



Patent Pending



# Next Generation (NG) Government

Includes NG 911 Solution



Text 2-911



Text 2 Government

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## EXECUTIVE SUMMARY

During the 2014 Loudoun County, Va. Public Safety Challenge, on the campus of AOL, Text2Them won the top honor of “Most Disruptive Technology”. We presented a new approach to common thinking regarding public safety and a plan to institute texting to Next Generation 911 (NG911) as the solution. Text2Them questioned the cost and logic of current plans being pursued by PSAPs and the FCC in their efforts to provide SMS and MMS (text, picture and video capabilities) to the nation’s 911 dispatchers (PSAPs).

*Lt. Charles Manning with Loudoun County Sheriff’s Office, who sat on the six-person judges panel called the idea a game changer. He oversaw the county’s 911-dispatch center for the last year and a half and said, “What you’re proposing is an area we can improve upon. It’s in a good price point, it’s easy to implement and it’s forward thinking.”*

*Loudoun Business*



The “game changer” is providing residents with the ability to text to 911 and at the same cost, you can provide texting to all agencies. This would alleviate the overloading of PSAPs during disasters with non-emergency texts, and provide an avenue for these non-emergency texts. The Text2Them system would allow texting to 911, while keep our PSAPs available for only the most critical demands for help.

Critical questions you should ask yourself are:

- Should 911 be the only agency that residents can text during emergencies? What about schools systems, public works and other government agencies?
- Will texting to 911 eliminate the problem of jammed phone lines, experienced during 9/11, east coast earthquake and other major disasters?
- Should you have the ability to forward non-emergency text to the appropriate department? How will you do this if only 911 can receive and send texts?
- Would it help if texts went to a clearing house, such as a 311 or other non-emergency location and then transferred to 911?

We think you will agree that government needs to expand texting beyond 911 in order to truly provide the safety our citizens deserve and desire. Text2Them provides this capability now, even to Legacy PSAPs, without the need for major system upgrades.

## PSAP Challenges/Concerns

In August of 2014 Text2Them, Inc. won top honors at the Loudoun County Public Safety Challenge [www.isc.org](http://www.isc.org) with our patent pending technology. We presented the solution to government communication, for everyday use as well as emergencies, like we experienced during 9/11 and the East Coast Earthquake. In regards to the FCC plans and the rollout of NG911, our technology provides several solutions to serious issues they are facing.

The FCC is faced with four major issues with the rollout of NG911:

- I. Slow Rollout of NG911 - The FCC has been working on rolling out NG911 for four years. To date there are approximately 200, out of 6,000, 911 Dispatch Centers (PSAPs) that can now receive texts. The slow rollout of NG911 has been a huge disappointment to the FCC. A major reason for the delay is the need for PSAPs to upgrade equipment. Text2Them does not require anything other than internet access to implement so even Legacy PSAPs are able to implement SMS and MMS today.
- II. Low Volume during non-emergencies - In addition, the PSAPs that have implemented texting to 911 are seeing very low volume of use by residents:
  - Vermont (8 PSAPs) – 133 texts in 9 months<sup>1</sup>
  - Maine (2 PSAPs) – “Volume low operators text among selves for practice”<sup>1</sup>
  - North Central Texas (33 PSAPs) – 9 texts in first 2 months<sup>1</sup>
  - Marion County, FL – 56 texts in 12 months
  - Durham NC – 1 text in 14 months<sup>2</sup>
  - Monroe County, NY (Rochester) – 73 texts in 12 months
  - Frederick County Maryland – 24 text in 24 months
- III. Transfer of Non-Emergency Texts – A large percentage of text messages received by PSAPs during the rollout of NG911 are non-emergency messages. PSAPs need the ability to transfer these text messages to other government agencies/departments. Current NG911 does not allow for this capability. In addition, it has also been stated by the emergency number administrator in Maryland that, given the low number of texts, it is preferred that text messages go to a 311 number and then have the emergency text transferred to 911. Again, current NG911 applications do not provide for this application.

