

# Disaster Prevention / BCP Development



**Business persistence risk is increasing for the companies which depend on their global supply chain, since natural disasters are expected to become more intense due to global warming.**

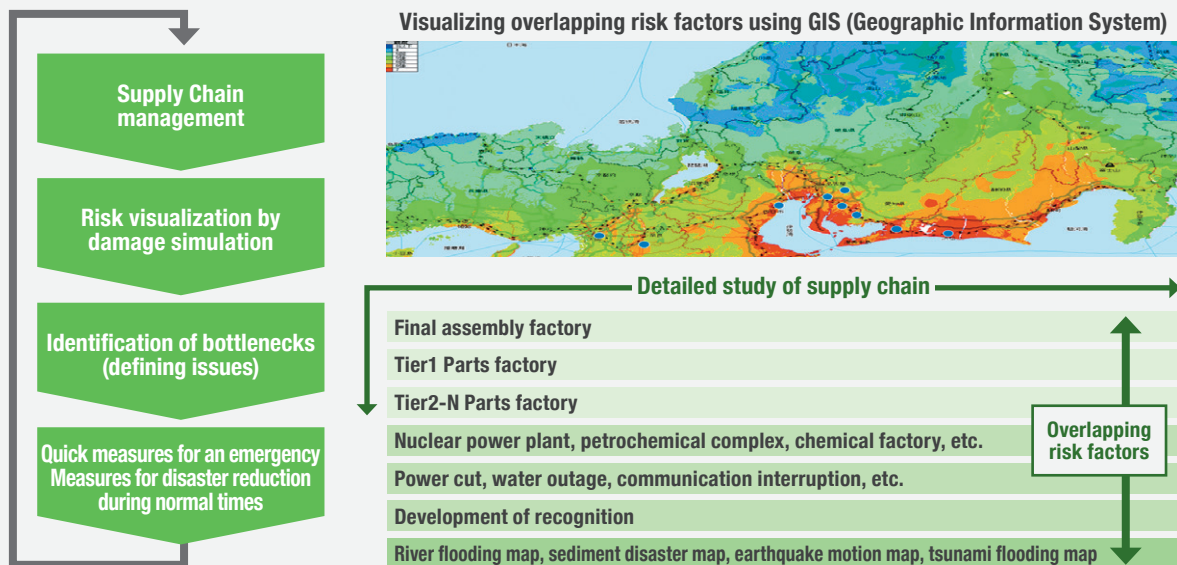
**Impacts of disasters will become more severe in a society that is expanding their network globally**

**Businesses must develop relevant strategies for business continuity by visualizing risks**

With the effect of global warming, natural disasters are becoming more frequent and intense. On the other hand, with global supply chain expansion by distribution and manufacturing companies, the impact of disasters are likely to be more severe than previously experienced. Companies with global network experienced the impact of natural disaster during the Tohoku (North-East Japan) Earthquake (2011) and floods in Thailand (2011) that disrupted the automobile production, and the 1999 Jiji Earthquake in Taiwan that led to a rise in the prices of computer parts. There may also be a risk of business discontinuity even if the company's location is not directly affected from the disaster. Therefore, it is necessary to visualize the risks in supply chain during normal operation and develop relevant strategies to minimize the risks during disasters.

Through the lessons learned from the disasters that occurred in the past, we have realized the importance of understanding the supply chain in great depth, and will expand our understanding on the structure of supply chain during normal operation. However, expanding knowledge of supply chain will not be enough to deal with major disasters. Therefore, it is necessary to analyze the potential risk of damage to the company and factories, and impact on the social infrastructure for business such as electricity, water supply and transportation network. It is also necessary to predict supply chain disruption risk and perform a "bottleneck analysis" beforehand based on the disaster and flood hazard mapping. This approach can help in eliminating critical bottlenecks during normal operation and also reduces the impact of disasters by making quick recovery.

## Support for Business Continuity Management of Global Supply Chain



**It is important to visualize the risk through a detailed study of the supply chain of the company**

\*Automated Guided Vehicle \*Automated Guided Vehicle

## NRI provides support from the phase of simulating the disaster risks using GIS, formulating disaster prevention measures and developing BCP for government agencies and companies until its recovery and restoration.

### Disaster simulation service that supports the initiatives of “risk visualization”

NRI has extensive experience in disaster risk management consulting and solutions. For example, we were involved in simulating damage estimation during massive disasters and large-scale floods undertaken by the Central Disaster Prevention Council under the government of Japan, and providing consulting support for formulating disaster prevention measures. Further, we developed and introduced the Disaster Information System (DIS) that transmits early estimation results of disaster damage within 15 minutes of its occurrence to the Cabinet Emergency Control Center or Cabinet Intelligent Information Center. With expert knowledge and technology, we have been using our proprietary “Supply chain risk evaluation system” that estimates supply chain disruption risk at the early stage with synchronization of “Damage simulation services” that assess the possible damage which may be caused to our client company’s headquarters, production location and supplier. This system is used as a disaster prevention measure and supply chain risk management tool by large-scale automobile and automotive parts manufacturers.

### “Board BCP” supports businesses in determining flexible and compatible trade-offs to face an emergency

NRI has provided support for developing “Board BCP” for a heavy industry company. “Board BCP” is a set of decisions making criteria that is agreed within the whole company, unlike traditional BCP which only focuses only on the early response manual etc. It is based on the idea that it is valuable to have an integrated decision making process, during disasters.

Since critical resources such as facility, personnel and systems are limited during disaster, there is an immediate requirement for tradeoff decisions such as “what to leave and what to protect”. Therefore, it is necessary to analyze the gap between the “to-be” and “as-is” situation and to identify challenges in business continuity with the help of “goal setting” and “risk visualization” of items and level that must be protected during normal operation. Since the management’s values differ during any emergency, there is a risk that ideal actions cannot be taken across the organization. Therefore, it is important to identify the priority in the management’s values in advance. “Board BCP” functions as a tool for supporting business to make flexible trade-off decision when faced by an emergency.

## NRI's Disaster Prevention/BCP Development Consulting Solutions menu

### Risk visualization (simulation)

<b>Location damage simulating service</b>	Evaluate the damage risk at the factories location etc.
<b>Personnel attendance evaluation system</b>	Evaluate the possibility of employee attendance in an emergency and attendance time
<b>Disaster measures chart creation</b>	Create risk diagnostic documents by area or location
<b>Supply chain risk evaluation system</b>	Evaluate the impact of supply chain disruption

### BCP/BCM consulting

<b>Board BCP consulting</b>	Provide support to the management to make decision in trade-off emergency situations
<b>Business Impact Analysis (BIA)</b>	Provide support in setting target recovery time based on evaluation of business impact by business disruption
<b>Redevelopment of risk management regulations</b>	Development of the list of risk related regulations, and provide support in redevelopment and content enhancement
<b>BCP/BCM development</b>	Provide support for the documentation of BCP/manuals and developing business continuity management (BCM)

### Support for examining disaster prevention measures

<b>Government Disaster Prevention Policy, Corporate Disaster Prevention Measures</b>	Provide support for disaster prevention measures, recovery and restoration
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### Task Flow for Board BCP consulting

