Disaster Preparedness for Modern Supply Chains

Explore this 6 chapter e-book on different aspects of disaster preparedness through the lens of the supply chain.
Disasters happen. Are you ready?

When Hurricane Katrina ripped through New Orleans in 2005, the deadly storm didn’t just bring a city to its knees. It disrupted thousands of supply chains across a wide swath of America. Roads, the port, and oil refineries were shut down, with widespread impact for months. Likewise, when the Tohoku earthquake and resulting 45-foot tsunami hit Japan in 2011, the effects were felt well beyond the country’s borders.

The fact is, disasters happen. They happen across the United States and around the world in every imaginable form and size. They include natural disasters like earthquakes, floods, tsunamis, wildfires, hurricanes, and tornados. Even labor disputes, acts of terrorism, and changes in political regimes and regulatory environments can trigger crisis events that make it difficult to keep a supply chain running.

So, if disasters are a fact of life, how do you prepare your supply chain to bounce back? How do you swiftly mobilize resources to begin recovery efforts – and keep your people, resources and assets safe?

The six chapters in this e-book explore different aspects of disaster preparedness through the lens of the supply chain:

1. 10 bases to cover in planning and preparing your supply chain for the unexpected
2. The importance of maintaining detailed policies, processes and procedures
3. 5 steps to safely secure assets in and around affected areas
4. 3 things you must do to prepare equipment for what happens after a storm
5. 3 essential resources to have on standby: partners, drivers and vehicles
6. 5 steps every supply chain manager should take to prepare for a disaster before it’s imminent
Is your supply chain ready for a disaster?

Cover your bases and prepare your supply chain for the unexpected.

Supply chain disruptions come in all shapes and sizes – earthquakes, hurricanes, tornadoes, fires, floods and even power outages and labor stoppages. Whatever the flavor, disasters can create a variety of supply chain management challenges, from disrupting your power supply, grounding your fleet and diverting shipments to compromising the safety of your assets, your employees and local community.

Is your supply chain ready for the worst Mother Nature can dish out? The key to disaster-proofing your supply chain and being able to move swiftly and smoothly into response mode is preparation. To make sure you can swing your supply chain into action when the unexpected happens, be sure you cover these 10 bases:

1. **Plan ahead:** Test your readiness and have a documented business continuity/disaster recovery/contingency plan in place that engages resources at every level. This might mean having a set of procedures outlining what to do, anticipating steps you’ll take and running different scenarios (best, average, worst-case) by your team.

2. **Set aside funds:** Make sure you have budget set aside to cover extra drivers, trucks, emergency and relief workers if you need them, so you’re not scrambling for funds at the last minute.

3. **Designate a crisis team:** Know who will make decisions and communicate them across your supply chain to launch an effective response.

4. **Know who to call:** What to do and when and where to go in the event of evacuation. Keep a list of disaster resources readily available:

   - Federal Emergency Management Agency (www.fema.gov)
   - American Red Cross (national & local chapters) (www.redcross.org)
   - State disaster information (unique to your state, e.g. www.floridadisaster.org)
   - Public radio stations
   - Hotel room availability
   - Local, county and state Office of Emergency management
   - The Weather Channel
5 Line up suppliers: Nurture strong relationships with several suppliers to provide flexibility if/when disaster strikes and you need to secure resources from alternate providers.

6 Diversify your transportation modes: Have backup drivers, vehicles, and routes ready.

7 Document processes: If you have to bring in extra people, documented procedures make it easier to get them up and running fast.

8 Know what you’ll need: Determine what components, materials and supplies will be in demand.

9 Anticipate demand: Make sure your supply chain can flex to meet surges in demand.

10 Be ready for detours: Move products through different routes, ports, waterways or railways.
Can you swing your supply chain into action when disaster strikes?

Maintain detailed policies, processes and procedures and plan, plan, plan.

Supply chain disruptions can have a significant impact on your business, whether it’s lower productivity, delays in getting products to store shelves or unhappy customers. Imagine a tornado rips the roof off your main distribution center, a fire turns your production facility into a crater or a flood grounds your fleet. Without a plan, any of these events can grind your supply chain – and your business - to a halt.

Being properly prepared and able to launch a response that prevents or mitigates the impact of the disruption means maintaining and documenting your supply chain processes and procedures. It also means having plans in place. Then if/when disaster strikes, you can swing your backup plan into action and bring additional people up to speed quickly. Consider these five steps to planning for disaster:

1. **Map and assess internal & external risks:** Collect data about your supply chain, understand the interdependencies between nodes (e.g. a key supplier’s dependency on a particular transportation company) and identify threats that could disrupt/disable your supply chain. Develop and document strategies, plans and procedures to maintain the continuity of your supply chain.

2. **Create a contingency plan:** Develop process-level plans that map solutions to the risks and strategies you identify. Encourage internal supply chain teams and external vendors, technology providers and supply chain partners to help develop the plan. Then test, test and test again.

