



ECONOMIC RECOVERY FOR MANUFACTURING

Natural and man-made disaster events can strike manufacturing businesses at any time. Businesses face threats not only from disasters like drought, hurricanes, earthquakes, tornadoes, and wildfires, but also newer hazards like climate change and cyberterrorism. Manufacturing businesses can also be uniquely prone to man-made disasters, such as fires, explosions, and power and equipment failures. When disasters do strike, manufacturers and their employees are especially susceptible to damages because their work is dependent on expensive and difficult-to-replace equipment and facilities.

Public and private partners can play a vital role in helping manufacturers recover from disasters, both in the short and long term. Prior to a disaster, these partners can provide training and other support to help manufacturers develop and implement disaster response and business continuity plans. After a disaster strikes, they can help provide businesses with immediate aid and facilitate communications between manufacturers and resource providers. After the immediate aftermath of a disaster, partners can help manufacturers begin to resume normal operations through grant funding, technical assistance, and support in identifying alternative sites, equipment, and suppliers. These combined actions can have key economic and security benefits for regions, both before and after a disaster.

KEY POINT #1

Develop formal disaster response plans for helping manufacturers.

KEY POINT #2

Facilitate communications between businesses and resource providers.

KEY POINT #3

Provide training and consultation for businesses on disaster response.

KEY POINT #4

Help manufacturers develop business continuity plans.



KEYPOINT #1:

Develop formal disaster response plans for helping manufacturers.

In the immediate aftermath of any unexpected natural or man-made disasters, the first response to address damages can prove vital to paving the way for later recovery. Although manufacturing businesses face their own set of challenges in responding to disasters, thorough preparation and a rapid, well-managed re-

sponse will make a major difference to the success of their recovery from a disaster.

Public and private partners at the federal, state, and local level can support businesses after a disaster by proactively publicizing the disaster plans they have created for the city, state, or region. Making formal disaster plans available will allow regions and states to assess which businesses will be impacted, how they will be impacted, and the new roles their staff will need to fill in order to help businesses following a catastrophic event. These plans can provide manufacturers with information they need about where to go for aid, such as emergency centers, and how to access other resources. These plans can also help public and private economic development and disaster aid organizations prepare for the large increase in demand for funding and other services that will follow a regionwide disaster.

Over the past few years, many public sector and private partners at the federal, state, and local level have created initiatives for providing immediate aid to manufacturers following a disaster. One of the most important public sector partners for manufacturers is the Hollings Manufacturing Extension Partnership (MEP), part of the National Institute of Standards and Technology (NIST) at the U.S. Department of Commerce. Established in 1988, the MEP provides technical assistance to small and medium-sized manufacturers through 60 centers located in all 50 states and Puerto Rico. In 2013, the New Jersey MEP created the Super Storm Emergency Program to assist manufacturers recovering from Hurricane Sandy, and to help them prepare for possible future natural disasters. One of the major elements of the program was to provide immediate aid for manufacturers in key areas.

In 2008, the state of Iowa suffered a series of natural

disasters: two major tornadoes and several major floods. The state's MEP Center, the Center for Industrial Research and Services (CIRAS), went to work to help manufacturers get back on their feet by assigning individuals to companies severely impacted by the disasters to help connect them with the right private and public resources. They also delivered equipment like office furniture to businesses and helped them find alternative office space sites.

The public sector can help manufacturers develop their own formal disaster response plans that will provide vital guidance in the event of unexpected disasters. In the aftermath of the 2008 disasters, CIRAS created the CIRAS Disaster Checklist (2012) to provide a series of steps for businesses to prepare for and respond to potential disasters. Preparation steps include creating an alternative staffing plan and putting together a "Business Continuity Kit" that includes basic disaster response supplies, copies of important documents, and inventory lists.

Following a disaster, manufacturers may need to have "workaround" plans in order to restart operations as soon as possible. The CIRAS Disaster Checklist also includes guidance on what factors companies need to consider during the "workaround" period, including:

- Alternative sites and equipment
- New staffing organization
- Alternate communication and operations, e.g., filling orders using nonelectronic systems
- Whether these workarounds prove temporary or permanent, establishing alternative means of operations is vitally important for manufacturers to avoid major losses following a disaster.