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<sup>1</sup> Interim SMS Text-to-9-1-1 Information and Planning Guide - Version 2 May 2014 – Appendix F

<sup>2</sup> FCC.gov Notice of Ex Parte Presentation - Facilitating the Deployment of Text-to-911 and Other Next Generation Applications, PS Docket No. 11-153 and Framework for Next Generation 911 Deployment, PS Docket No. 10-255 June 2, 2012

IV. High Volume Disaster Communications – No PSAP can handle the demand for service following a disaster. However, text provides an opportunity for operators to manage high volume. In a study by Avaya/Gardner of the cost of managing incoming communications by various means, it was determined that text messaging was able to handle more calls at a much lower cost than all other methods.

SERVICE CHANNEL	COST
Web Chat	\$7.50
Phone Call with Live Agent	\$4.50
Email	\$2.50
Phone Self-Service	\$1.85
Web Self-Service	\$0.65
SMS	\$0.10

Avaya/Gardner Call Center Study<sup>3</sup>

## Other PSAP/Public Safety Challenges/Concerns

### I. Post Disaster Communication

What happens after a disaster when phones are jammed?

Minutes after the 2011 earthquake, phones were jammed, including 911. People stood outside of buildings staring at their phones. This problem existed throughout the mid-Atlantic region. When disaster strikes, small or large, we know the phone lines around the towers will be overwhelmed. It has been over 10 years since 9/11, and we still have not found a post disaster communication system to solve this problem.

Public Safety officials tell residents you should text, but to who? You can't text most PSAPs or any other government agency.

No PSAP can handle the demand for service following a disaster. However text provides an opportunity for operators to manage high volume, critical for post disaster communication, at a lower cost.

Several factors allow operators to manage high volume:

- **Auto Reply** - Most questions can be answered by auto reply linking to a webpage with the requested information.
- **Short to the Point** - Conversations are short and to the point requiring less time to conclude.

<sup>3</sup> [SMS in the Call Center: How mobile messaging can increase profits and reduce costs immediately](#)

- **Multiple Conversations** – Operators can handle as many as ten text conversations instead of one voice conversation.

Text2Them NG Government Solution: Text2Them provides a method of communication that allows residents to access emergency services, even when phones are jammed, and they can communicate with all government agencies. This provides more access to government services which frees up PSAPs for emergency services.

## II. Text Broadcast Alerts

Approximately 10% of the residents sign up for broadcast alerts. In Washington D.C. area, at a recent meeting, we asked how many of the 632k residents actually enrolled for the alert. The answer was 62k, less than 10%. We find this to be true everywhere we ask the question. This means 90% of residents will never receive the broadcast alerts.

Text2Them NG Government Solution: Allow residents to enroll in alerts by simply texting a keyword (LCAAlerts) to a short code. The best time to get residents to enroll is when a disaster has happened. Example: For more information text LCAAlerts to 68398. This allows residents to receive an auto reply with important information and weblinks. Each resident that does this is also automatically enrolled in LCAAlerts and will receive subsequent updates as well as new alerts.

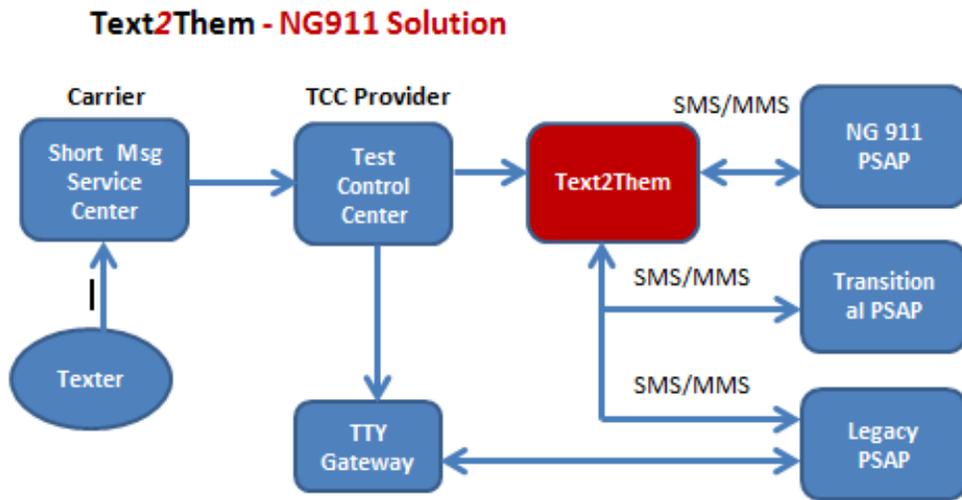
## III. “See Something, Say Something”

