A Review of 311 in New York City

Charis Elizabeth Idicheria
Columbia University

Dr. Alexander Schellong
National Center for Digital Government, UMass

Prof. Dr. Jobst Fiedler
Hertie School of Governance

Matthias Kammer, Marie-Therese Huppertz, Horst Westerfeld (Editors)
Table of Contents

Introduction ................................................................. 4

I. How 311 Works.............................................................. 7
   1.1 Overview.................................................................... 7
   1.2 Call Process............................................................ 7
   1.3 Knowledge Management System/Database......................... 9
   1.4 Web presence of 311.................................................. 11
   1.5 Additional Mobile Capabilities..................................... 12
   1.6 Languages.................................................................. 13
   1.7 Complex service requests .......................................... 14

II Enhanced 311 ................................................................. 14
   2.1 Overview.................................................................... 14
   2.2 Call Process............................................................ 15

III 311 as a two-way communication channel ..................... 18
   3.1 Notify NYC.............................................................. 18
   3.2 Social Media............................................................ 19
   3.3 Communities............................................................ 20

IV Recent Projects............................................................. 21
   4.1 NYC Big Apps........................................................... 21
   4.2 DataMine................................................................. 24

V. Statistics on Calls .......................................................... 26
   5.1 311 Call Volume......................................................... 26
   5.2 Types of 311 Calls..................................................... 27
   5.3 E311 Call Volume...................................................... 29
   5.4 Types of e311 Calls.................................................... 30

VI Budget............................................................................ 31
VII. Policy Implications .................................................. 32
VIII. Reaction of the Agencies ................................. 34
  8.1 Historical Overview ......................................................... 34
  8.2 Snapshot: Police Department ........................................ 36
  8.3 Snapshot: Fire Department ............................................. 37
IX. Customer Service .................................................. 38
X. Performance Indicators and Tracking .................. 39
  10.1 Central Performance Tracking .................................... 39
  10.2 Local Law 47 ................................................................. 41
XI. Future Prospects ................................................... 43
  11.1 Challenges ................................................................. 43
  11.2 In the Pipeline ............................................................ 45
Lessons for D115 ....................................................... 46
Introduction

Single non-emergency numbers have received increased attention by governments around the globe. For example, 13 out of 27 European Member States have implemented single non-emergency number contact centers, and others are in the process of doing so.¹ It was a visit to New York City’s 311 non-emergency solution in 2006, which inspired the development of the D115 project in Germany. The project recently ended its pilot and entered regular operations. More and more German counties and municipalities are joining the D115 non-emergency government phone service network.

This study returns to the City of New York to see whether more lessons can be drawn for D115 from its development over the last three years. In evaluating 311 in New York City for D115, it is important to explore not only the basic mechanics and statistics relating to the infrastructure and resources but also the issues surrounding policy, city management and service delivery that have accompanied the evolution of 311.²

311 was formally established for the City of New York in March 2003. Prior to its inception, citizen requests and queries were processed by 40 agency help lines and the Mayor’s Action Center. Both the transition and the

¹ Schuppan et. al. (2011). Public Service Numbers in the European Union, ifG.CC, Potsdam, Germany
² We would like to thank all members of the New York City government and NGO’s who made a contribution to this study either by participating in the interviews or by making introduction to further experts.
A Review of 311 in New York City

operations of 311 thereafter were placed under the Department of Information, Technology and Telecommunications (DoITT)\(^5\). The integration of all 40 agencies into a single call centre under the 311 system had an uncommonly short implementation period of one year\(^4\). Accenture, a consultancy, was chosen as the system integrator and Siebel, a software company, provided the Customer Relationship Management (CRM) software\(^5\). Mayor Bloomberg’s firm support has driven both the inception and various innovations in 311. Today 311 in New York is in all ways the largest non-emergency city service system in the US.

This report will first present a general overview of 311 functions and processes. Of special interest is the growing role of social services in enhanced 311 (e311) as well as ongoing projects to improve 311. The next section presents data on call volume and top issues in 311, as well as e311. Finally, the report turns to a more in-depth analysis of 311 based on the detailed overview provided in the preceding sections. This involves looking at composite issues such as policy implications, and the reaction and perspective of the agencies that were implicated in 311. Additionally, it looks at how

---


customer satisfaction and performance management are gauged. The report ends with recommendations for D115 based on the findings of the preceding analysis.
I. How 311 Works

1.1 Overview
311 runs on a knowledge database that houses over 7000 pieces of information on over 3600 services from various city agencies and non-profit organizations. 311 services are available in 180 languages. Calls are answered 24 hours a day, 365 days of the year. Calls can also be made via skype, an online communication provider recently acquired by Microsoft, which is an asset for customers who might be calling from remote locations without having to incur calling charges. In sum, 311 is “New York City’s online website and phone number for government information and non-emergency services”.

1.2 Call Process
The Interactive Voice Response System (IVR) is the first line of reference that faces a caller. In its early stages the mayoral mandate clearly instructed that calls needed to be handled by an operator and not an IVR. This was the case for a little over the first three years of operation. Since then, DoITT has added an IVR feature that has changed the way in which calls are handled. The IVR is recognized to be a ‘thin-layer’ in order to maintain a

---

simple response to a citizen’s service request. It was added and sustained for two main reasons. Firstly, it gives citizens the option to receive an immediate, up-front message should they prefer not to speak with a representative. Secondly, the IVR has proved to be a resourceful way of meeting a significant proportion of total calls\(^9\) and therefore controlling the human / budget resources needed.

