



An outage communications journey

The value of appropriate customer engagement and best practices

AGENT511
425 Huehl Road, Suite 11B
Northbrook, Illinois 60062

Telephone: 877-511-9511 x 1000
Email: info@agent511.com
Web: <http://www.agent511.com>

Copyright © 2019, Good Egg Media LLC DBA AGENT511

Northbrook, Illinois, USA. All rights reserved. This document is the property of AGENT511. It contains material distributed under license agreement. Reproduction or use other than as provided for in the license agreement is prohibited.

Information contained herein consists of AGENT511 copyrighted material and, as indicated, copyrighted material furnished by AGENT511's third party suppliers, which is used herein by permission of said suppliers.

Published by AGENT511, 425 Huehl Road, Suite 11B, Northbrook, Illinois 60062.

Service interruptions occur in many businesses. For a utility providing vital electric service, a service interruption has the potential to disrupt peoples' lives in many ways, from mere inconvenience and safety implications, to loss of revenue and productive time. While the focus for power dispatchers, operators, and field workers is to assess service interruptions and restore service as soon as possible, service interruptions are also a prime opportunity for the utility to become the customer's hero and help cement a positive, trusting relationship contributing to higher customer satisfaction scores.

Despite regular maintenance and trimmed trees, many interruptions are unavoidable and occur for any number of reasons including planned maintenance, damage to equipment during inclement weather, accidental and malicious damage to equipment, or demand limitations. When service is interrupted, for any reason, the first thing a customer wants to know is, "Does the utility know my power is out?" Quick and targeted messaging goes a long way to alleviate customer stress and concern. After the initial message status, restoration estimates and other vital information, such as locations of ice stations or cooling centers, may be sent and are essential to meeting customer expectations. Historically, utility personnel are focused on restoring power. However, customers are more willing to accept a brief delay in restoration time when they are aware of the crews working on the front lines of the restoration effort. This means it would be beneficial to find a way to get the outage and restoration updates to customers in such a way that does not take time away from the actual restoration. This requires planning, automation, integration with key utility systems, testing, and continuous process improvement.

The key to effective notifications is delivery of accurate and timely information in accordance with customers' preferences - how and when they receive the messages. Customer preference options can include their language of choice, channels of communication such as a phone call, email, text message, social media options or mobile app push, and any limits on times when they do not want to receive a message.

A customer notification program requires the following enabling components in order to deliver automated, targeted alerts:

- User interface and database to acquire and record customer preferences that further correlates notification preferences with account and/or premise and flexible fields to store a customer's communication preferences;
- Interface to a utility information system such as an outage management system (OMS);
- Complex event processor to filter events and apply business rules that trigger notifications in accordance with preferences and communication templates; and
- Notification gateway between the complex event process and preference manager that sends messages via carrier text messaging gateway, e-mail server, automated voice system, or mobile app interface.

These combined components allow the utility to trigger proactive communications for power outages as well as other informational or educational campaigns. Having developed and implemented hundreds of notification programs, AGENT511 has compiled the following list of best practices to help you develop an effective and successful notification program.

1. Create canned responses

Take the time to consider scenarios based on your operation and customer base to create basic templates addressing all elements of each scenario. Compile as many scenarios as possible and use a workflow approach to identify each step or possible message. Think through the scenarios from the customers’ point of view to ensure understandable and complete messaging. Prepackaging these templates allows more complete automation alleviating calls to the utility with customer concerns.

Messaging templates should include only information for which there is a high degree of confidence. As also shown below, a probable cause is added when known.