This is the slogan to report suspicious packages or activity. However, while the obvious terrorist target is crowded buses, subways or other venues, calling law enforcement by phone is not convenient and could even be dangerous on a crowded subway. In addition, pictures, if available, cannot be sent on voice lines. Two-way texting works best, however, once again government has not allowed for this application.

Text2them NG Government Solution: “See Something. Text Something” In a recent pilot in Maryland we found Text 2 Stop it! to be an effective tool for schools to get students to report bullying, drugs, suicide concerns and other unhealthy behavior. In a pilot involving just 6 schools we received reports of 22 kids being bullied, 6 drug dealers and 3 teenagers planning on committing suicide.

Text2Them provides the ability to send and receive text messages to report unsafe activity. Text2Them in addition allows the tipster to send pictures and video providing critical additional information for law enforcement and government officials.

## Text2Them NG911 Solution



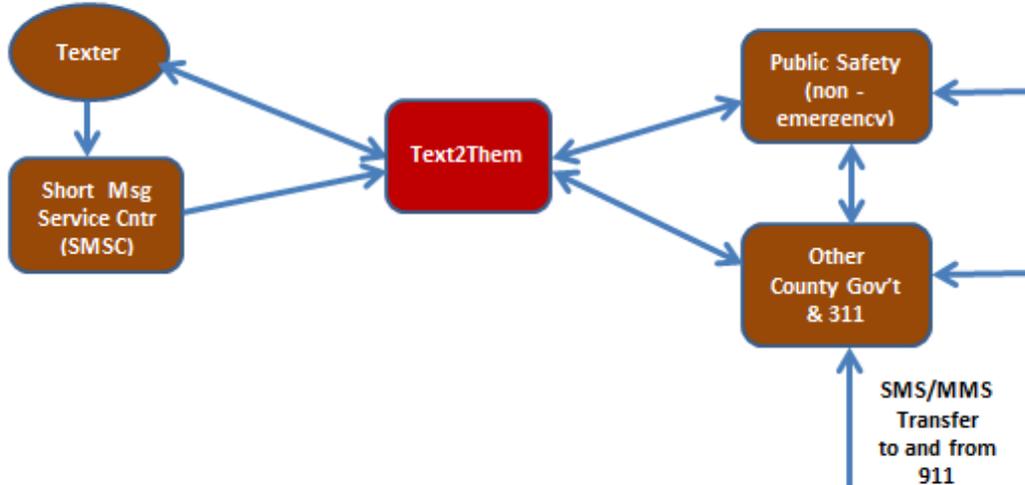
The process for receiving text messages (SMS) begins with Texter texting a message to 911 which is a phone number and a Shortcode. The text is received by the Short Message Service Center (SMSC). This center processes Shortcode messages from all carriers to determine ownership and handling of the message. In this case the FCC owns the Shortcode 911.

The message is then forwarded to the Test Control Center (TCC) for routing to the appropriate PSAP. Text2Them provide software link between the PSAPs and TCC that establishes two-way text communication. Once Text2Them communication is established the Texter is able to send texts (SMS), pictures and short videos (MMS).

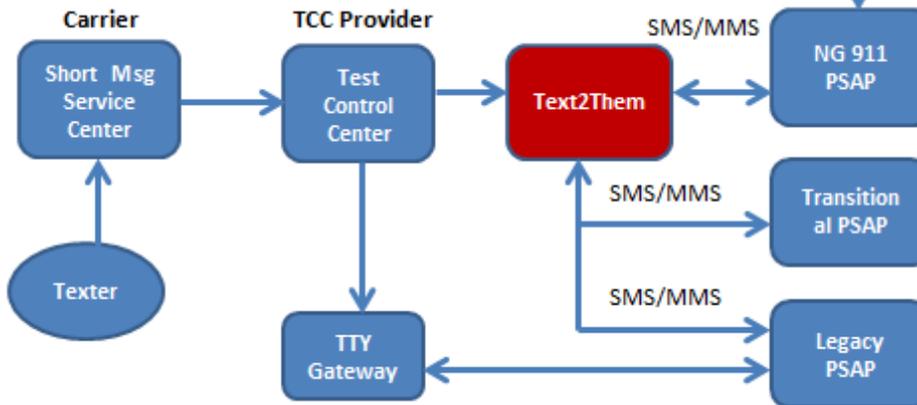
The TCC also manages the sending of TTY and there is no change in providing this communication to existing Legacy PSAPs.