KEYPOINT #2:

Facilitate communications between businesses and resource providers.

Facilitating communication between manufacturers and resource providers is one of the most crucial roles that public and private partners can fill following a disaster. In the immediate aftermath, public and private partners can connect manufacturers with emergency aid resource providers, such as the

Federal Emergency Management Agency (FEMA) and the American Red Cross, in order to help them protect their employees and shield or recover their property. A major element of the New Jersey MEP's Super Storm Emergency Program is to establish an avenue of communication between the state's manufacturers, the state of New Jersey, and the New Jersey Economic Development Authority.

In the longer term, these partners can help manufacturers receive the support they need in order to resume normal operations, such as grants and loans for equipment and staffing. Several states, regions, and municipalities offer economic development programs to assist businesses recovering from disasters, including:

- The **Gulf Opportunity Zone Act of 2005** provides federal business incentives to areas of Mississippi and Louisiana affected by Hurricane Katrina that were designated as warranting public assistance.
- New Jersey administers the **Stronger NJ Business Loan Program**, which is available to help small businesses that were impacted by Superstorm Sandy, as well as businesses looking to expand within storm-impacted communities.
- New York City offers a **Business Recovery Loan and Grant Program** that provides low-interest loans and expedited grants to storm-impacted businesses for working capital and equipment.
- Iowa's **Disaster Recovery Business Rental Assistance Program** provides financial assistance to businesses located in a business rental space that was physically damaged by the natural disasters of 2008.

In addition to facilitating communications between manufacturers and their partners, public agencies with strong connections to the manufacturing industry in their region can help manufacturers in a region connect with each other. Before or after a disaster, MEP centers and similar organizations can utilize their connections to manufacturers from different industries in the region to bring businesses together to pool information and resources. Communications between manufacturers will allow them to identify alternative facilities and equipment, as well as alternative sources of supplies they may need if their suppliers suffered damages after a disaster.

KEYPOINT #3:
Provide training and consultation for businesses on disaster response.

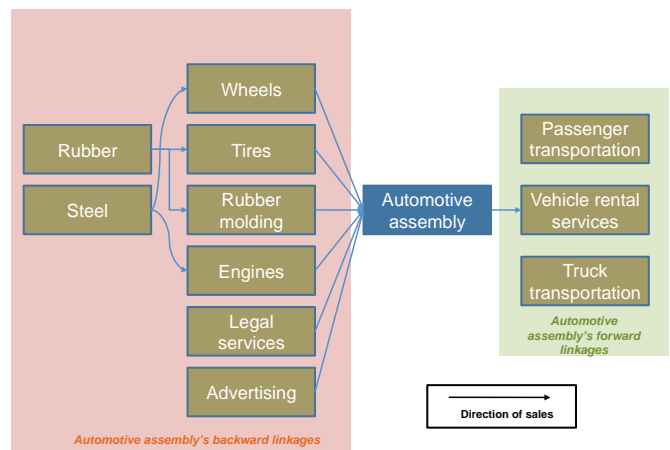
Regions can help avoid economic losses following disasters by communicating to businesses the great importance of disaster response planning efforts. Small and mid-sized manufacturers tend to focus their limited resources on day-to-day operations rather than long-term planning for unforeseen events. Public

and private partners can help small manufacturers understand the risks natural and manmade disasters pose to their operations and provide resources to help them avoid losses. This can be accomplished through training sessions, events, and one-on-one consultations.

Many partner organizations have begun proactive outreach to manufacturers to provide them with information and services for disaster planning, especially in regions that have experienced recent catastrophic events. The New Jersey MEP center offers training workshops on contingency planning, data recovery and retention, and recovering from structural damage in the wake of a disaster. For businesses damaged by recent hurricanes, they offer a "Hurricane Sandy trial version" of their Pro-Action Network Program, a retainer-based program for in-depth risk evaluations and consultation.

Following hurricanes in 2006, the Florida MEP center received grant funding through the MEP Gulf Coast Hurricane Assistance Program to host group training

Simple Supply Chain Diagram



seminars for manufacturers impacted by hurricane damage or disruptions in their supply chains. The Florida MEP also assigned coaches to businesses impacted by hurricanes to provide the companies with one-on-one training and assessments.