When it first started, the IVR resolved approximately 20-25% of total calls concerning alternative street parking. Since then it has grown to address almost 50% of total calls. The IVR is managed in-house with the help of a programmer who maintains and enlarges the system as needed. The IVR is available in the six most frequently requested languages, which has further helped to resolve many calls at this level\(^10\).

If the call is not resolved through the IVR, it passes on to the Call Center Representative (CCR). The CCR uses the Customer Service Management System (CSMS) and types in keywords that prompt the relevant information from the database. This process helps the CCR to identify the specific need as well as determine the next step\(^11\).


\(^10\) Ibid

Consequently, calls fall into three categories. The first is one in which the CCR is able to provide the customer with the exact information requested. Such calls are approximately 40% of the total call volume. The second category has a call volume of about 26% and involves transferring the call to an external agency. Some agencies, such as the department of finance maintained their own Call Centers in the early years of operation for reasons such as billing functions and the private nature of the information processed. Steps - such as integrating the Department of Finance into the 311 system in the summer of 2009 - have been taken to curtail the

---

incidence of these types of calls. As call volume in the second category is now decreasing owing to these measures, the third category, in which the 311 CCR processes a service request, is rising from its current value of 24%\textsuperscript{13}.

### 1.3 Knowledge Management System/Database\textsuperscript{14}

The Oracle/Siebel (CSMS) knowledge management system houses information on over 3600 services and processes, which is an increase of 450% within a two year timeframe. 80-90% of the content is stable and it is the narrow remainder that is usually updated.

A content team of 20 people oversees the system. Five of these are responsible for managing the actual language and content while the other 15 liaise with city agencies. Those that face the agencies are responsible for updating the content on a daily basis on a variety of fronts. These include obtaining information that customers have requested but is not available in the knowledge management system. Conversely, the agencies also directly provide updated information to the 15 designated points of contact. Both types of information are then put into a standard format in the knowledge management system\textsuperscript{15}. A quality assurance team frequently listens to the calls in order to monitor whether the information is relevant and intelligible to the audience. If a piece of information is too complex,


\textsuperscript{14} Terms used interchangeably

the content is adjusted to become more understandable\textsuperscript{16}.

The knowledge management system was first built for the Call Center function of 311. Joe Morrisroe, Executive Director of DoITT, identifies this as a weakness in the initial implementation strategy, since it limited public access to these resources via just the call function. The migration of this information to a 311 website that customers could access anytime began in 2007. To this end, Morrisroe advises the build-up of a web-based knowledge management system that can be accessed via the Call Center and the website at early stages of implementation.

\textbf{1.4 Web presence of 311}

The 311 website was first launched in January of 2008 and offers a wide range of options from providing information to viewing the status of existing service requests. Almost 60\% of the service requests are now processed online. Users also have the possibility to visualize service requests on a map. 311 online receives approximately 2000 unique visitors a week. It is a fairly new initiative, and is thus intended to grow as a source of information in time and with greater publicity\textsuperscript{17}.

The transfer of information on the 3600+ services to the website was handled by the 20-person content team that oversees the CSMS. This process involved converting the information into the US standard that is geared towards the average web reader and is simpler than the format

\textsuperscript{16} ibid
\textsuperscript{17} ibid
provided to CCRs to answer calls. The conversion process was completed in March of 2009.\textsuperscript{18}

Figure 2: Screenshot of the 311 website\textsuperscript{19}

1.5 Additional Mobile Capabilities
Beginning in September of 2008, customers were able to send pictures to log a service request. Customers can send pictures on potholes or videos of vandalism and graffiti, for example, to report crime. Popularity for this function is projected to rise as the use of smart phones is becomes more prevalent. A recently developed iPhone

\textsuperscript{18} ibid

\textsuperscript{19} NYC 311 Homepage. (2009). Retrieved August 2011
application has also increased the visibility of 311 among smart phone users catering to the needs of the mobile citizen\textsuperscript{20}.

**Figure 3: Official NYC 311 iPhone App**

![Official NYC 311 iPhone App](image)

### 1.6 Languages
Almost 95% of the calls received are in English. All other languages do not exceed 5% with Spanish being the second most frequently requested language. English and Spanish services are provided in-house. If a caller requests another language, the CCR connects with an external live operator: a translation vendor who speaks a minimum of 5 languages. If the translation vendor is not skilled in the requested language, he/she will transfer the call to a colleague within his/her company to provide the needed translation assistance. This is an

\textsuperscript{20} Litt, S. (2009, November). DoITT Interview on Social Media and Networking. (J. Fiedler, & C. Idicheria, Interviewers) New York, NY.
uncommonly long call, with three people present: the customer, the CCR and the translation vendor. With 180 languages potentially requested, 311 only experiences between 80-100 different language requests annually which is 0.00001% of the total call volume\textsuperscript{21}.

1.7 Complex service requests
Apart from specialized language services, 311 has two tiers of trained CCR to respond to diverse and complex requests. This division exists because of technological constraints that were carried over from the early stages of implementation. Five agencies had ‘legacy systems’, which are deeply entrenched in the business functions of each agency, making them difficult to replace. Each of the 450+ staff in 311 are trained in at least 2 of the legacy systems, which occupy about 12% of the total call volume\textsuperscript{22}. A workaround solution concerning these legacy systems is still in process as it is exceedingly challenging to overcome\textsuperscript{23}.

II Enhanced 311

2.1 Overview
Another new aspect relevant to the two-tier arrangement is enhanced 311 (e311). Having integrated


the city agencies, the idea of collaborating with social service offerings was first pioneered in the Spring of 2006. In March of 2007 this vision expanded to incorporate all 211 calls – calls for health and human services – within 311. This “blended model” of ‘211 at 311’ was crystallized in the Spring of 2007. It was done with the intent of leveraging the economies of scale and central networking advantages of 311 for non-profit organizations and other social services.

