

Designed Optimized Distribution Network & Implemented New 3PL Aligned With Strategy

Distribution Network Optimization & Operations



- Distribution Network Optimization
- Distribution Center Location Selection
- Inventory Management
- Contingency for Reduced Flexibility in AMZ DC Selection
- 3PL Sourcing & Selection
- 3PL Implementation & Integration

A large, multi-national Amazon retailer acquired multiple brands resulting in a distribution network that grew to become excessively complex and costly. The North American portion of the network alone included over 20 different 3PL vendors and more than 30 different warehouses.

Ventura Group worked with the client to design and implement an optimized distribution network in three stages. First, Ventura Group designed the optimal end-state distribution network specifying the ideal quantity and location of distribution centers. Next, Ventura Group worked with the client to source and select a single 3PL vendor that could meet all client requirements including those of the optimized end-state distribution network. Finally, Ventura Group worked with the client to transition from many warehouses and 3PL providers to a single provider and specified locations based on the optimized distribution network.

challenge

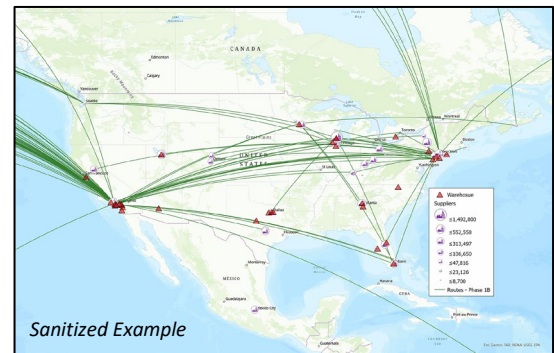
- **Overly complex distribution network with many warehouses and 3PL providers:** Over the course of multiple years, growth and the acquisition of multiple brands led to a distribution network with more than twenty 3PL providers and thirty warehouses in North America alone. These providers and warehouses were often left in place from acquisitions or from old requirements. An optimized distribution network was needed to allow for more efficient operations using an ideal number and position of DCs. This optimized network needed to account for inbound and outbound logistics patterns, varying brands and product types, volumes, and specific service requirements.
- **Expectation of reduced flexibility in selecting the Amazon DC for Amazon orders:** The client had been able to select Amazon DCs relatively close to the client's own stocking locations keeping the distance and cost of Amazon deliveries minimal. However, it was expected that this flexibility might be reduced if not eliminated by Amazon which could lead to longer distances and more costly deliveries to Amazon DCs. The optimized distribution network would need to account for this contingency.

- Varying states of product and inventory data from multiple acquired brands:**
 With the acquisition of multiple brands, the client had product and inventory data in various states of completeness. This data quality had to be improved and standardized to gain the full benefit of the optimized distribution network.

solution

- Modeled scenarios based on product flows and requirements at a SKU level and including multiple contingencies:**
 Ventura Group conducted a detailed hot spot analysis to identify where demand in volumetric weight was concentrated in North America. This led to the definition of preferred regions which enabled more refined discussions and location analysis based on the client's overall strategy and logistics trends. Ventura Group then built a model to simulate the network based on known inbound and outbound flows, requirements, costs at an item and zip code level. Using this model, we worked with the client to run over 30 different distribution network scenarios which enabled us to fine tune the end-state distribution network and test for contingencies.

While some network models appeared highly advantageous initially, the model indicated that contingencies such as reduced flexibility in selecting Amazon DCs could wipe out all anticipated savings and result in higher costs than before in some of the most attractive no-contingency designs. The eventual design allowed the client to take advantage of the best of both worlds, using the initially optimal distribution network design but with the ability to easily pivot to the alternate design thus maintaining cost savings should contingencies come to fruition. In fact, one contingency became reality within months of implementation, but the client was able to effortlessly shift toward the contingency design which avoided substantial additional costs and preserved most savings.



- Selection of new 3PL aligned with the client requirements and end-state footprint:**
 In-house vs. outsource options for warehousing and logistics services were considered but it was determined that continuing use of the outsourced 3PL vendors was most advantageous for this client. Using the blueprint of the optimized future-state distribution network, Ventura Group worked with the client in sourcing and selecting a 3PL partner with the footprint, technology, and general capabilities that aligned well with client's operating strategy and the future-state distribution network.

results

- Simplified, logistically optimized distribution network including one 3PL vendor and four strategically selected warehouse locations**
- Optimal stocking plan by warehouse location, product brand, and SKU**
- 25-35% reduction in distribution, operations, and logistics costs even given contingencies that would have otherwise *increased* costs by 60-90%**