Distribution network model disproved, savings millions in unnecessary costs

The Client

After several strategic acquisitions, this multi-billion dollar manufacturer of medical devices had a distribution network that overlapped and several inventory challenges. After completing a strategic network modeling exercise, they wanted to know if the new facility alignment was correct and the savings real.

The Challenge

The strategic network model was built from inconsistent data and for the most part based on averages and aggregate data. The results from this exercise suggested closing 4 DCs and consolidating inventory with savings in excess of $24,000,000 over 5 years.

Although network modeling tools are good at estimating a general idea of distribution locations and costs based on various input, they are not very good at factoring actual carrier service and the real dollar impact. The challenge was to verify the amount of savings and changes in service to the customer (fill rates and time to deliver).

The Solution

A new model of the current operation was built by Trans-solutions. This model used real warehouse, inventory and shipment level data. Various scenarios to optimize the network were run. The results showed limited savings. Because of the number of manufacturing sites that also distributed orders, there was a profound pull on the model back to the manufacturing locations. A significant amount of freight had to be expedited to maintain service that previously traveled via ground mode. As a result, the model did not optimize as well as the theoretical study suggested. It omitted the expedited service. Theoretical studies are good for theoretical answers. Real models built by Trans-solutions show real answers.

Calculated real costs, disproved theoretical model