In the Spring of 2008, e311 applied for accreditation from the Alliance of Informational and Referral Specialists (AIRS), which is still pending at the end of 2009. While there is an ongoing search for a better technological solution to support these processes, e311 launched its information for the services under its directory on the website in the summer of 2008.

Citizens can retrieve information on social services and non-profit organizations in the e311 system by:

- Accessing the website
- Calling 311
- Calling 211 which is automatically re-routed to 311

2.2 Call Process
As is the case with other calls in 311, if the call passes through the IVR, the CCR will determine one of several

courses of action after hearing the customer’s request, and processing the keywords in the database. If the request is beyond the expertise of the tier 1 CCR, the CCR can:

1. Transfer the call to the Information and Referral (I & R) Specialists Unit, which would be tier 2. This consists of a team of 50 CCR at the 311 Call Center with various social science backgrounds. They are better equipped to direct the customer to either the relevant agency or an NGO.
2. Transfer the call directly to the relevant city agency.
3. Transfer the call directly to the relevant state agency.
4. Transfer the call to NGOs that accept call transfers.
5. Provide the telephone number for NGOs that do not accept direct transfers.

These various channels are then free to transfer the call to the entities that accept direct calls in the capacity detailed in the list above. Entities can also always transfer the call back to the I & R specialist27.

The value of the I & R specialist unit is critical, since most social queries are not singular and tend to be interrelated. The knowledge management system will prompt the I & R specialist to inquire about the customer’s interest in services that are usually correlated. The I & R specialist will then inform the customer of his/her options and provide a number of ways to address each service concern. For example, The

---

I & R specialist can directly transfer the customer for the first request, provide the phone number for the second, and point to the website for the third request. While the information on the services is available in the knowledge management system, the I & R will determine the means and order of contact that the customer will avail in each service scenario. This function of 311 fulfils its vision to act as a multi-channel, multi-access hub, providing citizens with a variety of ways to address diverse service needs.

III 311 as a two-way communication channel

3.1 Notify NYC
In its early years of operation, 311 was geared towards improving the system and the enhancement of agency functions. In recent years, operations and innovations have shifted to become more customer focused. Experience also brought with it new ways on how the information generated from 311 could be pre-emptively sent to interested parties based on a subscription model. This initiative is called “Notify NYC”.

Customers sign up to be notified in certain fields based on neighbourhood perimeters of their choice. They also specify the means of notification such as an email or an

---

SMS. As of November 2009, over 10,000 citizens had signed up for “Notify NYC”. This channel serves to tailor outbound information to the customer’s needs. In times of unusual activity or crisis, ranging from the swine flu outbreak to delays in subway, 311 can push information to subscribers, mitigating potential call volume and costs, as well as increasing responsiveness\textsuperscript{30}.

3.2 Social Media

Another innovation to promote a ‘multi-channel, multi-access’ approach in 311 is the advance of social media. Using social networking sites such as facebook and twitter, a micro-blogging service provider, are two such examples. Using the logic of ‘Notify NYC’, information is pushed out via NYC based on the ‘rhythm of the city’\textsuperscript{31}. As of February 2012, NYC 311 has 25,518 followers on twitter (www.twitter.com/311nyc). The main purpose of this channel is to mitigate call volume for information that can readily be made available to the public. In the instance that a query cannot be answered via twitter, the customer can link directly to the 311 website from the twitter page\textsuperscript{32}.

One of the initial concerns about providing outlets via social media was the challenge of addressing negative or exaggerated commentaries. Some of this is alleviated by


the 150+ student interns at 311 that are well versed in this form of social media, as well as in the language surrounding this culture\textsuperscript{33}.

\textbf{3.3 Communities}

311 is re-orienting itself from being a ‘controller’ of information to a ‘host’. In the spirit of this movement 311 envisions building communities that coalesce around common issues\textsuperscript{34}. In the endeavour to create support for people who were trying to give up smoking, with the department of health being a significant advocate to this end, it was found that interested parties began to create communities to support one another. While this was an unintended consequence, it was an invaluable practical lesson\textsuperscript{35}. 311 can make use of it extensive networks to facilitate the creation of other such communities.


\textsuperscript{34} ibid

\textsuperscript{35} Litt, S. (2009, November). DoITT Interview on Social Media and Networking. (J. Fiedler, & C. Idicheria, Interviewers) New York, NY.
IV Recent Projects

4.1 NYC Big Apps
Continuing in the vein of increasing public accessibility and involvement with how 311 information is stored and presented, 311 launched a competition called NYC Big Apps in late 2009. Based on Vivek Kundra’s, the former CIO of D.C., Apps for Democracy contest in Washington D.C., 311 initiated a competition to create applications that broaden the fundamental goals of 311 and city government: transparency, accessibility and accountability. The competition was initiated by New York’s Economic Development Organization and gave interested software developers access to 170 data sets from 30 city agencies such as results from restaurant inspections, traffic data or schedules. This enables citizens to not only be recipients of information but also become part of the production process. For minimal costs it harnesses the software capabilities of specialists with some guidance on areas that are of most concern in order to avoid extreme concentration in a single area.

The top three winners out of over a 100 submissions were:

- **WayFinder NYC**: An application designed for smartphones powered by Google’s Android operating system which allows users to find the closest subway entrance. It uses an approach known as augmented reality, overlaying subway line symbols on a live view through the phone’s camera.
- **Taxihack**: A web tool allowing people to post comments on individual taxis and their drivers via email or twitter.
- **Big Apple Ed**: A Web-based guide offering detailed profiles, reviews and information about the city’s network of public schools.

