

Sustainable Supply Chain Benefits Require More than Traditional Risk Management

Out-of-date risk management systems can be large supply chain risk.

BY ASHOK SANTHANAM, CEO, BRISTLECONE

Today's supply chains are more fraught with risk than ever before. Global outsourcing, highly demanding customers, and a trend toward leaner inventory levels within the supply chain, have combined with unexpected disruptions like hurricanes and earthquakes ravaging many parts of Asia to jeopardize the steady flow of goods at established prices. In order to plan for and respond to these disruptions within their supply chains, many organizations are investing in supply chain risk management initiatives.

Most of their risk management efforts focus on assessing and addressing supply side risks by minimizing the volatility of commodity prices and materials costs, deploying multiple suppliers to reduce dependence on any single one and ensuring contract compliance to drive predictable pricing. Companies also strive to improve logistics and delivery reliability and reduce supply network costs.

However, one of the biggest sources of supply chain risk comes from within their current supply chain management system, whose performance is likely to deteriorate over time, resulting in planning recommendations that do not reflect a company's current conditions. This steady erosion in the system's performance is a risk most companies never even recognize because they expect their supply chain planning and execution systems to perform as well as they did when they were first implemented. But this performance erosion is a source of future supply chain problems that is bubbling in many companies' global supply chains right now, hidden from view.

Some of the most common problems with out-of-date risk management systems include the following:

- Demand planning solutions use multiple statistical models to predict demand. However, most organizations don't have deep statistical modeling capabilities. As a result, over time the business environment changes, but the statistical models don't keep pace. Forecast accuracy worsens as time goes by, leading to recommendations that increase supply chain risk.
- Supply chain planning systems use multiple optimization algorithms. Creating them or updating them requires deep expertise in operations research, which many organizations lack. As a result, when the assumptions behind the sophisticated planning algorithms change, the algorithms are no longer in sync with the environment, leading to sub-optimized or even incorrect planning recommendations.
- Data within every information system deteriorates over time. With the decline in the quality of data, the supply chain deployment can potentially hide supply-side issues, creating a potential for unexpected disruptions in the future. When this occurs, the systems which were once accurate can make wrong recommendations or lead to incorrect decisions.
- Most supply chain planning systems generate a lot of 'busy work' for planners such as exception conditions processing. Planners may become buried in details, unable to spend more time on high value added tasks more likely to identify and reduce a potential disruption to the supply chain. In addition, these systems don't carry enough analytics that leverage heuristics and other mechanisms to bubble the most important issues to the top.

Organizations that are able to address such issues proactively will see the highest return

on risk management spending, since the best way to avoid a supply chain disruption is to anticipate it ahead of time. There are two possible approaches to averting these future problems. Companies may hire a dedicated person within the enterprise to address these issues, or they can retain an outside consulting firm that provides knowledge process outsourcing, or KPO services for the capabilities listed above. Unlike the more common practice of outsourcing manufacturing work, KPO outsourcing typically requires a higher-skilled staff to work on information-related work.

Regardless of whether companies outsource this work or keep it in house, however, they must seek out someone that has expertise in any of these areas, including: statistical modeling, optimization algorithms for supply chain planning, analytics and data cleansing – coupled with a deep expertise in application of these technologies to supply chain management.

Such a set of skills may be hard for a company to recruit and retain. With the right expertise, however, issues can be addressed proactively and supply chain risk reduced considerably. Supply chain consulting organizations with KPO capabilities or individuals trained in these areas can bring sophisticated technical expertise to a company's supply chain team. For example, working closely with the demand planning team, they can continuously assess the existing statistical models and refine them to ensure highest performance on forecast accuracy.

In addition to providing expertise in the specific supply chain technologies such as statistical modeling or optimization modeling, consultants or in-house workers are also needed to provide many decision-support services, such as supply chain exception processing and continuous data cleansing. These services ensure that supply

chain planners are spending majority of their time on more high value tasks, while day-to-day tedious task of exception processing and data cleansing can be managed by a dedicated staff.

While companies often set themselves up as lean, geographically dispersed operations to remain competitive, however, that same structure can leave them particularly vulnerable to supply chain disruptions. In today's ultra competitive business climate, even little blips in normal supply chain functions can have serious consequences. It may be hard to comprehend how a company's current supply chain management system, which designed to anticipate and avert risk may end up being a source of risk. But unless these systems are continuously optimized by skilled staff, they will be of little use in helping a company navigate a supply chain disruption.

Supply chains where current optimization and statistical models do not reflect the company's most current business, will not provide an accurate picture of underlying issues and may increase supply chain risk. However by taking a deeper view of their current systems and ensuring that they have the capability to continuously leverage advanced analytics and optimize statistical/optimization models of their supply chains, they can reduce their risk and reap sustainable benefits, so that they are ready to respond to those unfortunate, but inevitable events that disrupt the flow of raw materials and finished products.

Ashok Santhanam is the CEO of Bristlecone, a supply chain consulting firm. Bristlecone brings expertise across the entire spectrum of supply chain including demand planning, supply planning, network collaboration, sourcing and analytics. In addition Bristlecone provides supply chain-focused KPO services. www.bcone.com

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