

Supply Chain Risk Management: Tornadoes and Earthquakes and Floods, Oh My!

By Rick Pay

In the movie “The Wizard of Oz,” Dorothy exclaims “Lions and tigers and bears, oh my!” as she starts her journey down the yellow brick road. She hadn’t actually seen any lions, tigers, or bears, but people said they were there and she feared the unknown. She famously overcame her fears by partnering with three co-travelers.

Recently The Wall Street Journal, Bloomberg Business Week and other business news sources have reported that supply chain interruptions caused by natural disasters are revealing the flaws of JIT inventory management. Just as suddenly, industry speakers have taken up the topic of supply chain risk, how to manage it and why increased inventory is essential.

I maintain that *properly* constructed supply chains are almost entirely disaster proof. By developing strong supply chain strategies, using supplier partnerships, and building risk management plans, companies can avoid the dangers in the supply management forest.

Why We Should Keep JIT

A few weeks ago during an interview, a CNBC commentator suggested that the Japanese earthquake’s impact on supply chains could prompt companies to shy away from JIT. The interviewee responded that JIT’s potential to help cash flow will keep it in use in the long run, and that reversing JIT would require too much cash, making it impractical for companies to make the switch.

I agree that companies should keep JIT for many reasons. JIT is more than an inventory management method; it is a management philosophy that focuses on eliminating waste in every aspect of the business. The bottom line is to produce or purchase *only* what you need, *when* you need it, in the correct amount. This brings about overall operational improvements, including lower inventory. Quitting JIT impacts much more than just your current inventory levels.

Strategy is Your Best Weapon Against Risk

While there are several components of strong supply chain strategy, the foundation is design for supply chain management (DSCM). DSCM builds on the elements of concurrent engineering that

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emerged in the 1990s during the popularity of World Class Manufacturing. Concurrent engineering:

- 1) Worked closely with suppliers to select materials that were common, lower cost and easy to source, and
- 2) Tied materials and engineering together to assure that designs would meet supply chain management objectives by reducing the number of parts and selecting materials that could be easily sourced.

One of those objectives would be to choose parts that help lower the risk in the supply chain. This might include using parts with suppliers in different locations. One of the problems after the Japanese earthquake was that the only two plants that made a certain coating for silicon wafers were both in the earthquake zone. When they shut down, there was no back-up. Designing products with supply chain risk in mind is vital for risk mitigation.

Weaving a Safety Net with Supplier Partnerships

Careful selecting and certifying key suppliers helps move your

company toward a lower risk supply strategy. In adherence with the folk wisdom that tells us not to put all our eggs in one supplier's basket, many companies will dual source a part, using three, four or even more suppliers. Not only does this practice raise the cost of materials, but it makes your supply chains unnecessarily complex.

There is another, more advantageous strategy than multi-sourcing each part. It springs from the collaborative mentality of forming sound supplier partnerships for long-term competitive advantage. I call it dual sourcing the *technology while single sourcing the part*. For example, if you have two aluminum extrusion parts, one could be sourced from supplier A and the other from supplier B. Both suppliers are now pre-qualified and relationships - including billing - are set up with both, paving the way for a smooth transition.

Dual sourcing the technology mitigates risk, still limits the number of suppliers, and allows the company to reap cost

advantages by sharing forecasts with suppliers and involving them in the design process. You could even select suppliers in different geographic areas to guard against the risk of natural disasters.

Risk Management Plans

Lots of things can interrupt supply chains just as dramatically as an earthquake. Suppliers can have fires, labor strikes, or their own supply chain problems. Storms, floods, and accidents can interrupt logistics. Breakdowns, mistakes and misunderstandings can all interrupt the chain. Your materials staff should meet with each key supplier to review risks and establish a written mitigation plan that covers equipment back-up, buildings, raw material suppliers, and labor.

Companies that don't have back-up and risk reduction plans for supply chain interruptions will pay the costs when the inevitable happens. Every business – from manufacturers to distributors to banks to service organizations – that uses outside suppliers would be wise to examine their risk management plans and make sure they are prepared.