Public outreach partners have often found that small and medium-sized manufacturers are unlikely to actively pursue training and consultation on natural disaster planning, although requests have increased following several high-profile disaster events in recent years. After the manufacturers in Southeast Pennsylvania were adversely affected by major fires at two different plants, the regional MEP Center, MANTEC, began proactive outreach to local manufacturers to inform them about their natural disaster response training and consultation services. When Hurricanes Lee and Irene hit the region in 2011 and flooded many businesses, MANTEC had the resources in place to provide local manufacturers with more information about disaster-response planning.

Some disaster risks have greatly increased as manufacturing operations have become progressively more global and digital. California Manufacturing Technology Consulting (CMTC), the MEP Center serving southern California, partnered with the Port of Los Angeles and the U.S. Department of Homeland Security to deliver a training workshop “road show” to small manufacturers about cybersecurity, which can be immensely important for protecting their operations and finances. Training smaller manufacturers to manage digital and international commerce risks can help prepare them to expand into new global markets.

KEYPOINT #4:

Help manufacturers develop business continuity plans.

In the case of a regionwide disaster, manufacturers are often vulnerable to the impacts of damages to other businesses within their supply and distribution network. In an increasingly globally connected world, major damage at one manufacturing facility can cause major hardships for suppliers, distributors, employees,

stockholders, and customers throughout many different regions and even across the world, as was the case following the major earthquake and tsunami in Japan in 2011. In 2012, an estimated 10,000 manufacturing facilities were directly affected by Hurricane Sandy, as even undamaged plants faced temporary closures, interrupting finely balanced supply chains.

Prior to a disaster, public and private partners can start identifying key supply chain linkages associated with their region’s most important industries. This analysis will help officials begin to understand the economic linkages in the region that could either create problems or serve as assets in the event of an emergency or disaster. This analysis will also help officials identify key stakeholders throughout the region who could serve as lead organizations in crucial roles after a disaster, such as coordinating information-gathering. Once the region’s most critical economic vulnerabilities have been identified, officials can start developing action plans to address them. This can involve looking at the potential challenges related to a variety of natural or manmade disasters that could have significant economic impacts on businesses or other economic institutions.

Public and private partners can also support small and mid-sized manufacturers in developing their own business continuity plans for addressing impacts to their supply chains. These types of plans can show manufacturers not only how their supply chains are structured, but also where the most likely risks would be in the event of a disaster. According to a recent article in the Harvard Business Review, businesses often find that “the greatest exposures often lie in unlikely places,” such as sole source suppliers. Damages to even one supplier can create “bottlenecks” that hold up production for lengthy periods of time following a disaster. With a plan in place, manufacturers can begin to understand these risks and prepare for them through actions like requiring suppliers to operate multiple production sites.

While many large manufacturers have already produced plans, smaller manufacturers often lack the knowledge and resources for this type of planning. MEP Centers throughout the country, like MANTEC and CIRAS, have begun working with smaller manufacturers to help them develop plans. These partners offer multiple services to businesses in their regions, including:

- Performing outreach efforts to give manufacturers information on the benefits of business continuity planning
- Holding training seminars and one-on-one consultations to teach them about planning
- Providing easy-to-use plan templates suitable for small businesses
- Helping businesses receive grant funding for planning, such as through technical grants

MEP Centers have found the most effective strategy for convincing smaller manufacturers to plan is to present it as a standard good business practice with a solid return on investment, as it will help prepare them in the event of any supply chain disruption. The public sector can further incentivize business continuity planning by increasing grant funding and technical assistance for business continuity planning and connecting manufacturers with other regional planning partners, such as insurance firms.

SUMMARY

With a proactive planning approach to helping manufacturers, public partners can lessen the likelihood of major post-disaster economic losses in their regions through:

- Facilitating communications between manufacturers and their public and private partners to help them share information and connect with resources before and after a disaster.
- Delivering training and consulting services to help manufacturers prepare for disasters.
- Providing information and other resources to manufacturers to help them create disaster response and business continuity plans.

RESOURCES

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