

Is Supply Chain Design a Lost Art in High-Tech?

Global high-tech supply chains are facing significant additional complexity as we enter 2019. On top of all the other factors normally in play, today's political landscape and trade war environment are making companies rethink their China-based supply chains to minimize the bottom line impact of tariffs and other duties. In response, many companies – high-tech and otherwise – have scrambled to revisit their supply chain design and sourcing strategies to find ways to meet demand while minimizing sourcing decisions that incur tariffs.

Typically, high-tech leads the pack when it comes to supply chain analytics – the industry has led the market in terms of responsive supply chain planning, integration of information across virtual supply chains, supply chain risk management, and more recently the adoption of capabilities like machine learning and artificial intelligence. But faced with the challenge of how to respond to tariffs a curious phenomenon occurred – most of the companies we've worked with relied on crude Microsoft Excel models cobbled together by task forces of senior executives and key analysts.

Why High-Tech Lags Behind

In many industries, the physical location of manufacturing and distribution facilities is a major concern in supply chain design and factors such as transportation costs and product freshness weigh heavily on such decisions. Faced with these dynamics and traditional supply chain challenges like managing manufacturing capacity and inventory investments, companies in the process industries, consumer products, and industrial manufacturing companies have long since developed strong capabilities to optimize decisions related to facility locations, product flows, and transportation. Factors like tariffs can be easily factored into these already proven models to respond to real world business questions.

High-tech companies, conversely, typically deal with products where the freight cost is a tiny fraction of the total landed cost and consequently often think nothing of flying products around the world for different manufacturing operations. Low relative freight costs and reasonable contract manufacturing outsourcing options to flex production capacity mean that classic supply chain network design is often an afterthought. As a result, when tariffs appeared, the quality of the typical analysis in a high-tech company lagged other industries in terms of speed, quality, and reliability.

How to be a Leader

To manage costs and maintain profitability, companies must find and maintain the right balance across all elements of their supply chain. A change of any kind, be it a new cost or shift in lead time can have drastic consequences to the business. Once out of balance, every minute until the network adjusts is lost money. So, supply chain optimization modeling needs to be both accurate and fast.

Supply Chain Network Optimization solutions aren't new but are woefully underleveraged in the high-tech industry. Ironically most companies in high-tech are relatively well prepared for supply chain optimization modeling – having better than average supply chain model data and a good understanding of the different critical cost components. But while tactical supply planning models are widely in use, most companies have never bothered to build and use design models to evaluate strategic capacity and sourcing decisions in an optimal manner.

Spinneraker has helped several recent customers develop capabilities so that they can understand their network behavior and course correct the moment a change occurs. If and when new costs or capacity constraints occur, they know the implications and can evaluate alternative options.

Moreover, our clients are also armed with sensitivity analysis around the key cost components that are out of their control (i.e. currency value, fuel cost, new tariffs) — and they have determined at what value the optimal answer changes and a new policy or network structure is required. For instance, one company found that if tariffs increased by less than 50%, continuing with their legacy manufacturing network remains the most profitable approach, but once tariff costs go above 50%, they must shift production to regain profitability.

How to Get Started

With the affordability of the software and services for this type of modeling, adding these capabilities to your organization's toolkit could be the highest ROI project you undertake this year. In addition to tariff analysis, supply chain network optimization provides valuable insights to relevant decisions such as:

- Footprint Analysis
- Global Sourcing and Capacity Analysis
- Regional vs. Global Distribution Strategies
- Cost-to-Serve Modeling
- Physical vs. Virtual Vendor Managed Inventory (“VMI”) Strategies

[Click here](#) to discuss potential applications for your company please reach out to talk with one of our experts.

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About Spinnaker:

Spinnaker is a supply chain services company that helps clients grow, manage risk, reduce costs, and improve customer service by developing world-class supply chain capabilities. Our services help clients develop the right supply chain strategy for their business challenges and implement the process and technology solutions to improve Demand/Supply Planning, Procurement and Sourcing, Logistics and Warehousing, and Reverse Logistics business performance. Spinnaker offers a unique service delivery model that combines the strength of deeply experienced management and technology consultants with a seasoned team of business process outsourcing (BPO) and 3rd-party logistics (3PL) professionals. Founded in 2002, Spinnaker has offices in Boston, Columbus, Denver, Houston, Memphis, Pittsburgh, London, and Singapore.

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