

Business Continuity and Natural Disaster Resilience: Where Are We Heading?

Adopting best practices for weather safety based on new science

By Glen Denny, Baron Services, Inc.

There is an increasing interest in business continuity and natural disaster resilience among large organizations and businesses. Many now realize its importance to their workforce, supply chain, ability to get people to work and products shipped out, as well its role in general asset protection. Weather-related events can have a significant effect on business continuity, and there is a need for more granular information with faster advanced warning on major events. All large organizations need emergency weather plans as part of their overall threats plans. Following best practices, effective pre-planning, using all available tools, and conducting drills help when the actual event takes place. New weather tracking and alerting technologies also have an important role to play and should be incorporated into business continuity and natural disaster resilience initiatives.

Business continuity basics

Business continuity (BC) is defined in International Organization of Standardization standard 22301 (ISO 22301), a proposed standard that specifies security requirements for disaster recovery preparedness and business continuity management systems (BCMS). ISO 22301:2012 defines BC as the capability of the organization to continue delivery of products or services at acceptable



predefined levels following a disruptive incident. In effect, business continuity is a proactive solution, whereas disaster recovery is a reactive process. Disaster resilience is the ability of individuals, communities, organizations, and states to adapt to and recover from hazards, shocks, or stresses without compromising long-term development prospects.

According to ISO 22301^[1], the important elements of a business continuity management system include:

- Understanding continuity and preparedness needs, as well as the necessity for establishing business continuity management policy and objectives.
- Implementing and operating controls and measures for managing an organization's overall continuity risks.
- Monitoring and reviewing the performance and effectiveness of the business continuity management system.
- Continual improvement based on objective measurements.

In the past, government was the first line of defense for dealing with all disruptive incidents. Recently, large businesses have started doing their own planning, as they begin to realize the impact these events have on their workforce, supply chain, ability to get people to work – and products shipped out. Transportation, logistics, and insurance firms also see it through the lens of asset protection.

Unfortunately, most emergency managers are under-trained for responding to weather-related events. A recent survey Baron conducted among public safety personnel found that only 20-30 percent of emergency management personnel training deals with weather-related events, despite the fact that 78 percent of their time is taken up with them. A far larger percentage of training dealt with terrorist, homeland security, and other event types. Survey respondents reported they did not feel adequately prepared to deal with weather events. This training gap also applies to private businesses.

Another concern is the historic reliance on the National Weather Service for most weather-related data. With a large number of unfilled NWS jobs across the country, and lack of a toolset offering that enables users to make timely decisions on their own, reliance on the NWS leaves a big gap in local knowledge and timely interactions.

Companies are looking for more granular information with faster advanced warning on major events. In this quest, they are greatly helped by the fact that NWS has updated to dual polarization (dual-pol) radar across the country, allowing users to derive more information from the data coming from the NWS radar network.

Best practices for supporting business continuity and natural disaster resilience

The most recent trend is for all organizations and communities to do more proactive weather planning, coming together around a central weather event. In addition to businesses, insurance companies, utilities, government agencies, places of worship, and community organizations like



