

CASE STUDY #1: Bis Corporations

The Bis Corporations is a company that produces and distributes paints. The company was established in 1964 as a family venture and grew in 1970s and 1980s at a steady rate. Bis is now owned by 12 shareholders and run by a newly appointed CEO. Bis produces and sells about 4000 different SKUs (stock keeping units) at a similar price and the gross margin in the paint industry is about 20 percent. Despite high profitability, the new CEO is concerned that the supply chain is not the most efficient one. Specifically, the CEO pointed out that inbound truck utilization, inventory turns, and service levels are just too low.

Currently, eight manufacturing plants located in cities such as Atlanta and Denver serve about 2,000 retail stores including Home Depot, Wal-Mart as well as Bis-owned stores. The current distribution system is a single-tier network where all products are shipped from the plants to 17 warehouses, located all over the United States, and from there to retail accounts. They divided their market in 4 geographical areas.

In a recent shareholder meeting, he pointed out that the current production and distribution strategy used by Bis was designed about 20 years ago and was never modified. It consists of the following steps:

- Produce and store at the manufacturing plants.
- Pick, load, and ship to a warehouse centre.
- Unload and store at the warehouse.
- Pick, load, and deliver to stores.

Thus, shareholders decide to look for outside help in modifying their logistics network and supply chain (SC) strategy, with the objective of improving the SC effectiveness and to align the cost of service with account profitability.

The consultant team identified important issues that need to be addressed:

1. Once solution to consider could be replacing the logistics network with a two-tier distribution network that includes primary and secondary warehouses. In such a network, primary warehouses receive products from the plants and transfer inventory to secondary warehouses. The secondary warehouses in turn will serve the retail outlets. The

challenge is to identify the number, locations, and size of the primary and secondary warehouses.

2. Given the new network configuration, where should the company position inventory? How much? Specifically, with 4000 SKUs in this supply chain, it is not clear how inventory should be positioned. Should inventory of every SKU be positioned at every facility or should some SKUs perhaps be stocked only at the primary warehouse while others only at the secondary facilities?

3. Which plant should produce which product? Should each plant specialize in a few products and thus be able to produce large batches and hence reduce production cost or should plants be flexible and able to serve all retailers in close proximity, thus focusing on reducing distribution costs?

Customer service is of particular concern to Bis because there are a number of competing products in the markets. The CEO insists that to remain competitive, delivery time should be no more than one day for most of the retail outlets.

Based on the information available and the classes' material, please answer the following questions justifying them:

1. Correlate the information in the text, mainly the consultant suggestions, with the network planning contents that you have studied in the theoretical classes (including its steps).
2. Map the current and proposed supply chain structure, representing the material flows between entities, and analyze the advantages and disadvantages of having several warehouses or few warehouses.
3. Give examples of data that you, as a consultant, should require if the company is interested in changing the supply chain network design.