The city awarded a total of USD 20,000 in prizes. This amount was doubled and split among 14 winning apps in 2011.

Along these lines, a group of people developed “Commons”. It is a mobile based game for civic engagement inspired by how the City of New York utilized citizen reporting from 311, and the impact of SeeClickFix on public managers. Citizens can report problems, make recommendations and vote on solutions. They receive points and can unlock virtual rewards. The “Commons” founders hope that their mobile application helps local government 1) receive accurate and timely information, 2) identify priority

---

areas, 3) efficiently allocate resources, and, ultimately, 4) demonstrate accountability to its citizens by using their data in real-time. At the same time it should help make citizens aware of their community and individual reporting activities.

**Figure 5: NYC BigApps Website**
4.2 DataMine
Data from 311 and 40 other organizations is made public through the DataMine website. While data is released to the public, there is no way that the original information housed within the knowledge management system can be altered, insuring against potential vandalism, which has also not been a major cause for concern in the course of the competition. Much of the data used in the NYC Big Apps competition also comes from these datasets.

DataMine is an answer to the global move opening up data from government or scientific research to the public in machine-readable format. Opening up data promises to create public value. Mobile phone applications such as those described earlier are just one example.

---

Figure 6: NYC DataMine Website
V. Statistics on Calls

5.1 311 Call Volume
311 gets approximately 50,000 callers a day. In January of 2010, 311 recorded 93 million calls since its inception. In the initial years (2003-2005) annual call volume increased exponentially causing the percentage of calls answered less than 30 seconds to fall from 99% to 63% by the end of the same period. With the rate of growth levelling off in subsequent years, the response rate under 30 seconds increased to 90% in 2008\(^4\).

---

While the types of calls fluctuate based on several factors, they are tracked regularly and have distinct trends. Monthly reports that inform the public of metrics regarding frequency of calls, call trends, performance levels and the number and types of inquiries handled are published on the website of the Mayor’s Office of Operations.45

5.2 Types of 311 Calls
The types of concerns have remained pretty consistent over the years, allowing 311 to provide targeted ways of dealing with specific complaints vis-à-vis the IVR for example. The relative static nature of the information


45 See section on ‘Performance Indicators and Tracking’
further helps reinforce the website as a good substitute for common issues that have a high calling frequency.

Table 1: Names and Incidence of Top 10 Citywide Call Inquiries

<table>
<thead>
<tr>
<th>Top 10 Citywide 311 Inquiries in Fiscal 2009:</th>
<th>Total</th>
<th>% of All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise (all inquiries)</td>
<td>358,990</td>
<td>1.9%</td>
</tr>
<tr>
<td>Heat Complaint - Inadequate Heat</td>
<td>218,871</td>
<td>1.2%</td>
</tr>
<tr>
<td>Find a Police Precinct or Police Service Area (PSA)</td>
<td>188,590</td>
<td>1.0%</td>
</tr>
<tr>
<td>Landlord Complaint - Maintenance</td>
<td>168,354</td>
<td>0.9%</td>
</tr>
<tr>
<td>Schedule a Plan Examiner Appointment</td>
<td>144,007</td>
<td>0.8%</td>
</tr>
<tr>
<td>Bus or Subway Information</td>
<td>137,474</td>
<td>0.7%</td>
</tr>
<tr>
<td>Alternate Side Parking Information</td>
<td>114,054</td>
<td>0.6%</td>
</tr>
<tr>
<td>Missing Vehicle - Towed</td>
<td>100,875</td>
<td>0.5%</td>
</tr>
<tr>
<td>Bulk Items Disposal</td>
<td>99,321</td>
<td>0.5%</td>
</tr>
<tr>
<td>Parking Violation - Ticket Assistance</td>
<td>86,781</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

5.3 E311 Call Volume

E311 is experiencing a significant rise in calls, which is to be expected as it becomes more established and grows in the number of services offerings. The graph below shows the call volume till mid-2009, indicating that the total call volume should exceed 2008 levels at the current rate.

Figure 8: Annual e311 Call Volume

---

5.4 Types of e311 Calls
As is the case for general 311 calls, looking at the call breakdown in the figure below provides critical information on citizen concerns that can be used to inform policy decisions and alert the city of specific social service demands.

Figure 9: e311 inquiries breakdown

[Diagram showing call breakdown]

---

VI Budget

Between the years 2003-2008, the 311 annual budget steadily increased and has since then decreased in 2009. Capital funds that have been allocated to 311 from 2002-2007 amount to $96M. An additional $76M is projected to be spent till 2011 in capital funds. In 2010, reported expenditures of $46.5 million and a total of 397 personnel. The latter is supposed to decrease to 325 employees in 2012.

Figure 10: 311 Annual Budget

---


In the first year of operation, 62 full-time staff and 133 part-time staff were transferred from the individual agency Call Centers to DoITT. Since then staffing and the budget have increased concomitant to the rise in call volume. But, as the graph indicates, the rise in funds has been capped, particularly in this season of retrenchment. Budget limitations have induced 311 to re-examine its priorities. One example of this is seen in how the rate of responses answered less than 30 seconds are projected to fall to 80% in 2010 as opposed to 90% in 2008. While response rate is an important metric for 311, the ability to continue to serve citizens in a time of retrenchment given the budgetary constraints led to a scaling down of the response time.