Reported	Edison: An outage to area @ 123 MAIN ST reported. Additional updates coming. Text STOP to cancel alerts.
Analyzed	Edison: Outage to area @ 123 MAIN ST analyzed. Probable cause: tree down . Estimated restoration 05/13 12:30 PM . Text STOP to cancel alerts.
ERT	Edison: Working to restore outage to area @ 123 MAIN ST . Estimated restoration 05/13 2:30 PM . Text STOP to cancel alerts.
Closed	Edison: We’ve restored some customers in your area @ 123 MAIN ST at 05/13 2:15 PM . Text OUT if power still out. Text STOP to cancel alerts.
Suppressed outage	Edison: Working to restore outages to area @ 123 MAIN ST . Due to severe activity, estimated restoration unknown. Additional updates coming. Text STOP to cancel alerts.

2. Templates should be concise

Messaging templates should be short, informative, and easily digestible by your customers. In addition, each channel has requirements which must be taken into consideration. It can be tricky to craft a short message that informs rather than confuses. The table below shows various channels and relevant details.

Channel	Length	Limitations
SMS	160 chars	Text only
MMS	500 chars, multimedia content	Text, picture, audio, video
Email	No limitation	Plain text, HTML
Voice	30-60 seconds	Pre-recorded, text-to-speech (TTS)
Mobile push	None	Limited two-way

3. Use a variety of communication channels

Email and phone calls have been around for a long time and have been the primary source of communication between a utility and their customers, however, new options are emerging all the time. Over the past decade, short message service (SMS) text messaging and mobile push channels have developed. Now, a new modality is entering the market, multimedia messaging service (MMS), which includes transmission of picture and video content.

Sending MMS outage map reports can avoid customers having to click through web outage maps during a storm. They combine proactive notifications with a relevant sized map that communicates the intensity of a service disruption. Oftentimes, customers do not understand the scale of an outage. With this new channel you can now create multiple templates that inform and provide context to the restoration effort. The image of the lineperson who just climbed a pole in frigid temperature helps to establish customer empathy. Picture and video templates can be created on-the-fly and complements SMS text messaging notifications.



4. Test, test, and test again

Electric utilities are naturally concerned about the impact of sending erroneous or inaccurate restoration times. To ensure this doesn't happen it's important to test, test, and test again. It is always best to use employees or contractors as beta users to allow testing of all scenarios and preferences BEFORE you go-live and invite customers to use the system. Testing results should be evaluated from both the operational point of view as well as the customers' point of view. Although potentially tedious, frequent testing and retesting can be your best friend to avoid problems or backlash from your community or Board.

5. Fresh eyes

While a designated project team is typically deployed to put a notification program in place, it is always a good idea to have other employees, not involved in the development, review the scenarios, workflows, and messages. The value of "fresh eyes" on a product or problem cannot be overemphasized. It's easy to overlook mistakes or omissions when you're the creator or have been working with a document or process

for a while. Use a group of employees to double check scenarios and messages who have not been involved in their development.

6. Simulate a variety of scenarios

Review and test the workflow and messaging you've created for a variety of scenarios such as sunny-day situations or rainy-day situations. Remember to think through potential one-off situations and include a realistic number of outages that represents your worst-case scenarios.

Here is an example of a potential workflow progression of text alerts over time for a power outage.



Also, in order to simulate a proactive outage alerts process, you will need to perform the test by simulating messages to the number of customers you expect to opt-in for alerts. Otherwise, assume 10% annual organic growth will likely correspond to your digital marketing and outage rates. A test tool should be used for simulated messaging.

7. Don't be annoying or misleading

Communications messaging is a wonderful tool, but at some point, too many messages can just be annoying. When determining scenario workflows, consider elements that are important for customers to understand what's happening and how it impacts them without providing too much or extraneous information not relevant for their situation.

A customer should not receive an alert for every few minute restoration or field condition change, and a maximum number of message thresholds should be considered.

Use broad terms to describe restoration results when you are not completely confident in restoration, such as "Customers in your area have been restored" rather than "Your service has been restored". You don't want to mislead or confuse your customers. This

is especially important for nested outages and large-scale restoration efforts where advanced metering infrastructure (AMI) meter pings may not be available. When restoration data is not available or may be suppressed during scale outages, use a different template to notify customers that you are aware of outages and, given the scale, may not be ready to provide a restoration time.