3. **Get suppliers and vendors on the same page:** In a perfect world, you’d have a backup plan for every supply chain stakeholder. At the very least, focus on the vendors and partners most essential to the day-to-day operations of your supply chain. Ask for and review their business continuity/disaster recovery plans, share yours with them and work to get them all in sync.
5 Draw up plans for specific procedures: Your responses to different types of disasters may vary. For example, you may react one way to a hurricane and respond completely differently to a power or telecom outage, health pandemic or transportation system disruption.

6 Have an evacuation plan: Outline detailed plans for evacuation and shelter-in-place plans and practice regularly. Know where to go if you’re asked to evacuate. Make note of alternate routes if major roads are clogged or close. Establish backup locations for your key facilities and a central meeting place for employees.

Sample of an evacuation route map for the state of Florida produced by S.E.R.T State Emergency Response Team.
Hurricane coming? Take your supply chain into the eye of the storm

Five steps to safely secure assets in and around the affected area ahead of time.

Typically, when a hurricane watch turns into a hurricane warning and supply chains swing into action, it’s to swiftly move people, assets and resources out of harm’s way. But what if you need to ramp back up in an instant when the worst is over? What if your disaster preparedness plan doesn’t mean moving from the storm – but securing assets in and around where the affected area is expected to be?

Sound counterintuitive? Not if you’re in the retail, utility or healthcare business. Instead of shifting into lockdown mode, the goal is to safely place assets in and around where the affected area will be. If you’re a power or telecommunications provider, your mission is to restore service as quickly as possible. Hospitals have to keep running and restore operations quickly. Retail operations typically have to double or triple inventory to provide food, water, ice and medical supplies before, during and after the event.

Here’s a checklist of the top 5 steps to take to get assets secured in and around the affected area:

1. **Stay informed:** Be aware of what’s out there. Know the storm, its size and expected impact. Track its trajectory so you know where it’s headed and can plan accordingly.

2. **Line up trucks and drivers:** The reality is, you may be competing with FEMA for resources if you don’t do this ahead of time. Request reinforcements from other parts of the country. Then round up equipment, whether it’s flatbed trailers, reefers or refrigerated units to transport food, ice and medical supplies.

Keep in mind, you may need twice or triple the number of vehicles and drivers you usually use. Make sure all preventive maintenance is done, trucks are fully fueled and you have a place to fuel if power is knocked out. Don’t have access to these resources within your own organization? Partner with a provider ahead of time that can secure assets for you.
3 **Book hotel rooms:** If you’re bringing in managers, drivers, and other extra people from other parts of the country, make sure you have arrangements in place to house them.

4 **Set up agreements with vendors ahead of time:** Along with internal PO process and vendor onboarding. Have agreements in place with partners/vendors in other parts of the state so that you can store vehicles, equipment and provisions there and dispatch them to the affected area once the storm passes. Work collaboratively with suppliers and business partners well before a hurricane’s on the radar, rather than later when the emergency is imminent. Procure commodity supplies from multiple sources so you have a fallback in the event of a failure with one supplier.

5 **Establish a hierarchy of responsibility:** Designate an emergency/crisis team with defined roles, responsibilities, procedures, methods of information sharing and shifts at your staging site or wherever you’re mobilizing assets. Have a location manager or senior logistics manager on-site at all times, ideally in shifts to provide 24-hour coverage. Organize drivers into shifts too, so that when the first crew goes home, fresh drivers can come in behind them.
Orchestrating a rapid, coordinated recovery from a hurricane takes planning, preparation and collaboration. It also means making sure vehicles are secure, properly maintained and fully fueled. Consider three things you must do to make sure your equipment is ready to roll once the storm passes.

**Make sure all preventive maintenance has been performed:**
Once the storm moves on, you’ll want to mobilize your fleet quickly to restore the flow of resources and supplies. The last thing you need is a breakdown or unexpected downtime.

The top reasons for breakdowns include tires, electrical systems, brake issues and fuel.

To avoid issues in any of these areas, make sure all required preventive maintenance has been performed on all vehicles. Technicians should inspect brakes, check warning and fault indicator lights, check engine compartments for fluid leaks, test batteries for proper fluid levels, secure clamps and check tires for air pressure, alignment and tread depth – before the storm arrives.

**Fuel up:** Fuel shortages/supply chain disruptions are common after hurricanes, whether the cause is felled trees or outages at fueling stations. Hurricane Katrina shut down most of the oil refineries in the Gulf in 2005, causing long-term fuel shortages and sky-high prices at the pump.

To keep fuel shortages from grounding your fleet, urge drivers to fuel up vehicles ahead of the storm. Have a plan for refueling if power is knocked out. This might mean working with a partner to augment your own fleet/fuel supplies. Or you may want to rent equipment to store backup fuel: a storage tank and dispensing pumps with hoses and nozzles.

Keep in mind, you may need twice or triple the number of vehicles and drivers you usually use. Make sure all preventive maintenance is done, trucks are fully fueled and you have a place to fuel if power is knocked out. Don’t have access to these resources within your own organization? Partner with a provider ahead of time that can secure assets for you.
Secure your fleet: Move vehicles out of harm’s way to a secure location, preferably inside buildings or to higher ground if you’re in a flood-prone area. Re-route trucks/drivers so they’re not headed into the storm. Consider moving vehicles to cities away from the affected area. Can’t do it yourself? Engage an outside vendor to help, either a dedicated fleet provider or third-party logistics expert. Set up internal PO processes and onboard vendors sooner rather than later so you’re not scrambling for resources at the last minute.