VII. Policy Implications

Perhaps the most interesting use of the statistics mentioned above is how they shape public policy in New York City. On a primary level, call volume acts as a live indicator of the ‘rhythm of the city’. Mayor Bloomberg’s bullpen contains a large screen monitor, which displays the real-time call volume of the day. If there is an unusual spike in the volume, above the average 50,000 calls, the mayor’s aides will investigate to see if there is a concern that needs policy action. The ‘rhythm of the city’ is also used to determine what information needs to be pushed out vis-à-vis the many
multi-directional channels for citizens who have subscribed to them\textsuperscript{51}.

On a broader scale, metrics have also alerted the city of services necessary during times metrics have also alerted the city of services necessary in times of crises. For example, the 8 months spanning from October of 2008 till May of 2009 – a period when the economic crisis was at its worst – feature among the top 10 months in terms of call volume in the entire history of 311. This reinforces the value of 311 as a viable tool in understanding public policy. In gauging what citizens were demanding, the city was able to direct resources to agencies and advise citizens through a number of public channels\textsuperscript{52}. While there are no huge examples of activists overwhelming 311 to push an interest, this could credibly be the case in the future\textsuperscript{53}. In this regard, 311 can come to monitor both intentional and disjointed social trends.


\textsuperscript{52} ibid

VIII. Reaction of the Agencies

8.1 Historical Overview
Several key informants both in the agencies and the central DoITT team agree that the buy-in of the agencies is primarily attributable to the strong mayoral mandate steering 311. Despite this central backing, it took a few years of sustained, visible benefits for the agencies to support the migration of their Call Center functions to a central 311 hub.

Some of the initial agency hesitation is related to the concern that 311 operators would be ill equipped to answer complex service requests\textsuperscript{54}. An argument common to non-emergency government service number projects in other countries. The two-tier system as well as the migration of their own Call Center representatives to 311 has curbed this worry. Firstly 311 has decreased the number of informational calls that an agency has to attend to\textsuperscript{55}. The IVR and tier 1 CCR shoulder these types of calls, freeing the agency to concentrate more of its resources on other functions and responsibilities. William Eimicke, Deputy Commissioner for Strategic Policy and Planning in the Fire Department (FD) notes that many basic questions are answered on the website,

\textsuperscript{54} Chaffe, L. (2009, November). Interview on e311. (J. Fiedler, A. Schellong, & C. Idicheria, Interviewers) New York City, NY.

\textsuperscript{55} Chaffe, L. (2009, November). Interview on e311. (J. Fiedler, A. Schellong, & C. Idicheria, Interviewers) New York City, NY.
which has also relieved the FD of some of these requests\textsuperscript{56}.

Furthermore, the 2 tier system as well as the set-up of e311 addresses agency misgivings on the expertise of CCR 311 to a certain extent. Tier 2 representatives are able to answer several complex service requests. Again, this information is closely reviewed and updated by the content team working in collaboration with the agencies. Regarding complex social services requests, the I & R specialist refers the customer to the agency, meaning that the control over such cases still rests primarily with the identified agency\textsuperscript{57}.

Another major discrepancy between the former agency Call Centers and 311 had to do with hours of operation. On a positive note, customers were able to access information and create service requests all day, every day, as opposed to the agency’s standard hours of operation. On the other hand, agencies were flooded with a larger number of requests than they were accustomed to, which proved to be a tough learning curve in the initial stages of implementation. In subsequent years agencies have been able to better accommodate these rising requests. Moreover, 311 information can be used as a basis to request additional funding and resources\textsuperscript{58}.

\textsuperscript{57} Chaffe, L. (2009, November). Interview on e311. (J. Fiedler, A. Schellong, & C. Idicheria, Interviewers) New York City, NY.
8.2 Snapshot: Police Department
A significant milestone in agency perceptions has to do with the Police Department (PD). Typically credited as an agency that is resistant to such channels, their gradual use of the system paved the way for other agencies to follow suit and take note of the service benefits of 311. The PD began to use 311 to demonstrate annual successes to the public, and have also experienced growing call volumes in their area50.

Figure 11: 311 calls related to the Police Department60

---


8.3 Snapshot: Fire Department

Another agency that has benefitted from the website and Call Center functions of 311 is the Fire Department (FD). Both the PD and FD are interesting examples since they show the value of 311 in providing assistance for non-emergency matters in two departments that are heavily involved in emergency operations\(^1\). While the website is identified as a central source for non-emergency matters, the nature and volume of calls undertaken in Figure 11 and 12 indicate that the Call Center function is also of value.

**Graph 12: 311 Call received by the Fire Department**\(^2\)

---


IX. Customer Service

The Customer Service Group (CSG) came into being on May 15, 2008 under Executive Order 115 and is a part of the Mayor’s Office of Operations. It is charged with the responsibility of creating uniform practices to enhance customer experience. The CSG works closely with DoITT to create guidelines for websites. Part of its responsibilities involves preparing a Customer Service Newsletter, featuring studies and surveys like the one depicted in Figure 12. The actual survey was conducted by an external agency: CFI Group Inc. The graph shows that 311 fared much better than other governmental organizations and Call Centers in the private sector. Similar surveys include a review of how employees rate their own performances. In addition, The CSG also surveys 311 customers on the responsiveness of agencies to service requests.

---

X. Performance Indicators and Tracking

10.1 Central Performance Tracking
Since 2008, Citywide Performance Reporting (CPR) has come to house several important performance indicators for agency services in New York City. CPR along with 311 performance data is available on the NYCStat Website. CPR also falls under the jurisdiction of DoITT.

---

64 ibid
Of the thousands of potential indicators, 500 “critical measures” were identified.