8. Use interactive communications to gather data

Use proactive outage alerts to gain additional intelligence about an outage, especially for customers that are part of a nested outage. This can be leveraged for virtually any channel as shown below. **Error! Reference source not found.** In nearly all cases the process may be interactive – for instance, questions asked about whether a customer is experiencing a complete or partial outage. If there are multiple premises that are experiencing a service interruption the user may be queried for the specific location.

Channel	Report Outage
SMS text, Facebook	Reply OUT
Email	Click on URL link or HTML button
Voice	Respond "2" to report outage
Mobile app push	Click on URL link

Ensure options are available to opt-out of outage communications, such as STOP for text and interactive voice response call-backs (press "1" to opt-out).

Note: Twitter does not permit specific proactive alerts; namely, it is a broadcast communications channel by which a community may receive alerts, but it does not have the granularity to reach individual customers.

9. Minimize errors with proper data synchronization

The value of outage notifications is lost if messages are sent to the wrong person or the wrong address. Regular synchronization of customer account data (including email address, phone number, mobile app ID, or social handle), premise address details, and premise information with transformer, feeder, or node information is vital to ensure the proper message gets to your customers. Whether customers stop, start, or transfer service or grid topology changes, data requires continual updating and synchronization.

Loss of connectivity, brief maintenance upgrades, and changes that are not adequately coordinated result in loss of synchronization across platforms. As such, stakeholders and IT leadership should assess "loss of synchronization" and initiate periodic tests that determine any gaps. Even small gaps within very large utilities are meaningful. Once these gaps are assessed, stakeholders must perform a comparison and script rule that will address the gaps, exchange data, and update each respective system. The periodicity of such events will depend on the size of the gaps and may vary with any

changes to the various platforms.

10. Comply with The Consumer Protection Act (TCPA)

On August 4, 2016, the Federal Communications Commission (FCC) provided relief to the utility industry that would allow them to notify customers about service interruptions substantially increasing the number of customers notified for power outages. The ruling can be found at: <https://docs.fcc.gov/public/attachments/FCC-16-88A1.pdf>. It is recommended that any utility wishing to opt-in customers for service interruptions contact its legal advisers for guidance.

11. Ensure updated phone numbers

Acquiring and maintaining accurate contact information remains an on-going challenge for utilities. Historically, utilities rely on customers notifying them of a change of phone number, however, this does not happen reliably. Having updated and accurate phone numbers is even more important as we move to advanced notification systems. One problem with phone numbers is the use of recycled numbers. Recycled numbers are ones that have been terminated by an existing customer (such as wireless portability) and are picked-up by another mobile user who may or may not be your utility customer. Unless your communications platform is continuously monitoring numbers and looking for reporting portability and termination events, you may need to seek to update and/or remove numbers that are recycled. Other considerations include removing preferences and contacts for customers who have stopped service.

11. Continuous improvement

Continuous improvement is important for all processes including your messaging and notification programs. After program launch, continue to review outage communication data. At a minimum, routine analyses should evaluate messaging accuracy, number of messages per customer, and length a customer remains at a specific status.

While some internal stakeholders may push for changes to outage communications during major events, it is recommended that changes only be made after careful consideration, planning, and testing. In addition, all ongoing testing and subsequent changes should be coordinated by a single project manager and point of contact. Even minor changes to rules and templates that are not well planned may go terribly wrong.

Summary

Proactive and two-way outage communications are an integral tool in serving customers during difficult times. Concise, correct, and relevant messaging is required in order to adequately serve these customers and improve their impression of your organization. If the customer feels cared for and believes that restoration is progressing, anger may turn to understanding. As such, data integrity, simulation, and continuous improvement are necessary to satisfy customers. This occurs in an innovative environment with staff willing to learn from past mistakes and that understand the value of the customer relationship.