## Add Text2Them NG Government Solutions

### Text2Them – NG Government Solution



### Text2Them - NG911 Solution



Text2Them enhances current NG911 capabilities by providing an additional layer of communication so all agencies can communicate by text. This process takes the pressure off the PSAPs, during emergencies allowing other agencies to handle minor issues such as fallen trees, power outages and other services.

The Texter would text additional keywords, depending on the agency (see directory on next page). The SMSC would forward this message to the Text2Them software which would then be forwarded to the appropriate agency. If this is a text message conversation that requires PSAP assistance the text message conversation can then be transferred to the PSAP. In addition a non-emergency text message conversation that originates in the PSAPs can be transferred to other agencies for disposition.



## Sample Directory – Text2Them NG Government Solutions

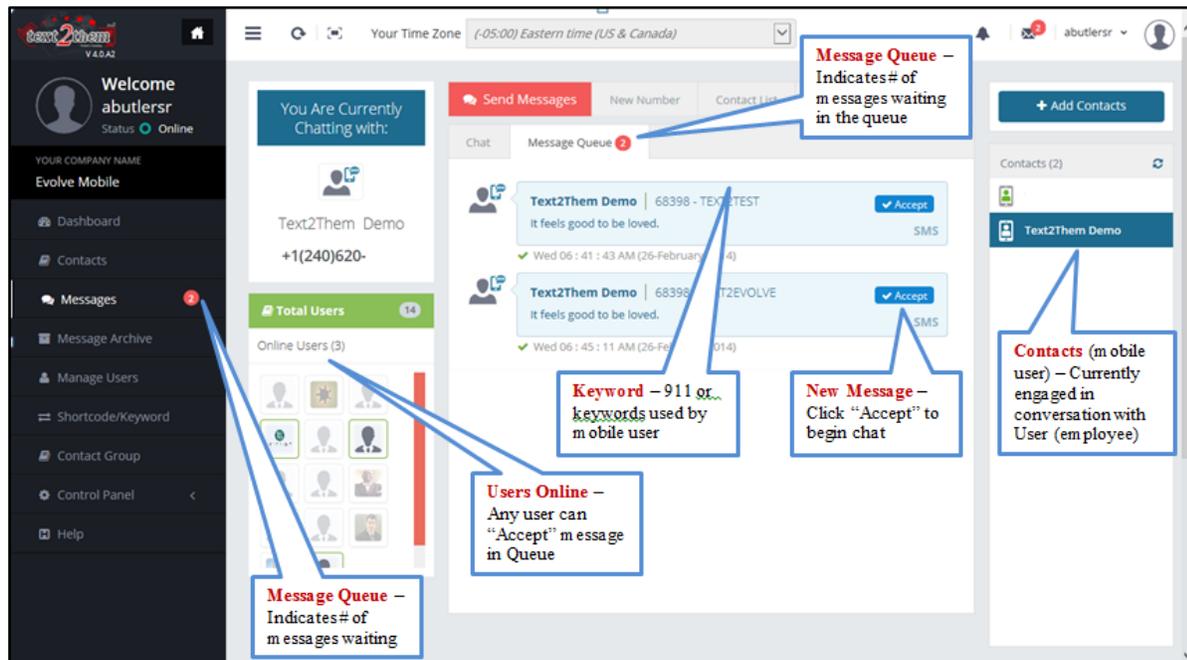


The screenshot shows the top navigation bar of the Loudoun County Virginia website. It includes a search bar, a 'Site Tools' link, and menu items for 'GOVERNMENT', 'SERVICES', 'BUSINESS', 'HOW DO I...', and 'ABOUT LOUDOUN'. Below the navigation is a table listing various county services, their telephone numbers, and their corresponding text keywords.

