

Insight: Supply Chain Business Interruption Risks

Recognizing the Risk

Interruptions to company site operations and production resulting in loss of income and/or added expenses can occur from supply chain disruptions caused by non-owned, non-operated suppliers. These types of disruptions to a company, created by third parties such as suppliers, can be catastrophic.

Understanding true company supply chain risks can involve complex analysis of factors such as supplier operations and delivery procedures, supply chain contingencies, real-time inventory levels with potential seasonal fluctuations, and global natural catastrophe (NatCAT) exposures. It can also involve understanding supply chain tiers and the potential exposures associated with both direct suppliers and, their “tier 2” suppliers (i.e., the subcontracted suppliers that supply the primary product/component suppliers). Loss history also shows that energy availability can be a significant risk, especially for locations in the higher NatCAT zones. Another challenge in supply chain risk analysis is that identified perils and exposures must be converted to an estimated downtime that could include somewhat hidden critical multipliers associated with building supplies availability critical equipment replacement and involve economic factors such as inflation and transit costs.

Controlling the Hazard

Supply chain risk assessments must be comprehensive and specific to each companies' specific organization, operations, and business needs. Regular supply chain reviews must also be conducted as an extension of corporate enterprise risk management (ERM) to ensure updates and reanalysis as business operations and suppliers change. Reassessment frequency and timing should be based on the company organization and operational changes. As a minimum, supply chain assessments should include the following:

- Identification of critical key suppliers - especially those that produce one-of-a-kind materials or that are single sources with extremely costly alternatives.
- Identification of utilities critical to operations as well as high demand sites and backup alternative energy installations.
- Review of financial due diligence conducted in preparation for awarding each supplier contract.
- Creating of supply chain mapping showing first, second and third tier suppliers, with alternative suppliers for critical suppliers (as well as flagging anywhere alternatives cannot be identified).
- Establishing how quickly alternative suppliers can come on stream to meet demand – consider buffer stocks.
- Documenting critical sourced raw materials, sub-assemblies, components etc. and the average annual value of shipments.
- Identifying facilities vulnerable to NatCAT exposure (earthquake, flood, tsunami, wind) noting potential accumulation exposures where manufacturers are concentrated in common NatCAT prone areas.
- Developing and implementing a process to follow inventory levels at priority suppliers with downtime calculations integration.
- Establishing lists of key supplier delivery disruption histories with details on cause of loss, duration of downtime, financial impact from the loss to the business and mitigation steps taken.
- Establishing minimum fire and security protection (surveillance, sprinklers, fire alarms etc.) expectations for critical suppliers with compliance verification.
- Establishing BCP expectations for critical or key suppliers with compliance verification.

A critical part of BCP risk management is always conducting a business impact analysis and develop response agreements in advance of a crisis as part of emergency response planning. After an event has occurred, controlled actions are typically limited.

References & Resources

The following information and resources may provide clients support on business continuity planning to avoid supply chain impacts resulting from pandemic, man-made or other natural hazard events:

- [AIG Insight: Business Continuity Planning](#)
- [AIG Insight: Business Continuity Plan Testing](#)
- [ISO-TS-22318-2015 \(Supply Chain Continuity\)](#)
- [ISO-22301 \(Business Continuity\)](#)
- [NFPA 1600: Standard on Continuity, Emergency, and Crisis Management](#)

*While NFPA documents are the global standard used by AIG, international equivalents may be acceptable.

[For more information, contact your local AIG Risk Engineer.](#)

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