

Contact Centers for Crisis Communication During Pandemics or Natural Disasters

Maintaining always-on public and essential services

Major changes in the expectations of citizens in municipalities around the world with respect to the accessibility of public and essential services have led local governments and enterprises that provision those services to establish advanced contact center e-services and voice portals. The capabilities, ease-of-use and attractiveness of these new service options have had a clear impact on citizens' satisfaction with their public service provider, and on the level of trust they have in the provider. And trust is just as important to public service providers as achieving business objectives is to a commercial enterprise. In times of crisis, like pandemics, earthquakes or economic downturns, the need for public services usually increases rapidly, generating more traffic for e-services and voice portals. Therefore, designing these portals with the capacity to deliver "always-on" service is critical to supporting citizens in troubled situations, and to maintaining a high level of trust between public service providers and the public.

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Introduction

Crisis situations, such as pandemics and major tragedies, continue to occur around the world: fatal earthquakes in Asia, hurricanes and flooding in the Caribbean, and major accidents, such as air crashes, train derailments, and industrial accidents. The International Air Transport Association (IATA), for example, states that:

... the average number rate of accidents remains stable — about 0.80 hull losses per million flights in 2007 and 2008 — the increase in the number of flights and transported passengers will lead to a growth in the number of fatal accidents in the coming years.¹

These crises and the recent economic downturn clearly demonstrate that during tragic situations the sheer number of requests for information or behavioral advice by citizens increases dramatically. A common question is:

What should I do in case of bankruptcy of the financial institution that was supposed to guarantee my assets?

For this reason, public and essential service providers need dedicated information and communication contact center systems that can manage and answer public queries in normal situations, as well as during crisis situations that generate a sudden increase in inbound traffic.

Market trends and challenges

The paradigm of Citizen Relationship Management (CiRM), with the emergence of eGovernment in particular, has experienced unprecedented transformation since the early 2000s. The main characteristic of CiRM, compared with traditional business-oriented Customer Relationship Management (CRM), is that it is aimed at engaging citizens. This is accomplished primarily with non-commercial relationships by offering public service provisioning through service portals for services that deal with a variety of subjects, including health, weather, natural environment conditions, and legal issues and regulations.

Most public service organizations that have established CiRM processes have done so with a contact center voice self-service portal — usually using a toll-free number and voice response automation — where callers can either get automated responses to their queries or get in touch with human operators when needed. And even though the citizen-government relationship has no business trigger, the challenges of quality and availability remain just as critical for these service portals as they do for other enterprise communications infrastructures. Keeping citizens satisfied is a key success factor for a trusted relationship, even if the level of satisfaction with public services might have a negligible effect on election polls.

The reality is that citizens not only expect public services to assist them in situations of major environmental trouble, they also want to be able to trust and rely on those services. An efficient public service contact center portal should be able to deliver information and services whatever the circumstances. For example, some organizations like airports, airlines, fire brigades, universities or hospitals are already running contact centers, but these are probably not ready to face a major crisis situation.

The challenges of the normal phase

In normal situations, public portals, like the 311 non-emergency number in the US and the 101 or 111 numbers in some European countries, provide regular services to citizens: mainly information, e-services and human interactions. The service must be well designed so that it can handle a variety of queries in a way that leaves citizens satisfied with the answers as well as with the quality of the service. It must also be organized so that the cost of the service is acceptable to the community.

¹ Source: www.IATA.com

To solve this difficult equation, many municipal authorities and local governments have put automated services in place to reduce the average workload of customer contacts. Because they have to provide numerous services — civil registry, tax registration, educational services — through one single number, automated menus must be kept attractive and avoid long lists of options. At the same time, the effectiveness of the service must rely on a well-structured combination of processes that eases public access to a relevant level of information.

The challenges of the alarm phase

The citizenry's perception of public services not only depends on its satisfaction when using those services in normal times but also on their ability to support them in troubled times.