Categories	Telephone	Text
<b>County Services</b>	<b>311</b>	<b>311</b>
Animal Services	703-777-0406	LC0406
County Administrator	703-777-0200	LC0200
Economic Development	703-777-0426	LC0426
<b>Emergency</b>	<b>911</b>	<b>911</b>
Fire, Rescue & Emergency Management	703-777-0333	LC0333
General Services	703-771-5552	LC5552
Health Department	703-777-0234	LC0234
Parks, Recreation & Community Services	703-777-0343	LC0343
Planning and Zoning	703-777-0246	LC0246
Public Affairs and Communications	703-777-0113	LC0113
Sheriff's Office	703-777-0407	LC0407
Solid Waste Management	703-777-0187	LC0187
Transportation & Capital Infrastructure	703-737-8624	LC8624
Traffic and Transportation Alerts		LCTraffic
Voter Registration	703-777-0380	LC0380
Weather Alerts		LCWeather

The phone/text directory provides the phone and text keywords/numbers needed to establish text communication with each agency. Given the huge cost savings the agencies will achieve by implementing text, that text communication be used for everyday communication. Then when disaster strikes and phones are jammed you have an alternative form of communication, resilient during disasters, that will allow government to continue to function and relieve the congestion to PSAPs.

## Text2Them – Incoming Message Screen



- Messages come in to a Message Queue
- Multiple operators can accept the message
- Manage text to 911 or other shortcodes and keywords from one system

# Text2Them – Conversation Screen

The screenshot shows the Text2Them interface with several callouts:

- Archive Conversations for later retrieval:** Points to the 'Message Archive' option in the left sidebar.
- Multiple Departments on the same system:** Points to the 'Departments' section in the bottom left, showing 'Operations' and 'Sales & Marketing'.
- Transfer text conversation to another person or department:** Points to the 'Transfer Chat To User' button.
- SMS or MMS Send and Receive SMS or MMS:** Points to the 'SMS' and 'MMS' radio buttons at the bottom of the chat window.
- Multiple Operators Multiple operators online to manage high volumes:** Points to the 'Total Users' and 'Online Users' sections in the top left.
- Multiple Conversations One operator can chat with many people:** Points to the 'Add Chat Contact' button and the list of contacts on the right.

- One operator can handle multiple conversations
- Receive pictures from residents
- All messages are archived
- All incoming numbers are stored
- Transfer messages to another person or depart
- Send and receive pictures and videos