Some of the relevant information that is also available on the NYCstat website for 311 – for calls and the website – is seen in Table 2, which includes projected figures for 2010. These metrics reflect the areas of service that DoITT has identified as critical points of appraisal. Regarding further performance indicators, the Mayor’s Management Report (MMR) provides specific call information and statistics on issues of concern reflected in call volumes and services requested in each agency.

### Table 2: 311 Annual Performance Indicators

<table>
<thead>
<tr>
<th>Performance Statistics</th>
<th>Actual FY06</th>
<th>Actual FY07</th>
<th>Actual FY08</th>
<th>Actual FY09</th>
<th>Actual FY10</th>
<th>Target Updated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calls received at 311 without transfer to agency for resolution (%)</td>
<td>NA</td>
<td>79%</td>
<td>77%</td>
<td>90%</td>
<td>94%</td>
<td>*</td>
</tr>
<tr>
<td>Calls answered at 311 within 30 seconds or less (%)</td>
<td>63%</td>
<td>88%</td>
<td>96%</td>
<td>97%</td>
<td>88%</td>
<td>*</td>
</tr>
<tr>
<td>Calls handled in languages other than English (%)</td>
<td>1.5%</td>
<td>1.9%</td>
<td>2.4%</td>
<td>1.9%</td>
<td>3.9%</td>
<td>*</td>
</tr>
<tr>
<td>Calls to complaints or concerns (%)</td>
<td>73%</td>
<td>67%</td>
<td>69%</td>
<td>63%</td>
<td>69%</td>
<td>*</td>
</tr>
<tr>
<td>Calls resolved at 311 within transfer to agency for resolution (%)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>*</td>
</tr>
<tr>
<td>NYC.gov online forms available</td>
<td>419</td>
<td>419</td>
<td>416</td>
<td>510</td>
<td>520</td>
<td>435</td>
</tr>
<tr>
<td>NYC.gov unique visitors (average monthly)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>1,885.60k</td>
</tr>
<tr>
<td>Percent uptime of NYC.gov</td>
<td>NA</td>
<td>NA</td>
<td>95.96%</td>
<td>92.85%</td>
<td>99.95%</td>
<td>*</td>
</tr>
<tr>
<td>Percent uptime of all key systems (mainframes, SunGard, WATS)</td>
<td>NA</td>
<td>NA</td>
<td>99.98%</td>
<td>99.90%</td>
<td>99.99%</td>
<td>*</td>
</tr>
<tr>
<td>Key projects completed on time (%) (Jan-Jun)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>81%</td>
</tr>
<tr>
<td>Key projects completed within budget (%) (Jan-Jun)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>100%</td>
</tr>
</tbody>
</table>

The way that information is used in an agency varies according to the existing systems of reporting. Some agencies such as the FD already have specific metrics

---

that are not derived from 311 calls with performance tracked on a more specific, internal system\textsuperscript{67}. Nonetheless, advocacy and special interest groups are able to access the 311 data and performance indicators to endorse their specific interests. With more performance indicators open to the public, agencies are more exposed to public appraisal, creating additional pressure on the agencies to meet expectations and deliver quality service. Furthermore, since the information is public, it also features in public debates around city elections and in city council meetings\textsuperscript{68}.

10.2 Local Law 47
A pivotal moment for performance tracking and call information in 311 was the passing of Local law 47 in May 2005. Councilwoman Gale Brewer was a central figure in pushing this law through, acting as the ‘prime sponsor’. It is local law 47 that mandated a monthly performance report issued by DoITT with all the vital statistics regarding call information. The monthly report has to be sent to the city council, the public advocate, community boards and made available to the public\textsuperscript{69}.

A quality assurance team also tracks performance. This team periodically listens in on calls to not only to see if the content is relevant and accessible but also to review

\textsuperscript{68} Einhorn, E. (2009, March 9). Make it 'hand held' 311 says city council Speaker Christine Quinn. Daily News
the performance of the CCR. At times, Mayor Bloomberg will call 311, creating even more of an incentive to deliver quality service for each call.

---


XI. Future Prospects

This multi-dimensional study of 311 shows it to be a dynamic and growing system. Despite the minor challenges mentioned in the preceding sections, there are still some larger challenges that require significant attention. Some of these issues are being currently addressed while some require time for processes to be perfected and better managed.

11.1 Challenges

A number of interviews and a survey of several performance reports in 311 reveal that the biggest challenges lie in the social service offerings. A 2008 report from the public advocate demonstrated an inconsistency in how 311 CCR responded to complex social problems for parents of children with special needs. Incidentally, education is a social service that council woman Gale Brewer identified as not adequately addressed by the e311 system. One reason is the lack of graduate-level trained social workers answering the calls. While the system might be able to prompt I & R specialists to redirect calls, it cannot reasonably address all possible combinations of compound social issues. Being trained in the 311 system is an inadequate means of combating these sorts of problems.

---


Councilwoman Brewer also identifies an ongoing disconnect between the community boards and DoITT even after Local Law 47 was established. She argues that the data that is presented to the community boards, albeit regular and in a standard format, is not very useful. Even if it was useful, it is provided in a PDF format that cannot be accessed but must be reconstructed. Thus while transparency might have increased on the whole, the real question is the lack of relevance of the data, pointing to the need for better coordination between 311 and the community boards.

Such collaboration could also benefit the complex social service requests that 311 cannot single-handedly resolve. As councilwoman Brewer points out, issues of this nature often need trained individuals who not only have a relevant educational background but are also able to follow-up.

