

BEST PRACTICES FOR INCOMING CALL RECOVERY™

There are 3 steps to a successful telecommunications recovery after a disaster or other outage:

- 1** **Diversion:** To divert incoming calls around the failure point and toward another destination. The “best practice” would include the capability of diverting during all possible failures, including catastrophic carrier failures.
- 2** **Control:** To establish real-time control of the diverted calls and enable rapid adaptability to unforeseen obstacles, with the goal of providing a professional experience for callers during all types of outages.
- 3** **Delivery:** To exhaust all possible means—creatively using both existing and new technologies—of delivering calls into existing premise equipment, before automatically attempting live delivery to the same employees through other paths, then attempting the next best option, then the next best, and so forth, with a final fail-over to voicemail and/or recorded announcements.

This article will explore the “best practices” within these three steps and how they can be used to provide a surprisingly effective and professional recovery for incoming calls during even the most severe outages and disasters.

1 **STEP 1: DIVERSION** (*also called a “Trigger”*)

When an outage occurs, the first—and most critical—step to recovering service for existing phone numbers is to divert incoming calls away from the problem. The final destination of the diverted calls is dealt with in succeeding steps.

Though steps 2 and 3 will determine the quality of the recovery, without a successful diversion in Step 1, affected numbers cannot be recovered*. And since steps 2 and 3 typically do not need to be turned on or off or triggered in any way, the diversion in Step 1 is the trigger of the entire recovery process.

Of the several different diversion methods that are appropriate for different situations, the best method to use depends mostly on two factors: the type of service and the cause of the outage, both listed below. Other factors can come into play that may affect the method used, such as carrier capabilities and responsiveness.

[Type text]

There are four types of incoming calls that must be diverted when an outage occurs:

- Local numbers/DIDs (either POTS or dedicated trunks/circuits)
- Switched toll-free (rings onto a 10-digit local number)
- Dedicated toll-free (rings onto dedicated LD carrier trunks/circuits)
- 9-1-1

Though there are unlimited possible scenarios that can lead to outages, physically there are only six potential failure points—“the 6 Vulnerabilities”—that require protection:

1. Equipment failure (hardware or software failure of PBX/phone system)
2. Power failure
3. Last mile (cable cut or other problem with the connection to the carrier)
4. Local carrier failure/congestion (affects local numbers)
5. Long distance carrier failure/congestion (affects toll-free numbers)
6. Evacuation or quarantine

There are several methods of successfully diverting calls, even when all connected carriers have completely failed or are unresponsive. The two most common are:

1. Call forwarding of local numbers by the local carrier
2. Re-termination of toll-free numbers by the long distance carrier

Little known are diversion methods that can be successfully used even when local and/or long distance carriers fail or are unresponsive. Comprehensive call diversion strategies for all types of inbound calls and for all 6 Vulnerabilities—including carrier failures—are employed and regularly tested as part of Telecom Recovery’s product line.

***The Final Alternative: A Toll-Free Hotline**

The possibility exists of a catastrophic outage where local numbers cannot be recovered for days or even weeks. To mitigate the impact of such an outage, every organization should establish a toll-free hotline that can completely circumvent any carriers, equipment, and other facilities in a geography.

When calls have been successfully diverted away from the problem, they must have a good place to go... it’s time for Step 2: Control.

[Type text]

[Type text]

2 STEP 2: CONTROL

Diverted calls must land at a backup system of some kind, somewhere, ideally where full real-time control can be re-established. At a minimum the backup system should have the following characteristics:

- Ample capacity
- Physical distance from your geography
- Network diversity (multiple carriers, PSTN and VoIP, etc.)
- Ability to receive and store voicemail
- Ability to receive and store faxes

Optimally, the system should also have the following capabilities:

- The ability to first attempt delivery into existing customer premise equipment via internet, alternate carrier, private network connections or satellite before automatically failing over to other options
- Ability to deliver live calls to any useable connection (cellular, land, internet, satellite, etc.)
- Hunting/overflow between multiple locations
- Real-time remote add/move/change control without disconnecting callers
- Separate treatment for different phone numbers (DID/TFN detection and routing)
- Call queuing with call distribution to multiple destinations before failing over to voicemail/announcements
- Dial-by-name/extension directories
- Ability to rapidly and remotely re-record all prompts/greetings, even if a microphone or telephone is not readily available
- Real-time reporting

Once control over diverted calls is established, callers can enjoy a professional experience even in the midst of a massive outage, with appropriate greetings, options, and/or other information, and live delivery can be attempted at myriad destinations.

To ensure the best possible experience for callers no matter the outage, go to Step 3: Delivery.

[Type text]

[Type text]

3 STEP 3: DELIVERY

With proper control established there are many possibilities of what to do with recovered calls. There are, however, some best practices that can guide a recovery to its best, most professional outcome.

The Call Delivery Ladder™

Telecom Recovery's Call Delivery Ladder™ (below) provides a best-practices guideline for enabling the best, most professional experience possible for callers during a telecom outage. The object of the ladder is to keep callers as close to #1 as possible, and automatically fail over to #2 only if #1 has been attempted and/or is not possible, and so forth.

1. Deliver calls into same equipment through another path
2. Live calls to same people/departments through another path
3. Live calls to other people, departments, locations
4. Voicemail
5. Announcement

Rung #1: Deliver calls into same equipment through another path

The ideal recovery from an outage is live call delivery into the same equipment through another path, so that callers are completely unaware of any problems. Telecom Recovery has discovered or developed several different methods of effectively delivering calls back into existing equipment:

- Installed POTS lines (analog/copper/centrex, etc.)
- Installed alternate carriers
- Existing private network (starting at another location)
- Existing public internet connection (as PRI, analog, T1, or SIP)
- Satellite (as PRI, analog, T1, or SIP)

Rung #2: Deliver live calls to the same people/departments through another path

If Rung #1 is unsuccessful, the next live delivery attempt should be to the same employees through alternative paths, such as POTS lines, mobile phones, home phones, VoIP over any available internet connection, hand-held satellite phones, and more.

For main numbers and departmental DID's the goal is to provide a simple, consistent and professional experience until the call can be connected live to the right person on an alternate phone of some kind, somewhere. This can be accomplished with various tools and features, such as:

[Type text]

[Type text]

- Auto attendants with custom greetings, after-hours functionality, security features
- Call distribution with call screening, whisper announcements, etc.
- Simple hunt/overflow across unlimited locations
- Toll-Free DNIS detection that skips menus and goes straight to queues

For personal DIDs, one of two options is appropriate:

1. The call is directly routed to the individual's mobile phone, home phone, VoIP number, etc., or multiple numbers before failing over to backup voicemail.
2. The caller is first routed to a menu and prompted to choose an appropriate option, such as dial by department, by name, dial by extension, re-entering the DID, etc., then the call goes to #1.

Rung #3: Deliver live calls to other people, departments, or locations

If Rung #2 is unsuccessful, the same tools and features should be used to have calls seamlessly fail over to other people, departments, and/or locations.

Rung #4: Voicemail

Rungs 1 through 3 of the Call Delivery Ladder offer the best chance of a live connection between the caller and the best employee available to take a call. If these options are unsuccessful it is still possible to establish two-way communication—though delayed—by failing over to backup voicemail.

Rung #5: Play an announcement

There are times, and possibly specific phone numbers, where the best alternative—or the final option—is to play to the caller an informative, reassuring announcement, either for a specific department or generally.

[Type text]