

Designing and managing the supply chain, chapter 1 questions

[Science](#)



PROC 5850 Week 1 Homework: Ch1 Question 1, 2, 6 1. Consider the supply chain for a domestic automobile. a. What are the components of the supply chain for an automobile? The components of the supply chain for an automobile are as follows: First you have the supplying industries. These include components such as steel and other metals, rubber, electronics, plastic, glass, and textiles. These raw components are fabricated into car bodies, mechanical and electrical subcomponents as well as engines and transmissions.

These subassemblies are assembled during final assembly and then distributed to dealership for the consumer market. b. What are the different firms involved in the supply chain? The following are a selection of firms involved in the supply chain: Suppliers, Manufactures, Transportation companies, Warehouses and distributions centers, sub-contractors, dealerships, and customers. c. What are the objectives of these firms? The simple objective of these firms is to maximize market share and make a profit.

Socratic Seminar Questions

Every challenge to operate the supply chain supports these two primary goals. d. Provide examples of conflicting objectives in this supply chain? The supplying industries would like the automobile manufacture to commit themselves to purchasing large quantities with stable volumes with flexible (long-lead) dates. On the manufacture's side, they need to be flexible to their customers' need and the change in demands. So what we

have is a direct conflict of interest between the suppliers' and manufactures' desire for flexibility.

The ability to optimally match supply and demand is just as much an art and it is science. Other conflicts arise with transportation of smaller batches versus larger batches of supplies. Usually the smaller and faster a batch of supply is required, the cost of transportation increase; another conflicting objective. e. What are the risks that rare or unexpected events pose to this supply chain? An unexpected risk such as a natural disaster can bring the supply chain to a stand still. However, such events can almost never be managed.

There are some challenges such as matching supply and demand risks, lead times, forecasts, transportation times and costs, which can be " managed" or operational risk management used to minimize risks. 2. Consider a consumer mortgage offered by a bank. f. What are the components of the supply chain for a mortgage? There are several components of the supply chain for a consumer mortgage offered by a bank. First, there are marketing companies that solicit to prospective customers. Secondly, the bank needs to be able to evaluate potential customers by using credit-reporting companies.

Thirdly, usually a third party bank that extends the mortgage loans. Lastly, the bank requires mortgage brokers that distribute the loans. g. Is there more than one firm involved in the supply chain? What are the objectives of the firm or firms? Marketing companies try to increase the responses from prospective homebuyers to maximize their returns. The banks try to find customers that are a relatively low risk, on-time payments, and low average maturity date; i. e. , maximize profits. The mortgage broker is all about <https://assignbuster.com/designing-and-managing-the-supply-chain-chapter-1-questions/>

maximizing his commission of the sell of the property. . What are the similarities between product and service supply chains, what are the differences? Both product and service supply chains provide a need. The difference is the type of service, instead of the physical product... faster, better, cheaper all apply. Some of the differences between the two types of supply chains are as follows: * With the product supply chain there is both the flow of physical and informational products. However, in the service supply chain, the product is mostly information. Unlike the service supply chain, inventory and transportation of goods are a major costs of product supply chains. * Since service supply chains usually don't carry inventory, coordinating capacity with demand is usually more important. * The cost of information is more often higher than in a product supply chain. Consider the cost of a credit report or hiring a consultant. 6. Consider the supply chain for canned peaches sold by a major food-processing company. What are the sources of uncertainty in this supply chain? Some of the sources of uncertainty are as follows: The first factor to consider is the peach crop and the factors that effect it... weather, disease, and disasters. * Number of migrant workers available to harvest the crop... spoilage. * Lead times from field to processing plant... spoilage. * Processing time, storage, and transportation times and costs. * Demand is not know beforehand. CASE: Meditech Surgical 1. What are Meditech's problems in introducing new products? In manufacturing ALL products? Meditech has two major issues with introducing new products. * It has poor service levels for new products The inventory levels are higher than necessary for all of its products 2. What is diving these problems, both systematically and organizationally? There are

seven major areas in which Meditech is driving these problems: * In the planning system, there are too many built-in delays and monthly buckets. This leads to inefficiencies, unneeded delays, and high inventory levels. * There is no tracking of forecasting errors. * Product demand is poorly studied. * The Info Systems used to record and monitor & inventory are not integrated and inadequately designed. Because Meditech does not normally see the end-customer, it has to overcome failures of communications with them... hoarding/panic orders is one example of this failure to communicate with end-customers. * The poor planning system in use magnifies variations in demand. * Panic ordering.

3. Why is the customer service manager the first person to recognize the major issues? He was the person who directly received customer complaints. In his position he was able to determine the scope of the problems. Other managers were not in positions to be aware of customer satisfaction.

4. How would you fix these problems?

There are several ways to fix the problems Meditech is facing. The first and most important is improving communications with customers... Five "Y"s. Another way to improve their SCM is to develop better demand forecasting systems and accountability for their forecasts. Furthermore, Meditech needs to integrate, implement, and improve their information systems. They could easily eliminate bulk inventory by putting assembly within the pull system; i. e. , get rid of the " push-pull" system. Lastly, they could implement a planning system to decrease planning delays (or just use M. S. Project) and reduce system time buckets.