Looking at complaints on air quality and water maintenance in New York, Kim raises the question of how 311 affects a citizen’s access to public services in the city. Her findings indicate that 311 alone does not aggravate social inequities preventing the access to public services. Nonetheless, she notes geographic discrepancies with wealthier neighbourhoods having a higher incidence of using 311. To this end, she highlights the potential for growth in 311 in less affluent neighbourhoods. Another recommendation is to conduct further research to see how 311 can be utilized to better facilitate public service delivery in low-income
neighbourhoods, enlarging the scope of 311 from a “reactive” tool to a “proactive” one.

11.2 In the Pipeline
Current economic challenges have helped to emphasize the need to continually meet the service needs of citizens even in times of budgetary constraints. While many efforts towards this end began before the official financial crisis, 311 has been able to utilize non-call channels. Projects that develop communities, social networking and Big Apps foster multi-directional communication, allowing 311 to continue to meet citizen needs. Eric Lee, a consultant for 311, recommends that 311 should continue to widen its non-call avenues to manage rising citizen expectations, particularly when services are all the more needed during a recession.

These include developing the ‘host’ nature of 311 and encouraging communities and social networking functions.

Another anticipated but yet to be realized point of improvement would be the collaboration potential with SeeClickFix, an online presence that has similar interests like 311. While the two are presently neither conflicting nor collaborating, joining resources in the future might prove to be a valuable means of expanding 311 functions and reach.

---

Lessons for D115

Since its inception in 2003, 311 has grown to become the largest non-emergency government service system in the US with over 40 participating municipalities or counties. This report shows how the system evolved and is currently administered in New York City. Several indicators, from call volumes to more complex performance reviews indicate that 311 is improving on
Figure 14: Evolution of 311 Call Center services and roles

Source: Schellong, Alexander “311 Workshop”, Harvard Kennedy School of Government
many levels, and simultaneously acting as a resource for everyday public management, policy making and intervention. It has further grown to become more invested in serving the citizen as opposed to agencies, and seeks to increasingly distance itself from its controller function to become more of a host and enabler. Looking at 311 service centers across the U.S., common evolution steps emerge which are outlined in Figure 14.

Many 311 Service Centers started by providing non-emergency policing information. Newer 311 projects skip this step and start with an information provision and referral offering. Over time service intake and outreach capabilities are added and promoted among constituents. Public works services are usually the first that can be requested by citizens. Service intake and outreach operations require closer collaboration with the respective service owners (agencies), interoperability of IT systems and sometimes process reengineering. At this stage, 311 organizations add new employee positions that focus on facilitating the latter. Given their access to the citizen’s daily needs, some 311 organizations evolve into central hubs for citizen orientation, customer service and performance management at stage six. For example, 311 data is integrated into government websites, shared with the public for additional transparency and utilized for decision making by public managers.

By comparing the state of integration of different levels of government in the Call Center, its utilization for governance, the service range and multi-channel integration, 311 Call Centers currently have a greater
level of sophistication than D115 Call Centers (Figure 15). Germany’s D115 Service Centers can be classified between two and three on the outlined evolution path. Service requests can be triggered in some Service Centers but citizen inquiries or suggestions (e.g. on a pothole, broken street sign or suggestions) are not actively promoted. Overall D115 remains a channel of two-way information provision and referrals. Based on its initial design, D115 Service Centers use a joint knowledge base with information from all levels of government (federal, state, local). This allows a D115 Call Center to completely take over operations from other D115 Call Centers.

Figure 15: Current state of the 311 and D115 evolution
Moreover, started as an initiative by the federal government (German Ministry of Interior) but implemented on the municipal level on an opt-in basis, D115 follows a long term strategy of offering the same service level all over Germany. Both make the German approach to a single-non emergency number unique. Performance management is conducted for internal quality control in D115 Call Center but not for other agencies. Unlike their U.S. peers, German politicians or public managers do not utilize D115 or its data for communication, resource allocation, accountability and governance activities. So far no mayor or Call Center manager we talked to about D115’s data potential showed greater interest or indicated a vision in this area.

In general, various forms of data can be produced by a non-emergency Call Center. A major amount of data is collected in the knowledge base. The process of collecting information on regulations, business processes and operations for the knowledge base helps government better understands itself. Several 311 Call Center managers also underlined the value of the knowledge base for other government channels such as the Website.
A second set of data is the data on Call Center operations. It is mainly used by Call Center managers to monitor the performance of their internal operations. It includes information on agent utilization, call or wait times.

The higher the sophistication of a Service Center, the broader the set of inquiry data it produces. The data can include information requests directed to the knowledge base, information requests not covered in the knowledge base, service requests—including details such as a location, problem description, frequency or resolution time—and qualitative feedback such as opinions from citizens. It can take months or years and a good analytics team to engage in appropriate performance measurement activities.

**Figure 16: Type of data produced by a non-emergency Call Center operations**

<table>
<thead>
<tr>
<th>Knowledge base</th>
<th>Call Center data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inquiry data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Call agent data</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>External data</th>
</tr>
</thead>
</table>
Data that is not accessible in electronic format is the intrinsic knowledge of a Call Center agent on government processes and citizens needs. Over time call agents become experts on government services, the issues citizens have with certain government processes, poor agency performance or multi-jurisdictional barriers. This “data” can only be retrieved through interview-oriented quality management processes.

Finally, there is external data from third parties (e.g. Internet research) that is utilized by call agents to reply to citizen inquiry. Similarly, customer service representatives can consult external resources to gain a better understanding of the context leading to certain citizen behaviour or agency performance (e.g. economic statistics, policies, company communications).