When an unexpected event occurs, there is a phase when only a few citizens — the first to be directly affected or to get knowledge of the event — are aware of it. In this phase, the requests for information increase rapidly and these requests cannot be treated in the usual manner because they require more expertise or “emergency” processes to be put in place. The need for human interaction during this phase grows as the overall traffic level goes above normal rates.

The consequences of the event may also directly affect the premises where the information service is hosted. Therefore, it is important that service continuity is ensured by:

- Absorbing the traffic peak by adding new resources to the response pool and by quickly reconfiguring the existing routing strategies accordingly
- Mobilizing beyond the traditional information service customer contacts' silo to provide citizens with skilled responders. There must also be a disaster recovery plan (DRP) in place to rectify any damage affecting the infrastructure itself.

The challenges of the crisis plateau phase

At some point, every crisis begins to affect all citizens in the crisis area. This is known as the crisis plateau phase, and it is usually characterized by a significant increase in communications traffic to the public service provider or portal. During this phase, public service providers have to inform all citizens about how to respond to the new environmental situation. Therefore, the public service provider must ensure that:

- The resource pool of the information service is enlarged and adapted to the new conditions. Regular civil servants or employees are usually asked to participate in the response process, and some areas of information specialization will require more expertise than others.
- The routing strategies of the system are adapted accordingly and automated voice response services efficiency is improved to let employees only respond to interactions that really require attention, and avoid any congestion in human interactions.
- The automated voice portal is capable of avoiding any misrouting of calls by re-routing incoming interactions to the most appropriate external service.

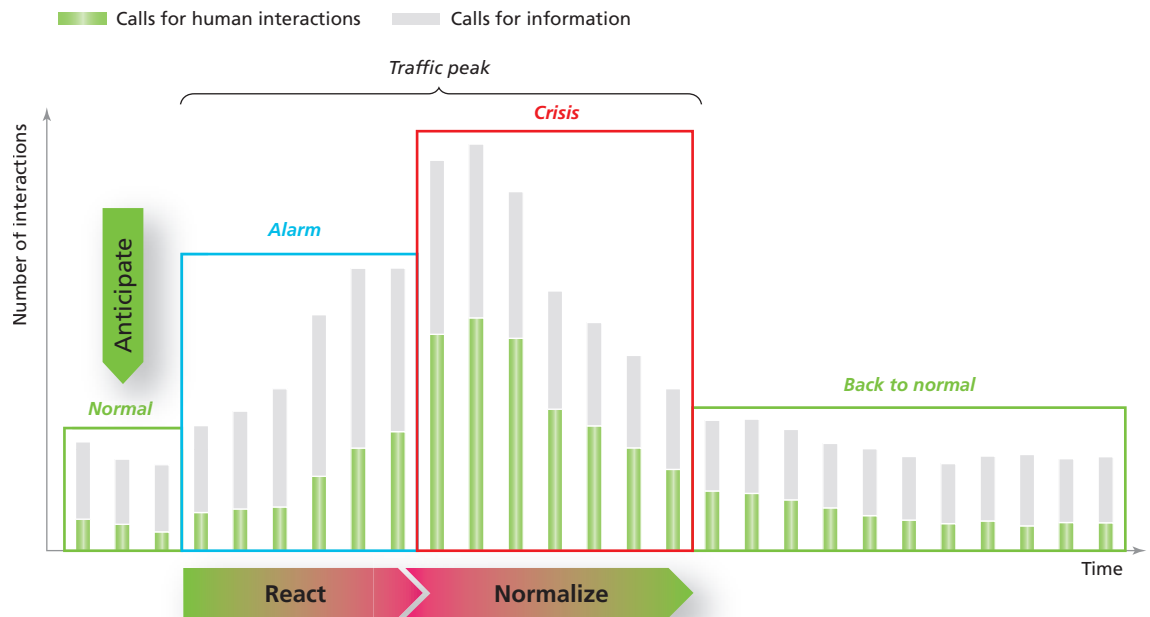
The challenges of getting back to normal

After the plateau phase, the crisis usually subsides and the public service provider works on getting everything back to normal. At this point, the number of requests for human interactions slowly decreases and the need for automated information changes from crisis-related queries to post-crisis-related and regular queries.

