Hewlett-Packard

Name

University Name

Course

Logistic

Professors Name

Date

Hewlett-Packard

**Analysis**

The Hewlett-Packard Deskjet Printer was introduced in 1988. It had become one of Hewlett-Packard’s most successful products. The organization of the HP Company was partially by product group and partially by function. The retail of this printer was composed of three segments, impact/dot matrix, inkjet and laser. The end customer, when choosing between the two ink-jet printers of equal speed and print quality, used general business criteria such as cost, reliability and availability to decide. Product loyalty continued to decrease.

**Synthesis**

The growth in this invention tracked sales growth. The distribution centers are filled with pallets of desk-jet printers. The inventory levels needs to be raised to maintain satisfaction and product availability. The question is how.

**Evaluation**

After reviewing the case, the problem HP faces is in the forecasting system, according to the Stanford intern. With the stock levels differing at the DCs, HP had to determine the best method to determine what the appropriate amount of stock to keep is and what to keep.

**How can design for logistic concepts be used to control logistics costs and make the supply chain more efficient?**

DFL is designed to control logistics costs using three components. They are economic packing and transportation, concurrent and parallel processing and standardization. Economic packing and transportation focuses on designing products so that they can be efficiently packed and stored. Products that can be packed more efficiently are reduces transportation cost by increasing the ability to ship more on each load. It is also possible to ship goods in bulk and only complete final package at the warehouse or even at the retailer. This will also reduce transportation cost.

According to Kaminsky (2008), concurrent and parallel processing involves modifying the manufacturing process so that steps that were previously performed in a sequence can be completed at the same time. This helps reduce manufacturing lead time, lower inventory costs through improved forecasting and reduce safety stock requirements. The key to keeping the manufacturing process parallel is the concept of decoupling. Using the strategy of decoupling makes it possible to design different inventory strategies for the various decoupled components (pg 344).

There are four approaches to standardization. They are part standardization, process standardization, product standardization and procurement standardization. Part standardization involves using common parts across many products (pg 345). According to Kaminsky (2008) “process standardization involves standardizing as much of the process as possible for different products, and then customizing the products as late as possible” (pg 346). Product standardization involves a number of parts being available but only few are chosen (pg 348). Kaminsky (2008) found “procurement standardization involves standardizing processing equipment and approaches, even when the product itself is not standardized” (pg 348

**What is delayed differentiation and how can Hewlett-Packard use delayed differentiation to address the problems described in the case?**

Delayed differentiation is the ability to manufacture a family of products with a similar design, but delay the decision for the specific product manufactured until demand is realized. Such a strategy calls for redesigning products and processes so that the stages of the production process in which a common process is used are prolonged (Lee, 1997). Hewlett-Packard’s problem is that they have high inventories of items that have low demand. By the time the supply chain catches up with customer demand, customer demands change, possibility due to the two week lead time and to the factors that lower customer service levels. With delaying differentiation, production starts can be based on aggregate forecasts. The design for delayed product differentiation can be effectively used to address the uncertainty of in final demand even if forecasts cannot be improved (pg 346). Finally, implementing a postponed strategy at HP mean the value of the inventory in transit will be lowered and freight and handling cost will be lowered.

**How can the advantages of delayed differentiation be quantified?**

Delayed differentiation can be quantified by redesigning the process so that the differentiating steps don’t have to be performed in a manufacturing facility or distribution center. It can take place in the retail store after the sale is final. This can be accomplished by focusing on modularity during the design phase, placing functionality in modules that can be easily added to a product like additional software or memory for a computer.

**When should suppliers be involved in the new product development process?**

According to Kaminsky (2008), there are four levels at which a supplier can be involved in new product development process; the levels are known as the Spectrum of Supplier Integration. First level is No involvement not involved in the design. The second is White Box-involvement is informal, buyer consults with the supplier. Third Level is Grey Box- involvement is formal; collaborative teams are formed between the buyer’s and the supplier’s engineers and joint development occurs. The fourth level is Black Box – the buyer gives the supplier a set of interface requirements and the supplier independently designs and develops the required component. This is determined by the buyer and is contingent upon their core competencies. The Global Procurement and Supply Chain Benchmarking Initiative have developed a strategic planning process to help firms make this determination: The process begins with determining internal core competencies; determine current and future new product developments; and identify external development and manufacturing needs (pgs 352-353).

**What is mass customization?**

Mass customization is best defined as a delivery process through which mass-market goods and services are individualized to satisfy a very specific customer need, at an affordable price (Bin, 2007). It involves a wide variety of customized goods and services quickly and efficiently at a low cost. Mass customization enhances an enterprise's competitiveness in terms of the speed, quality and cost (Bin, 2011). Mass customization is formed from two prevailing manufacturing paradigms; Craft Production and Mass Production. Mass production involves the efficient production of a large quantity of a small variety of goods. It has a very bureaucratic management structure, with rigid, functionally defined groups and tasks, and tightly supervised employees. Tight control and predictability is common, which tends to lead to high degrees of efficiency. Kaminsky (2008) found craft production involves highly skilled, flexible workers, often craftsmen in the manufacturing setting. They are governed by personal or professional standards and motivated by the desire to create unique and interesting products or services. They are typically trained through apprenticeships and experience. The organization is flexible, continually changing, and is able to produce highly differentiated and specialized goods; but is very difficult to regulate and control (pgs 354-355).

**Does the supply chain management play a role in the development of an effective mass customization strategy?**

Yes. The key roles of supply chain management in an effective mass customization strategy involve instantaneousness, costless, seamless and frictionless. According to Kaminsky (2008), “instantaneousness, modules and processes must be linked together very quickly. This allows rapid response to various customer demands. Costless: this linages must add little if any cost to the processes. This attribute allows mass customization to be a low-cost alternative. Seamless: the linkages and individual modules should be invisible to the customer, so customer service doesn’t suffer. Frictionless: Networks or collections of modules must be formed with little overhead. Communication must work instantly, without taking time for the team building; this is necessary in so many other types of environments” (pgs 355).

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