Hurricanes happen. But if you’re ready, you can get your fleet and your business back on the road quickly.

What are you doing to prepare this hurricane season?

Preventive Maintenance Check-List
Click here to view >>
Round up resources before the storm so your supply chain will be ready when it passes

Have partners, drivers and vehicles on standby.

If we’re going to be smart about preparing for an emergency, let’s go straight to the top for wisdom. It was Albert Einstein who said, “True genius isn’t in knowing the answer to all the questions, but knowing where to find the answers.” When it comes to preparing for a hurricane or other disaster, being ready isn’t about having every resource on hand. It’s knowing where to go to get the resources you need.

This means forging relationships with partners and suppliers, setting up PO processes and rounding up resources well before you need them. Here are three essential resources you should have standing by:

**Partners:** Like most supply chains, yours probably relies on third-party suppliers, business partners and service providers. These partners may provide you with raw materials, components, parts, IT services, transportation or third-party logistics services. In the event of a disaster, solid partnerships with supply chain partners can mean the difference between ramping up quickly and being out of commission.

Work with your supply chain partners to plan, execute and monitor operations. Short on people, equipment or fuel? That’s where a supplier or partner can step in and help. To minimize risk, build relationships with multiple suppliers so you have layers of contingencies if one partner fails.

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-Albert Einstein
Drivers: Make sure you have enough drivers to meet your needs, whether your disaster preparedness plan moves trucks and drivers to the affected area or away from it. Forge relationships with other divisions/departments, recruit drivers from other areas of the country and make arrangements to fly them in and house them. If you don’t have the resources in-house consider engaging driver leasing companies or a dedicated fleet.

Keep in mind, you may need twice or triple the number of vehicles and drivers you usually use. Make sure all preventive maintenance is done, trucks are fully fueled and you have a place to fuel if power is knocked out. Don’t have access to these resources within your own organization? Partner with a provider ahead of time that can secure assets for you.

Vehicles: Do you have enough vehicles to swing into action once the storm is over? Being prepared means knowing how many vehicles you need to dispatch in an emergency and having equipment ready to roll at any given moment. The key is to make arrangements with other divisions or partners to line up assets ahead of time.

Consider moving vehicles to different cities/locations surrounding the affected area. The right partner can often provide access to rental or lease fleets. Keep in mind, as we noted in a previous post, you may have to move fast to secure supplemental vehicles before FEMA arrives and requisitions all available equipment.
CHAPTER 6

What every supply chain manager should know about preparing for disaster

As a supply chain manager during a disaster you will need to make big decisions.

Different supply chains respond to disasters in different ways. Some, like utilities (think telecom or power providers), gear up and deploy assets to affected areas so that they can ramp up quickly to begin recovery efforts. Others shift into lockdown mode, securing assets and moving people, resources and vehicles out of harm’s way.

Whether your disaster response plan takes you into the affected area or away from it, there are five precautions every supply chain manager should take to weather virtually any emergency situation:

1. **Plan:** Identify and assess all potential risks ahead of time. Have a documented business continuity/contingency plan in place and procedures that enable your supply chain to swing into action before, during and after the event. Understand where your supply chain begins and ends - from the point of origin to the end consumer and all of the components and partners that keep it running smoothly. Know who to call and how to protect your people and assets.

2. **Secure assets:** This includes all nodes in your supply chain: production facilities, distribution centers, your fleet, terminals, suppliers and stores. In short, anything that could be sidelined by a disaster. Make sure you have the products and supplies you need when the disaster is over. If you’re a hospital, this might mean water, backup power and medical supplies. If you’re a power provider, it might mean staging sites, extra trucks, drivers and techs to go out and restore power. Move equipment indoors or to higher ground if you’re in a flood-prone area.
3 **Collaborate:** Work closely with third-party suppliers, key business partners, service providers and employees to develop and execute a strategy. If you have strong relationships in place, you’re in a better position to get the resources you need when disaster strikes. If one supplier is knocked out of commission, you’ll have another to rely on. Set up a crisis team and communications and information channels and define roles and responsibilities so everyone knows how to respond.

4 **Have alternatives:** If your infrastructure or transportation modes are affected, have other options in place, whether it’s backup power, water supplies, vehicles, drivers, alternate sites, routes or transportation modes or a redundant/backup IT infrastructure.

5 **Track and monitor:** Keep an eye on the impending crisis and make sure you have visibility into other threats that could disrupt your supply chain. In addition to natural disasters, sources of problems run the gamut from terrorism and geo-political turmoil to changes in political and regulatory environments, labor rates, vendor capacity limitations, fuel volatility or work stoppages.

The secret to success in all cases is to be prepared before disaster strikes. Protect your supply chain and your business from crippling standstills or losses by taking steps now to have a supply chain disaster preparedness plan in place.
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