

# Supply chain resilience during hurricane Irma

Hurricane Irma has recently caused extensive damage to several countries in the Americas. A record wind speed of 185MPH and other factors resulted in 102 deaths and material damages of over 100 Billion USD. Ports in the states of Florida, Georgia and South Carolina were closed, which significantly impacted many supply chains. Unfortunately, it is impossible to fully mitigate the impact of natural disasters like Irma. No company will be able to fully mitigate the impact of disruptions without eroding its profits or – worst case - filing for bankruptcy afterwards. Moreover, insurance is not an option as every insurance company classifies natural disasters as a force majeure.

## Resilience

What to do then? Executives can make supply chains less vulnerable by applying the concept of resilience, which is the ability to return to an original state after a disruption like Irma. Managing risks through resilience is more effective than traditional risk management methodologies. Resilience focuses on **building organizational competences to withstand disruptions, regardless of their nature and origin**. More traditional risk management focuses on finding and implementing costly and exhaustive risk mitigating strategies for specific disruptions and scenarios, which is ineffective. In many cases, specific risk scenarios tend to unfold differently than expected. In addition, these methods focus on the probability of occurrence and the impact of an event. Disruptions like Irma have a low probability of occurrence, which makes it difficult to estimate the impact. This is exactly the reason why none of the insurance companies provides comprehensive coverage. As disruptions like Irma cannot be predicted, measures need to be taken which are capable of dealing with disruptions regardless of their nature and origin.

## The Performance Food Group and resilience during Irma

The Performance Food Group (FPG) in the US did just that. Although they didn't know upfront how Irma would impact their operations, they took several measures to strengthen their supply chain. For example, additional products were stocked in 10 distribution centers (in the path of Irma) to make sure increasing demand after the hurricane could be fulfilled. Additional generators were provided to better preserve perishable products in case of power outage. Agreements with local companies were made to ensure additional personnel could be hired to support in the distribution as several PFG employees were expected to leave their homes before the storm. After the hurricane passed, a transport routing system incorporating real time information on the road conditions improved distribution.

## Back in the driver's seat through a 3-step approach

Several organizational competences are required to establish a supply chain capable of dealing with disruptions like Irma (or any other risk source). Production and distribution flexibility, visibility and crisis management can all be leveraged to minimize the impact.

- Step 1 In order to establish resilience, your company should start by analyzing your supply chain to understand the vulnerabilities. 17 elements in the figure below should definitely be covered in the assessment. Each of the below elements should be analyzed using relevant sub-factors. For example, distribution flexibility can be measured by considering i.e. LSP sourcing flexibility, decentralized stocking points and truck re-routing options.
- Step 2 After defining the most relevant weaknesses in the supply chain, a trade-off will need to be made between taking risk and managing risk (in a business case).
- Step 3 During the third step, risk mitigating strategies need to be applied and business continuity plans need to be updated.

Organizational Competences	Risk Sources
<ul style="list-style-type: none"> <li>Procurement flexibility</li> <li>Production flexibility</li> <li>Distribution flexibility</li> <li>Production capacity</li> <li>Logistics efficiency</li> <li>Supply chain visibility</li> <li>Adjustability</li> <li>Risk management</li> <li>Crisis management</li> <li>Distribution of assets</li> <li>Collaboration</li> <li>Security programs</li> </ul>	<ul style="list-style-type: none"> <li>Geographical risks</li> <li>Intentional attacks</li> <li>Pressures from the market, government &amp; civil society</li> <li>Limited resources</li> <li>Interdependence</li> </ul>

Every company encounters disruptions and will continue to do so in the future. The fundamental question is how to manage risk without eroding profits. The answer lies in the concept of resilience, which can deliver true value. Although the future cannot be predicted, supply chain executives should proactively manage risks to create business value for the long term. And in the short term: let us hope and pray that the hurricane season has reached its peak already....

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