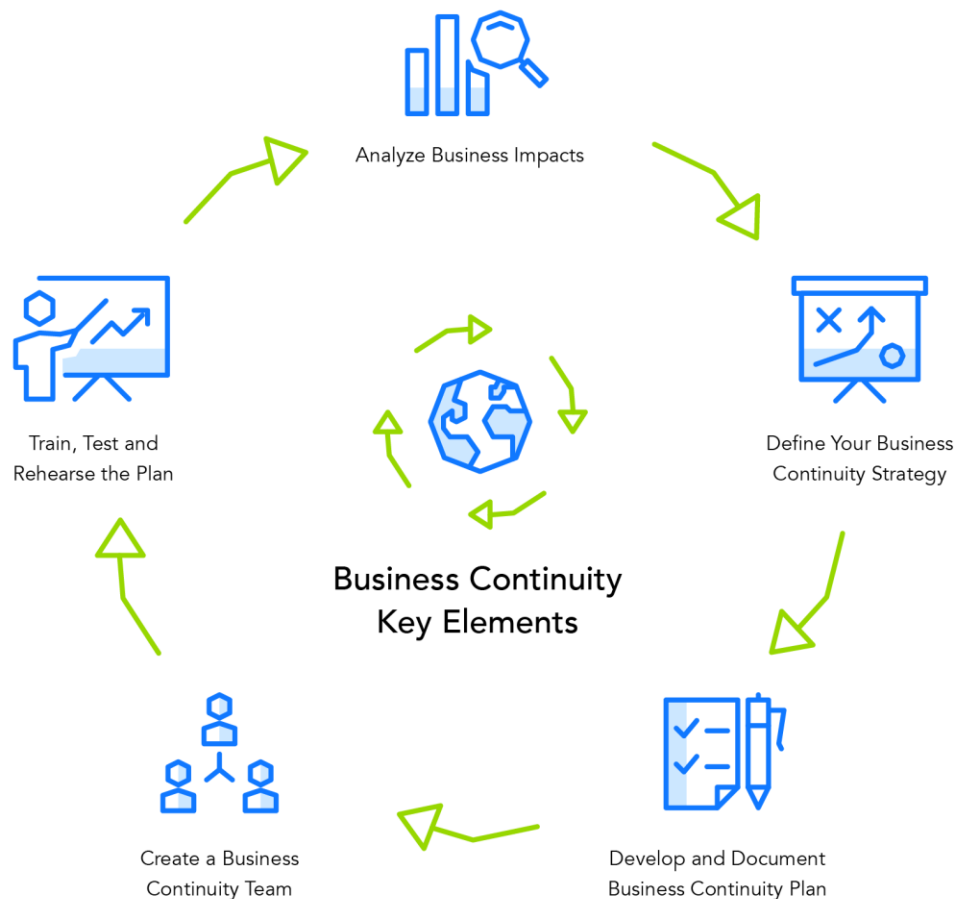
the Red Cross are tapping into a more holistic approach to weather events.

Companies prepare and manage their business continuity planning in many different ways. Most often companies include executive management, middle management, and employees of key or critical functions in the planning process.

Before starting the business continuity and natural disaster resilience planning process, companies should ask themselves:

- Should the plan address different type of emergencies (regional weather types)?

- What weather risks are most likely to affect the organization in this geographical area?
- How many key staff members should know how to carry out each key job?
- What resources are used now to identify potential weather threats to the business?
- Can the organization operate effectively when key locations are closed?
- Can we set up tiered responses based on the weather and level of disruption?



Planning

Some companies perform the business continuity planning process in-house, while others employ business continuity planning firms and use consultants. Most experts recommend a multi-step process that includes these components: ^[2]

1. Conduct a business impact analysis to determine the critical processes, functions and resources.
2. Identify and document an implementation plan to recover critical business functions ^[3]

- a. Identify the scope of the plan
 - b. Identify key business areas
 - c. Identify critical functions
 - d. Determine dependencies between various functions
 - e. Discuss acceptable downtime for each critical function
 - f. Create a plan to maintain operations
3. Identify a business continuity team to manage the business disruption
 4. Train, test, and run exercises while communicating the plan often to the staff.

There are a variety of tools available to help develop the plan. Consider use of a checklist that details the location of supplies and equipment, data backups, and backup sites. List where the plan is available and who should have it, and contact information for emergency responders, key personnel, and backup site providers.

Other useful best practices for planning include:

- Redundant backups – Maintain a full copy of critical information outside the production region.
- Testing – Conduct testing at least annually and use realistic scenarios to make sure the plan works. Each test should be evaluated for successes and failures, so the plan can be updated and maintained.
- Keep it up to date – Make sure any production or process changes are reflected in the plan.
- Training – All employees should be trained on the plan and kept updated with any changes that may be made after the annual testing. Several people should be trained in leading plan implementation. Make sure someone outside the region has been trained.
- Banking and financing – Ensure there is a means of continuing banking and finance operations.

Communication

Communication is key to any successful venture – and even more so in planning and recovery. All plans should be clearly understood and communicated to the team and staff. Plans should be in place to ensure that managers can communicate the status of the disruption and the plans for continuing business while the emergency is ongoing. Communication is necessary for continuing the relationship with customers and vendors. Plan for an alternative form of communication for management, managers, and employees.