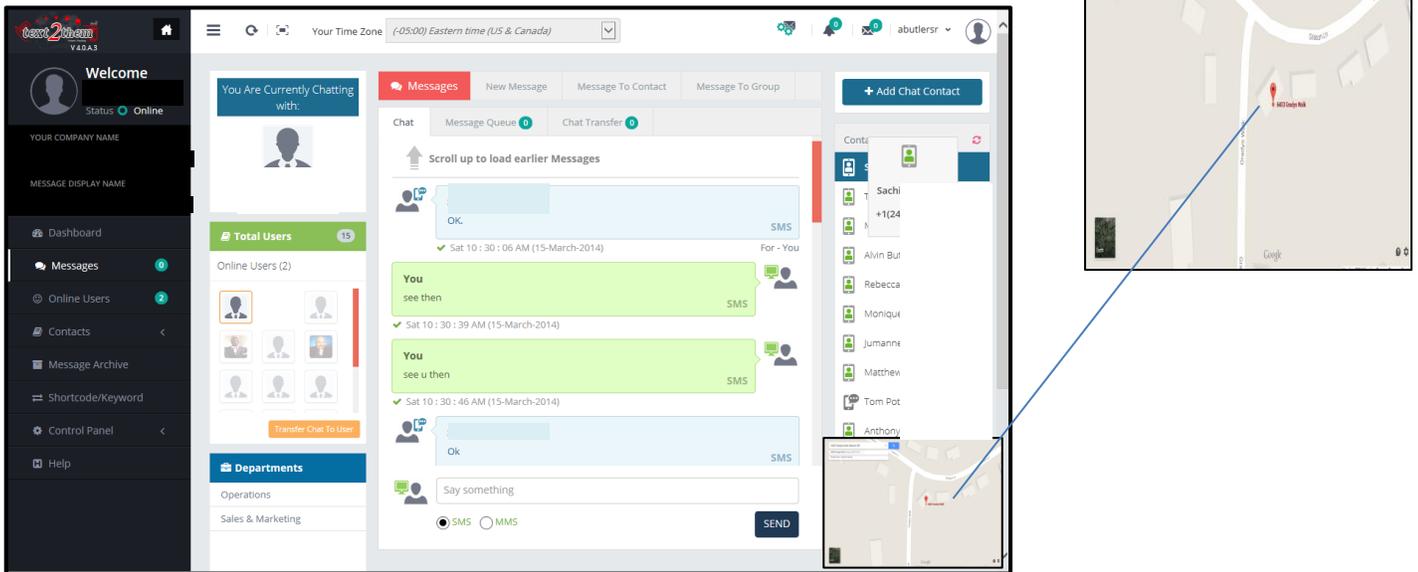
## Other Features - Text2Them System

- It is cloud based and does not impact your servers
- It integrates with Avaya and most existing communication systems
- We provide 24/7 support and training
- And there are no per message charges!

## Transferring Non-Emergency Texts

A large percentage of text messages received by PSAPs during the rollout of NG911 are non-emergency messages. PSAPs need the ability to transfer these text messages to other government agencies/departments. Current NG911 does not allow for this capability. In addition, it has also been stated by the emergency number administrator in Maryland that, given the low number of texts, it is preferred that text messages go to a 311 number and then have the emergency text transferred to 911. Once again current NG911 applications do not provide for this application.

## Optional – Realtime GPS Tracking for PSAPs



Text2Them provides realtime GPS location/tracking of mobile devices. This feature is an option since most agencies will not require this option.

## Reliability of Text

Informal studies have been done to test the reliability of text messages to and from PSAPs. In these studies, different carriers were used, along with varying signal strengths at different times of day. In order to test in the most difficult conditions, some signal strengths were reduced so low that voice calls would not have been able to be completed. These conditions would simulate conditions similar to those found during 9/11 when phone lines were jammed, and during east coast earthquake and Hurricane Katrina, when power outages and downed lines caused major disruptions in communication. During these historic events, when calls could not go through, text messages could. The finding in the studies substantiated our need for the option to text to 911. In the over 34,000 test text messages sent, an astonishing 100% success rate was achieved and most messages were delivered on an average of four seconds. Similar studies with similar results have been completed by the University of Colorado.

## Conclusion

With Text2Them, local and state governments have an opportunity to completely revolutionize emergency communication as we know it. Texting is already the preferred method of communication when talking with friends and family. Texting will also soon become the preferred method of communicating with government agencies and will:

- Provide texting to 911 now without the need for expensive upgrades
- Provide emergency and non-emergency communication that goes beyond 911
- Provide alternative communication throughout government, when phones are jammed
- Give you the ability to forward non-emergency text to the appropriate agency
- Reduce the number of non-emergency text messages into 911 centers
- Increase government efficiency through texting
- Provide an alert system even those not enrolled can access

We will no longer find ourselves helpless due to terrorist attacks, earthquakes or smaller local events

At a cost of what many PSAPs pay for texting to 911, we are prepared to bring this critical technology to your county and the nation immediately. All that is needed is for agencies, like yours to broaden their vision from what texting has been to what it can be in the future...which is a potential lifeline is for our citizens.

## About Us

Since 2010 Text2Them, Inc. and its parent company Evolve Mobile Communication, Inc. have been working to bring texting to business and government. Our patent pending technology and text messaging platform allows a consumer to text an organization, engage in a conversation and even have the text conversation transferred to another person or department. Text2Them performs all of the same functions of office voice phone systems, inclusive of the options of preprogrammed auto response, live operator and Text2Them can even transfer the text conversation to a different department or employee's computer.

## Our Channel Affiliates

