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**TECHWATCH**

# A network design is never done

**For many companies, designing a supply chain has gone from a one-time project to an ongoing process. Here's why.**

**By James A. Cooke**

It used to be that businesses turned to supply chain network modeling for help answering specific questions. For instance, if a company wanted to determine how many distribution centers to retain after a corporate merger or whether it should open a new facility to support expansion into a foreign market, it would use network analysis software to weigh the pros and cons of various supply chain network configurations. This type of software is available from such vendors as Barloworld, IBM, Infor, JDA, LLamasoft, Profit Point, and Solvoyo, to name a few.

But today's business climate has become increasingly volatile, and companies are struggling to contain distribution costs and meet new customer demands. That's why more and more businesses are starting to recognize that their distribution network requires periodic modeling. In fact, a recent study of 60 companies conducted by the Tompkins Supply Chain Consortium found that the average length of time between network design studies has dropped from 24 to 18 months. "Designing a supply chain is no longer something you do just once," says Toby Brzoznowski, an executive vice president at LLamasoft. "We're seeing design as being a process as opposed to a project."

How can companies benefit from regular distribution network modeling? For one thing, periodic evaluations can help a business assess whether its network design remains optimal despite changing inventory or customer requirements. For example, if customer demand is starting to shift, say to another region of the country or another part of the world, a network analysis can help the organization evaluate whether its distribution centers are still situated to serve customers at the lowest transportation cost. Or if customers are increasingly ordering merchandise online rather than buying from stores, the software can help a company decide whether it should be adding DCs to fulfill those online orders.

Along with changing customer demands, a company may also be dealing with changes to its supplier mix. For example, perhaps the organization has recently switched to a new supplier or expanded its supplier base in a bid to cut procurement costs. While that may hold down sourcing expenses, it can have an adverse effect on landed costs. A network analysis might identify ways to reconfigure the distribution network to keep inbound transportation costs low.

Volatile oil prices remain a nagging worry for logistics managers, prompting a number of them to get serious

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about contingency planning. Conducting a distribution network modeling exercise can help a company prepare a plan to modify the distribution network—perhaps moving DCs closer to customers—to keep down transportation costs in the event of a spike in fuel costs.

It's not just oil prices that are forcing a network re-examination. To curb overall costs, many companies are seeking closer integration between manufacturing and distribution, which may require consolidation or relocation of facilities. Alan Kosansky, president of Profit Point Inc., notes that many manufacturers are asking the question, "Given our manufacturing footprint, what's the best way for us to deliver our products to our customers?"

Because distribution networks are based on assumptions about current customers, markets, inventory needs, and distribution costs, volatility often changes the game, forcing companies to reassess their operations. In a world where assumptions can no longer be taken for granted, a distribution network for today might look very different from one for tomorrow.