

Our point of view

# Supply Chain Strategy & Network Design

## Lay the Analytics Foundation

Supply chain strategy and network design refer to how a company structures its supply chain to support its business strategy. This involves strategic decisions like number and location of facilities, transportation modes, and the size of inventory buffers.

The “right” supply chain structure can differ by product, customer segment, and stage of the product lifecycle.

### Can my Supply Chain Network be Improved?

We find that it usually can when one or more of these situations apply:

**Accidents of history.** Many supply chains were not “designed” in the first place. They merely reflect the sum of legacy facilities and additions via mergers and acquisitions.

**Optimizing one cost at the expense of others.**

A drive to reduce one type of cost (e.g., material cost) can inadvertently drive up other costs like warehousing and inventory.

**Missing strategy.** If the supply chain was not explicitly designed to support the business strategy, chances are it doesn't.

### Beware of Off-the-Shelf Solutions

A business may undertake to improve its supply chain network design using off-the-shelf software tools for supply chain modeling.

Unfortunately, this fit-all solution often doesn't work well. Tools may require too much detail before meaningful insights can be gained. Runtimes may be prohibitive. Data may not be available in the desired format, or significant preprocessing may be required.

## Proven Methodology

Over time we have developed and refined our 3-step methodology:

**Analyze network economics.** Define scope, then establish a baseline. Identify current cost drivers, constraints, key tradeoffs, and possible network alternatives.

**Model alternative network designs.** Gather input data and build a “right-sized” model based on key factors. Examine alternatives, validate outputs, and analyze sensitivities.

**Use model results to drive strategy.** Distill model output and learnings for managerial consumption. Develop a strategy, recommendation, and implementation plan.

We believe the insights behind the proposed solution are often more important than the solution itself. Given how fast conditions change, supply chains cannot be static. The insights give our customers the ability to monitor their business and adjust accordingly.

## Case Study

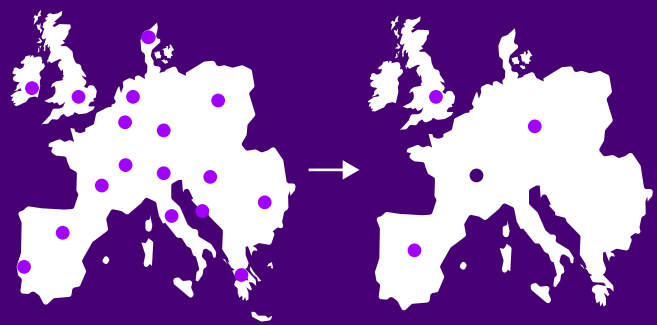
A medical device manufacturer grew in Europe by acquiring national players. The resulting distribution network sported a warehouse in each country.

This network design was an “accident of history.” Individual companies needed separate warehouses, but it didn’t make sense for the combined company.

We focused on service requirements, lead times, and shipping costs—not irrelevant country borders. We showed demand could be met with just three warehouses plus a central hub for large and heavy items.

Fixed cost savings of \$10M/yr and inventory reductions far outweighed the higher freight costs.

**Figure 1**  
Before & After Network Designs



**Figure 2**  
Network Cost Reduction