Eventually, the majority of the calls are for interactions associated with regular services. But the distribution of queries may vary when compared with the initial normal phase because some new requests will appear as a consequence of the crisis. In this situation, the routing strategies required are very similar to those during the initial phase, but the intensity of the traffic is slightly different and some new routing rules have to be created.

Again, the key success factor is to have the ability and capacity to constantly adapt the system throughout each phase (Figure 1). Quickly reprogramming the contact center routing strategies and easily reconfiguring the automated voice portal strings will contribute to a higher level of performance and an always efficient and correctly scaled system.

Figure 1. Contact center performance is directly related to the ability to adapt the system during each phase of a crisis



Face crisis call management challenges by implementing the appropriate strategy

Set up an efficient information/transactional portal

An efficient and effective information portal aimed at servicing citizens in any situation — normal and crisis — must operate 24/7, offering more automation during “out of business” periods.

Automated services and contact center “human” interactions must be well integrated to optimize the traffic load on each part of the system during every phase of a crisis. And information systems must be tied to the citizens’ portal to maximize the efficiency of the service.

Build effective automated systems

A citizens’ response service must offer satisfying and cost-effective service provisioning, particularly when offering a variety of services. The portal must remain attractive by providing intuitive experiences.

These days, voice portal and speech self-service menus are based on natural language recognition technologies, and they reduce operational costs associated with human interactions. As a result, they offer an affordable yet satisfying solution for public voice portals:

- Natural language recognition based on automatic speech recognition (ASR) technology eliminates the user’s typical frustration associated with “old-fashioned” Dual-Tone Multi-Frequency (DTMF) Interactive Voice Response (IVR) menu browsing. For example, when calling an embassy or foreign affairs services office to learn about travel conditions in China, it is easier for the caller to talk rather than to press a key. The caller might directly ask the following questions to the automated voice portal:

“What are the current travel conditions to go to China? Do I need a visa? And what is the health situation?”

The system will capture the essential elements of these questions (“travel”, “China”, “visa”, “health”) and will probably ask for more information:

“Are you an American citizen?”

Have you traveled to a tropical area recently?”

Based on the answers to these questions, the system will finally provide the caller with the most suitable answer.

- Text to speech (TTS) options allow public service providers designing a system to easily build menus and content — no need to record voice prompts.
- To some extent, Voice Extensible Markup Language (VXML) allows systems to leverage existing content from other information interfaces, such as Web portals.

Voice portals can also be established to provide transactional options that help to off-load contact center agents. For example, callers can be given the option to easily fill out a virtual form through a voice portal.

These are only a few examples of the possibilities offered by modern voice portals that are open to various integration possibilities, usually through an ergonomic programming GUI.

Qualify inbound interactions and route them to the right skill

Human interaction is a key element of citizen services. But service efficiency depends on how the initial need was qualified and answered.

Qualification is the key phase. This is accomplished by combining contextual information — when is the query happening and who is the caller (caller ID) — and, in some cases, by gathering information from the IVR system. Based on this, the most effective routing strategy can then be applied and the call can be routed to the most skilled customer contact. But this is always done with alternate solutions available (waiting queue, IVR options while waiting, call-back, diversion to a less skilled agent, etc.) for times when the agent is busy.

When combining automation and routing effectiveness, governments are able to offer always-on services that guarantee that each and every query is processed in a satisfying and cost-effective manner.

Be prepared to answer an exceeding number of calls

Obviously, the number of queries will skyrocket when a crisis occurs and the increase in call volume will begin with the alarm phase. The service response system must, therefore, have the capacity to connect, qualify, route and answer this overload:

- The connection capacity must be forecasted to set up, from the network layer, a diversion strategy to other backup systems to avoid any traffic congestion.
- Backup systems can be part of the DRP.
- Qualifying and routing strategies must be easily modified to change according to the event.
- The system must allow for overrun capacities resources to be added without having to enter a complex configuration or maintenance sequence, or by going through difficult licensing processes.

