworking – See Georgia Merit System policy for definition.

VoIP – Voice over Internet Protocol

VRU – Voice Response Unit

1.3. CONTRACT TERM

The initial contract term is from the date of contract award through June 30, 2007, with four (4) additional one (1) year options to renew. Renewal terms will be based on the Fiscal Year period beginning July 1 and ending June 30. Renewal will depend upon funding and Contractor performance. Contract award will be by the issuance of a Notice of Award document. Renewal will be accomplished through the issuance of an Amendment.

2. BACKGROUND

Governor Sonny Perdue established the Commission for a New Georgia (CNG) to engage a public/private partnership in achieving his primary goal for Georgia to become the nation's best-managed state. A key finding was the desire to improve the level of customer service Georgians experience when dealing with state government. The Customer Service Task Force developed a vision statement: Georgia will have “the Best Customer Service of any State in America.” To realize this vision, three areas of emphasis are targeted to realize this vision: ease of access to services; speed of service; and friendliness of interactions. Fundamental components of this initiative include improving overall customer service by promoting a strong customer-focused culture in State government that is continuously improving its customer-facing processes. It was also determined that the customer service initiative will address the need for a general information center to provide a single point of entry for all State services and serve as a ‘front door’ to State government to minimize the frequency of mishandled or transferred calls. The initiative includes the development of a statewide web-based knowledge tool providing immediate and proven answers to

frequently asked questions, expanded communication channels between the State and its customers (web, IM, email, self-service, etc.), and the improvement of existing State call centers to industry performance standards. Together, these components will facilitate **faster, friendlier, and easier** access to State services.

Expected Benefits:

Shared benefits for the State resulting from implementation of the General Information Center (GIC) and consolidation/improvement of state staffed call centers:

- Easier access to state services for citizens
- Lower cost per call and less variable service levels compared to existing call handling operations
- Streamlined customer-staff interaction by blending all media channels over the same infrastructure
- Lower maintenance/support costs for a single solution
- Investment protection for existing systems
- One set of business rules for Call Center solution applications
- A common set of standards-based IT tools and computer-based training
- Centralized comprehensive reporting and analytics
- Savings from shifting toll calls to local calls (VoIP)
- Location independence (VoIP creates an environment where remote workers can be utilized)
- Leverage technology across the state regardless of call center size
- Rapid deployment of enhancements to multiple sites (new sites can be easily added)

Expected Rollout:

Milestone	Target Date	Estimated Call Volume	Estimated seats
Implement in GIC	Q1 07	50K / month	40
Implement in Agency 1	Q1 07	110K / month	60
Implement in Agency 2	Q2 07	60K / month	80
Implement in Agency 3	Q2 07	40K / month	110
Implement in Agency 4-8	TBD	TBD	TBD

* "Estimated Seats & Estimated Call Volume" figures are used for planning purposes only

GEORGIA TECHNOLOGY AUTHORITY NORTH ATLANTA DATA CENTER (NADC)

(Please refer to Appendix G for the GTA NADC Overview information)

3. TECHNICAL PROPOSAL REQUIREMENTS

This section identifies all requirements, which should be met by the proposal. All requirements should be available upon receipt of the proposal. Do not include unreleased or optional features in this section. It is our intent to evaluate only those features listed in Section 3 of your proposal. Responses should indicate compliance and a brief description of how the Offeror will comply.

3.1 GENERAL REQUIREMENTS

For each of the following, describe in detail how the Offeror's solution meets this requirement using the Appendix H, Technical Requirements Catalogue

3.2 MANAGED SERVICES PROVIDER

GTA will require, a Managed Services provider to provide solutions to manage the state call center infrastructure. The Managed Services provider will provide a managed system environment that encompasses all administrative functions, system monitoring functions, billing, call tracking, reporting including applications development, system integration, release management, operations management, security, and help desk.

3.3 CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customer Relationship Management (CRM) is an essential tool for the states focus on customer service. In the future, the state may require more CRM than MCCC seats to integrate the back-office and contact center services. In addition, agencies without contact centers may be interested in deploying CRM solutions only. This may be necessary to assist with the routing of request to agencies that do not have call centers, but may be responsible for resolving constituents' problems or request. As a part of the Offeror's proposed solution, the state expects the offeror to provide a CRM system. The state does not currently own a CRM system.

Customer Relationship Management (CRM) includes the methodologies, strategies, software, and web-based capabilities that help organize and manage customer's requests. It is the collection and distribution of data entered by the call center agents and distributed to areas of the business by rules defined within the CRM system. The general purpose of CRM is to enable call center agents to capture information about the constituent's request using customized fields.

Major areas of CRM focus on service automated processes, personal information gathering and processing, and self-service. It attempts to integrate and automate the various customer serving processes.

The requirement is for the Offeror to propose a CRM system that will assist in improving customer service and managing service request. The state's initial CRM needs are simplistic, similar to that of a simple trouble tracking system. Initial information gathered from callers would typically consist of such information as zip code, email, name, phone numbers and a simple description of the problem or request. The CRM solution should have the sophistication and flexibility to handle a diverse set of needs over time

3.4 AUTOMATIC CALL DISTRIBUTION (ACD)

The specialized telephone system and software used in incoming call centers. It is a programmable device that automatically answers calls, queues calls, distributes calls to agents, plays delay announcements to callers and provides real-time and historical reports on these activities. May be a stand-alone system, or ACD capability built into a CO, network or PBX.