Remote access, telecommuting, telecommunications

Facilitating remote access and telecommuting will allow employees to work remotely and keep the business running. This is especially important for employees who work with customers and vendors. It is important that employees can get access to files and materials necessary to operate the business. Telecommunications may also be an issue. For example, in 2011 telecommunications in North Alabama was heavily damaged due to several tornados. The volume of people relying on cell service caused an interruption in cell phone service and some towers were unable to transmit due to power outages. Communication with employees occurred using lower bandwidth texting rather than cell phone calls.

Maintain vendor relationships

Having a plan to continue operating through banking, ordering, shipping and delivery will be essential to keeping a business going.

Regulatory and compliance considerations

Understanding regulatory compliance for normal business operations and restricted business operations is important to maintaining the quality of the product and ensuring safety for employees and customers.

Develop infrastructure to mitigate utility and transportation disruptions

It is important to have plans in place to support a business infrastructure remotely, at an alternative location or with supportive temporary technologies. As an example, the area around Baron's headquarters was struck by multiple tornadoes, which severely damaged the electrical and telecommunications infrastructure. Baron has a redundant data delivery site with an automatic roll-over that ensured no loss of data delivery operations. The company also used its backup generator to power phones and network operations. The entire area was without power for 7 days, while Baron was able to conduct business as usual.

New weather technology helps with business continuity and natural disaster resilience

Over time, technology and commercial entities have moved weather forecasting and monitoring technology forward. Inventions like dual-pol radar and faster computers have led to weather models with more regularity and quicker incorporation of a wider variety of source materials. Higher resolution radar information provides a street level view of precipitation, both just rain and icy snow conditions. There are also quicker updates based on atmospheric projections.

Commercial technology that provides higher resolution with more accuracy and a better ability to predict where disruption may occur is critical. These new technologies enable companies to have monitoring capabilities previously only available to the NWS. They may also allow access to satellite-delivered, Internet-delivered, and cellular delivered information, along with improved accessibility of real time current weather information and monitoring capability. And the access can be from the desktop, tablet, or mobile phone.

Access to these commercial weather entities is an innovation that enables businesses to monitor their assets specifically, rather than the regional monitoring available with the NWS.

Organizations can now focus on their own concerns, assets, and needs – and monitor only those.

A wide range of different assets may be involved, depending on the company’s business.

Transportation and logistics firms may need to plan alternate truck routes in response to weather disruptions, while FedEx may be concerned about its fleet of airplanes. The emergency staff at a major university Baron works with has to monitor the impact of a weather event on the university, its large regional hospital, numerous smaller doctor-staffed clinics, and other satellite offices – across two states!

One example that works for all types of facilities, as well as for transportation monitoring, is Baron Threat Net, which provides easy-to-use data that helps identify the threat, anticipate the impact, and plan accordingly. The technology provides radar and specialized data products for monitoring road conditions, and severe weather analysis, like hail and flooding detection, as well as tools for tornado identification.

Patented processing techniques automatically analyze radar data and pinpoint threats, so business continuity planners can focus attention and resources during severe weather events. Pinpoint alerting sends alert notifications via text message, push notification, and email when weather approaches specific locations of interest. High-resolution forecast models for precipitation, temperature, and rain or snow accumulation help prepare for expected conditions up to four days in advance. Once the storm arrives, radar and current condition reports enable users to evaluate the impact of the event as it unfolds, and make any adjustments to their response plan.



Baron Threat Net is compatible with computers, tablets, and mobile devices.

Business continuity depends on good information

Many more organizations now have a vested interest in weather safety. In the past decades, weather has been a real impediment to many organizations’ ability to get their product to market. Weather monitoring and understanding weather circumstances can help organizations prevent or overcome business disruption. It can help them track assets, equipment, and staff to ensure business continuity and effective disaster resilience planning.

[1] <http://searchcio.techtarget.com/definition/business-continuity-management-BCM>

[2] <https://www.ready.gov/business/implementation/continuity>

[3] <https://www.cio.com/article/2381021/best-practices/best-practices-how-to-create-an-effective-business-continuity-plan.html>