Efficiency is maximized when any regular employee of the organization can simply give a hand — become part of the customer contact pool — and participate in answering queries.

Be prepared to adapt to circumstances

To ensure public service providers can adapt to a sudden change in initial traffic conditions, they need a flexible system that can easily support re-programming and resource add-ons:

- Lead time to adaptation must be shortened. Intuitive, easy-to-use GUI configuration applications offer a quick way to manage IVR and contact centers in a few minutes.
- On the other hand, the solution must offer ways to add additional agents to the contact center. The possibility to connect regular employees, whatever their desktop environment, should be the rule. In addition, the ability to add mobile devices as contact center agent terminals can help in situations when the contact center premises are damaged.

Provide always-on response service

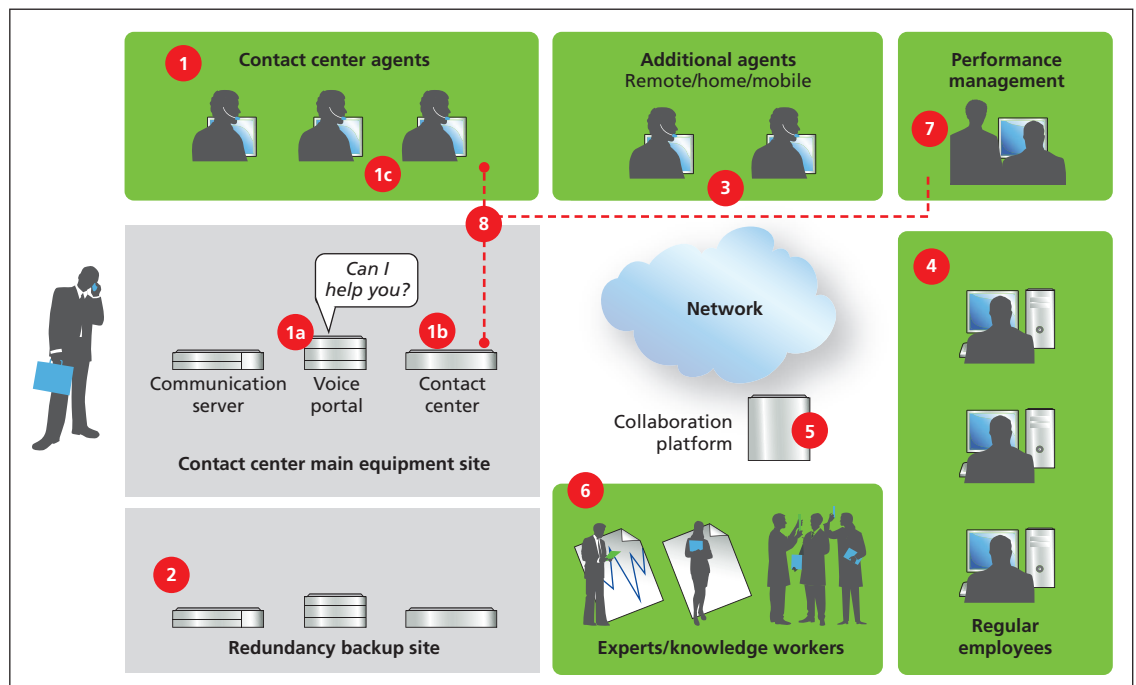
Because citizen service portals are designed to play a crucial role in major crises, their always-on availability is non-negotiable. The DRP must be pre-defined to take into account all situations. Most importantly, the solution must be backed up and continuously monitored to detect any malfunction and resolve it accordingly:

- Server redundancy or solution backup must be the rule, preferably involving a minimum of two different locations to avoid the possibility that the consequences of the crisis event may simultaneously affect the main and secondary sites.
- In terms of monitoring, a suitable performance management application must be set up that can immediately detect underlying network anomalies, monitor contact center activities, and react appropriately to any changes.

The Alcatel-Lucent approach

Alcatel-Lucent has developed a contact center solution blueprint that addresses all the requirements for efficient information management during crisis situations. Figure 2 shows the typical elements that are needed to deliver an efficient, always-on information service.