3.5 QUALITY MONITORING AND RECORDING

The state expects to use a Quality Monitoring and Recording solution for training and quality purposes. It is anticipated that only ten percent of total seats would require concurrent monitoring at any given time. Please ensure the solution is sized based on this number.

3.6 CALLBACK MESSAGING

The state expects to use Call Back Messaging in order to give the caller an option of leaving a message requesting to be contacted at a later date and time based on the telephone left.

3.7 MULTI CHANNEL CONTACT CENTER ROUTING

Routes contacts (phone calls, emails, faxes, and web chat/collaboration) to the most appropriate representative.

3.8 HOME AGENT

Using telecommunications systems to work from home or other locations instead of at the organization's premises.

3.9 AUTOMATED ATTENDANT

A voice processing capability that automates the attendant function. The system prompts callers to respond to choices (e.g., press one for this, two for that^f) and then coordinates with the ACD to send callers to specific destinations. This function can reside in an on-site system or in the network

3.10 INDUSTRY STANDARDS

The proposed solution should meet current industry software and hardware standards.

3.11 SOFT PHONE

An [application](#) that enables a [desktop](#), [laptop](#) or [workstation computer](#) to function as a telephone via [Voice over IP](#) technology that uses the cables of a computer [network](#) as the medium for transmitting telephone service. Equipped with a headset or a hand-held device, and using the numbers on the [keyboard](#) to dial, the computer with soft phone [software](#) can perform the full range of telephone features available through traditional systems, such as [teleconferencing](#) and call forwarding. Soft phones typically make use of the computer's sound card for audio input and output.

3.12 IVR – INTERACTIVE VOICE RESPONSE

Interactive Voice Response, a [telephony technology](#) in which someone uses a touch-tone telephone to interact with a [database](#) to acquire information from or enter [data](#) into the database. IVR technology does not require human interaction over the telephone as the user's interaction with the database is predetermined by what the IVR system will allow the user access to. For example, banks and credit card companies use IVR systems so that their customers can receive up-to-date account information instantly and easily without having to speak directly to a person. IVR technology is also used to gather information, as in the case of telephone surveys in which the user is prompted to answer questions by pushing the numbers on a touch-tone telephone.

3.13 WEB CHAT

To participate in a synchronous exchange of remarks with one or more people over a computer network or the World Wide Web.

3.14 E-MAIL

Messages transmitted by computer over communications networks. The messages can be notes entered from an individual keyboard or electronic files stored in the computer or on a computer disk. They can be sent to one user at a time or broadcast to several users at the same time and usually take only a few minutes to arrive at their destination.

3.15 FAX

Communication of a printed page between remote locations.

3.16 ADMINISTRATION TOOLS

Software that allows either on-site or remote administering of a solution.

3.17 REPORTING

Ability to gather data and report on that data from a Real-Time and Historical perspective as it relates to agent performance / productivity on an hourly, daily, weekly, monthly or yearly basis.

3.18 SECURITY

Please see the attached Technical Requirements Catalogue

3.19 ALARMS

Please see the attached Technical Requirements Catalogue

3.20 ARCHITECTURE

The State desires the vendor to propose the best solution both from a performance and cost perspective. This solution may be located at the vendor(s) location –and/or – at the State Data Center. Regardless of the location, the state expects the vendor to incorporate all associated costs, to include telecom costs, et.al. in the per seat cost. The solution should be capable of delivering calls that are the most cost effective to the state using the vendors chosen location and delivering those calls back to the state network when required. The majority of the calls coming into State Agencies are local calls to each regional area. Calls terminating into State Agency Call Centers are using local numbers and in some cases, toll free numbers.

3.21 BUSINESS CONTINUITY AND DISASTER RECOVERY

The State of Georgia is faced, at times, with handling emergencies such as hurricanes, floods, tornados, and special events. The emergencies often require bringing up capacity in a short amount of time. The state is interested in knowing how fast the vendor can add extra capacity to handle an influx of unanticipated calls. This should include not only the ability for the state to add more agents but agreements that the vendor may have with service providers to handle emergency routing of calls

Appendix E

Software Vendors

Best” 311 Software Vendors

Product	Company	Users	URL
Sieble	Oracle	NYC, Denver, Atlanta	http://www.oracle.com/newsletters/information-insight/customer-relationship-management/dec-06/localities-crm.html
Hansen Technologies	Hansen Technologies	Louisville	http://www.hansen.com/solutions/crm-cis-bill/cc-customer-service.asp
Customer Service Request System	Motorola	Baltimore, Chicago	http://www.motorola.com/governmentandenterprise/il/en-us/public/functions/browse/solution/browse/solution.aspx?navigationpath=id_803i/id_2254i/id_2488i
Lagan CRM	Lagan	San Francisco, Minneapolis, Yonkers, Hartford	http://www.lagan.com/usa/Products/LocalGovernmentCRM311/tabid/256/Default.aspx

Georgia Offeror's Conference Participants
Call conducted by the State Purchasing Office in the Department of
Administrative Services
November 2, 2006

Type of Vendor	Vendor Name
Software	Affiliated Computer Services (ACS)
Consultant	Performant
Software (works with UCN)	RightNow Technologies
Telephony	UCN
Consultant	Eloyalty
State Agency	Georgia Technology Agency
Software	Oracle
Telephony	Avaya
Telephony	Verizon
Telephony	Nortel
Telephony	Verizon Business
Consultant	Unisys
State Agency	Georgia Department of Administrative Services
Software	Service Check
Consultant	Tier 1 Innovation
Consultant	Bearing Point
Consultant	Zuvata
Telephony	Quest
Consultant	Perimeter Technology