Besides performance management, D115 Call Centers are encouraged to consider the following improvements:

**Multi-channel integration**

Feed information from the D115 Service Center into your Website to meet daily information needs of your constituency. Let citizens search your knowledge base and track service requests. Once the appropriate infrastructure has been implemented, give citizens the option to submit reports/service requests via smart phones and share information with geographical information systems. A contest can lead to useful applications. Finally, if citizens are offered more self-service functions over the Internet budget constraints to, D115 Service Center operations can be overcome.
Agency service integration and service improvement
While integrating information about an agency and its services processes, use this knowledge to reassess how that agency is working and implement customer service oriented improvement. Moreover, make more services available over the phone and Internet channel.

Open Data
Make data collected in the D115 available to the public through your open data portal. If the latter doesn’t exist, implement an open data portal for your jurisdiction.

Clear communication strategy
D115 is rarely promoted through marketing activities. Several municipalities still promote their old service number besides D115. They also do not place links to D115 in prominent locations on their Web portal or use it as a back channel in other outreach activities. D115 is not proactively communicated as a source for citizens to share their knowledge on local issues (crowdsourcing) or feedback. Overall this is not helpful to establish D115 as a brand and utilize its full potential.

Expansion
Do not get constrained by the initial vision of D115. Allow it to evolve into something beyond
your initial expectations and planning. D115 can compliment public safety plans and be the hub for citizen oriented government.

Performance management
Based on information from D115 and other sources within government, establish a set of indicators that can be used to identify patterns, for trend analysis areas of improvement and for holding everyone accountable. Sharing the data with the public will make the efforts more powerful.

D115 and 311 share similar challenges to implementation and their operation. Most common to all are the perception of agencies that Service Center agents are ill equipped to provide special advice on their respective area of expertise. Moreover, some agencies are afraid of the transparency, loss of power or resources resulting from a centralized organization. Leadership and political management is essential to overcome these barriers. On the technical side, legacy systems and interoperability hamper integration of departmental services. Citizens may be dissatisfied with the government’s speed in resolving their reported issue due to the time lag between ease of access reporting and departmental responsiveness, especially when jurisdictional lines are crossed unless expectations are continuously managed. In terms of funding, budget deficits are limiting the breadth and depth of Service Center operations.
With its approach of a common knowledge base and coordination through the national level, D115 promises to become available in most regions of Germany over time. For some regions shared services offered through D115 might even be the only option to face demographic change and budget constraints. However, it is up to the political level to navigate the first step and leverage D115 or its data for communication, resource allocation, accountability and governance activities.
The Authors

Charis Elizabeth Idicheria

is a Research Associate at the Indian Institute for Human Settlements – India’s first prospective National Innovation University addressing the challenges of urbanisation through an integrated programme of education, research, consulting and advisory services. Charis has worked on consulting and research projects ranging from e-governance and participatory urban planning, to evaluating rural micro-finance and livelihoods schemes. Her research interests centre around designing, measuring and evaluating poverty alleviation schemes in India, the urban social safety net and the nature of urban political representation. Charis has a Bachelors degree In International Affairs and German from Gordon College. She also holds a dual Masters degree in Public Policy from the Hertie School of Governance, and a Masters in Public Administration from Columbia University’s School of International and Public Affairs.

eMail: cidicheria@gmail.com
Dr. Alexander Schellong

is currently Regional Operations Manager Europe for the U.S. Department of State’s GSS visa services contract with CSC’s North American Public Sector Foreign Affairs Division. Prior to his current position he advised public sector clients internationally on issues such as eGovernment, Citizen Relationship Management, Open Government, Public Policy, Public Management, Stability Operations or Border and Immigration Management. He continues to be active in academia through research and lectures, e.g. at Harvard Kennedy School of Government, Goethe- University Frankfurt am Main, The University of Tokyo, Salzburg School of Management or Hertie School of Government. He remains a non-resident fellow at the National Center for Digital Government, UMass Amherst. His studies focus on the impacts of ICT and organizational and societal issues as well as Citizen Relationship Management. He studied political science and economics.

eMail: aschellong@csc.com
Prof. Dr. Jobst Fiedler

is Professor of Public and Financial Management and Founding Director of the EMPM at the Hertie School of Governance, from 2005-2008 he served as Associate Dean at the School. After his studies of law, economics and political science, Jobst Fiedler worked as research fellow at the Social Science Research Center Berlin (WZB); he holds a PhD from the University of Hanover. Beginning in 1980, Fiedler worked in executive positions within the city state of Hamburg and was member of several working groups of the OECD and the EU. He was elected Hanover executive mayor in 1990. In 1996, Jobst Fiedler switched to the private sector and joined Roland Berger Strategy Consultants as managing partner. During his private sector career, Fiedler continued publishing and teaching in the field of public management, a.o. at the University of Potsdam and the Bocconi School of Management in Milan. In 2009, he was visiting professor at the Columbia University of New York, USA.

eMail: fiedler@hertie-school.org
Single non-emergency numbers have received increased attention by governments around the globe. For example, 13 out of 27 European Member States have implemented single non-emergency number contact centers, and others are in the process of doing so. It was a visit to New York City’s 311 non-emergency solution in 2006, which inspired the development of the D115 project in Germany. The project recently ended its pilot and entered regular operations. More and more German counties and municipalities are joining the D115 non-emergency government phone service network.

This study returns to the City of New York to see whether more lessons can be drawn for D115 from its development over the last three years. In evaluating 311 in New York City for D115, it is important to explore not only the basic mechanics and statistics relating to the infrastructure and resources but also the issues surrounding policy, city management and service delivery that have accompanied the evolution of 311.