Case Study #2: Dell's Supply Chain Integration

Dell, a 57-billion-dollar industry, employs its supply chain systems unlike any other PC maker on the planet. The company was one of the first to introduce a configure-to-order model where customers could have millions of configurations to customize their PCs according to their requirements. This innovative direct sales model strategy builds a supply chain including customer, manufacturing and assembly plant, and suppliers.

The company considers its suppliers to be an integral part of its success being a fundamental part to achieve a truly flexible supply chain. Dell concentrated its supplier base into 50 to 100 suppliers accounting for 80 percent of its purchases, maintaining long-term relationships with them that help the brand streamline their inventory management as well. To ensure deliveries, suppliers should also cooperate with logistics companies that can both deliver the components and ship the customer orders. Since Dell assemble Just in Time, the company promotes flexible and sustainable relationships with suppliers to ensure they need to be ready for any raw materials orders at any time, safeguarding customer service level. For this reason, Dell requires its suppliers to concentrate Dell-specific inventory, that is, parts designed to Dell's specifications, near to Dell's assembly plants, in small warehouses called Supplier Logistics Centres (SLCs). Each of this centre is shared by several suppliers who pay rents for using the space.

Dell Reinvents Its Supply Chain

If you ordered a Dell PC 15 to 20 years ago, you may remember going through a customization process and you ordered by computer or phone. For Dell, customization enabled better monitoring of the quality of components and kept on-hand inventory low, reducing potential waste and overflow.

However, in 2010, this strategy was no longer the most advantageous one. Product offering had become too complex and exceeded customer requirements. Dell was adding unnecessary cost and responsiveness waste in the supply chain that need to be eliminated. The company switched to a segmented approach where they offered customers different product's choices, namely, configurable, preconfigured, and ready-to-ship. This approach enabled Dell to continue providing customers with a choice of options while simplifying its processes to drive efficiency.

Dell couldn't just rely on the direct to customer distribution channel anymore, since only one in four customers using the direct model. Dell needed a way to touch consumers in person. Following Apple's example, that had huge success with their stores, Dell needed a similar solution. In 2007 they started selling a limited number of their pre-configured models through retailers. Today they offer almost the full range of products via multiple retailers internationally. When Dell entered the retail channel, the company tried to use the same supply chain as its online configure-to-order business. But competition in conventional retail can be more price-sensitive than it is online, and the supply chain Dell designed for online was not optimized for lowest cost.

Adding to the challenge, the company faced corporate and public sector clients who were increasingly looking for a complete solution for their IT needs, and in many cases, a solution designed specifically for their organization. This again entails a supply chain strategy quite different from the one employed for online customers.

Clearly, Dell needed to transform its supply chain to serve new customers in new channels with new types of products. The question was: how to do that effectively? Dell decided to create multiple supply chains, each dedicated to a different segment of the PC industry but configured in such a way that the company could take advantage of synergies to reduce complexity and benefit from economies of scale.

Online, Dell offers millions of possible configurations, and as a result, forecast accuracy by configuration is poor and volume by configuration is low. As Dell offers to satisfy consumers' individual needs, the focus is on higher margins, and thus the cost of a lost sale is high. Here Dell employs a Build-to-Order strategy, where component inventory is managed based on forecast while actual customer requirements determine the final configurations.

The retail segment, therefore, is associated with low demand uncertainty and a loose customer relationship, with means that a better strategy could be aligned with managing the supply chain based on long-term forecast, lowers cost through economies of scale and forecast accuracy. In this Build-to-Plan strategy, procurement, production, and shipment decisions are all based on forecast.

Given the information provided please discuss the following topics:

1. Draw Dell's supply chain network, representing the material and information flow between stakeholders
2. Discuss appropriate integration strategies to apply in Dell's supply chain, identify why there are different and explore each one main giving advantages and disadvantages.
3. When and what type of material is Dell considering in inventory along the different used supply chain strategies.