Figure 2. Alcatel-Lucent always-on contact center solution blueprint for public service providers



The key elements of the Alcatel-Lucent solution shown in Figure 2 are:

- 1 The main site's activity that operates in normal conditions, offering automated services through a voice portal (1a) and human interactions through contact center services (1b and 1c)
- 2 The backup facilities, which are mainly used to mirror the activity of the main site, but are located at a secondary site
- 3 The ability to easily add agents from diverse locations to the resource pool to help absorb traffic peaks during alert or crisis phases
- 4 The ability to incorporate regular employees within the response service, leveraging the routing capabilities of the solution architecture to allow other employees to give a hand when traffic exceeds normal levels
- 5 and 6 The ability to integrate subject matter experts into a response process to help agents or employees resolve complicated situations from within or without the organization
- 7 and 8 Real-time monitoring of the underlying network's performance and overall activity. Supervisors can then apply all relevant procedures to change the routing strategies in case of a major alarm or malfunction.

To deliver always-on interactions, the voice solution is built on the Alcatel-Lucent OmniPCX™ Enterprise Communication Server voice infrastructure. Depending on the level of functionality to be offered to citizens, voice portal features can be based either on the Alcatel-Lucent OmniTouch™ 4625 Contact Center Interactive Voice Response solution, the Genesys™ Voice Platform solution or, for more simple applications, on the Visual IVR function embedded in the Alcatel-Lucent OmniTouch Contact Center (CC) Premium Edition.

Also, depending on the type of interactions (voice only, voice and e-mail, any media), the number of agents involved, or on the integration capacities needed, the contact center solution can be based on the Alcatel-Lucent OmniTouch CC Standard Edition, the OmniTouch CC Premium Edition or the Alcatel-Lucent OmniGenesys™ Contact Center solution. These solutions ensure high availability through redundancy or backup and multi-site features.

The Visual CC interface, available on the OmniTouch CC Premium Edition and OmniGenesys Contact Center, allows public service providers to connect any employee, using any device (fixed, mobile, SIP-compatible terminals) without having to enter an IP PBX configuration sequence.

Collaboration within the citizen's interaction paradigm will be ensured with the integration of the Alcatel-Lucent OmniTouch 8460 Advanced Communications Server and Alcatel-Lucent OmniTouch 8660 My Teamwork™ within the OmniTouch CC Premium Edition or OmniGenesys Contact Center solution through a specific component called the Alcatel-Lucent Contact Center Teamer.

The Alcatel-Lucent VitalSuite™ Performance Management Software allows public service providers to permanently monitor all contact center-related activities on the network. It allows them to ensure that quality of service is always optimized and make sure that data flows within the contact center are fluent enough to guarantee shortened resolution times.

Conclusion

CiRM, e-services, and voice portals have transformed public service communication. They are now key elements for managing interactions between citizens and their governments in normal times and in crisis situations. And there are opportunities for governments and enterprises that operate in the field of public services to offer efficient and attractive solutions based on affordable platforms.

When creating a new transaction or information portal, governments must consider offering attractive services to establish a trusted relationship with their citizens. The crucial element will be the capacity of the portal to surpass crisis situations by offering always-on services that will reinforce the perception of reliability in every citizen's mind.

But optimizing contact center operations for crisis communications goes beyond public service providers. With the right platforms, other organizations that deliver essential services can also ensure the public gets critical information when they need it in times of crisis. Transportation service providers, from rail to air, can ensure there is a smooth flow of information after accidents or major changes in weather systems that affect daily operations. And utilities can ensure customers have access to the latest information during service interruptions.

With years of experience in contact centers and voice portals, Alcatel-Lucent delivers solutions that allow all organizations to deliver always-on services.

Acronyms

ASR	automated speech recognition
CiRM	Citizen Relationship Management
CRM	Customer Relationship Management
DRP	disaster recovery plan
DTMF	Dual Tone Multi-Frequency
IVR	Interactive Voice Response
SIP	Session Initiation Protocol
TTS	text to speech
VXML	Voice Extensible Markup Language

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