

Certification Track Descriptions

Supply Chain Management Principles

The supply chain function is estimated to control as much as 90% of the costs associated with delivering a final product or service. This percentage of costs means that supply chains have an opportunity to reduce some of that cost or expense. For this reason, the function has increased in complexity and importance within organizations in recent years. From global sourcing to global customers and from brick and mortar stores to e-commerce, the function coordinates and integrates the processes to procure, plan, produce, and deliver products to customers when and where they want them.

Customer Service Operations

Customer service is essentially the delivery of satisfaction and covers all aspects of the supply chain, but it is generally assigned to either logistics or sales. Customer service focuses on identifying and meeting customers' needs, wants, and expectations before, during, and after they buy products. It interfaces greatly with logistics and transportation to get products where and when they belong. Customer service also interfaces with operations, warehousing, and inventory, which assists in ensuring that customers get products when they need or want them, while, at the same time, maintaining inventory to control costs. The function of customer service is essential to any organization, whether they are private sectors (e.g., manufacturers, wholesalers, retailers, carriers, and third-party logistics providers) or public sectors (e.g., airports, ports, and terminals).

Warehousing Operations

Warehousing is another function of logistics and controls the receiving, storing, retrieving, and distributing of inventory. In many companies, warehousing also provides additional services that provide new value to customers. These could include services such as special picking and packing, final assembling and packaging, putting multiple products together as kits, and refurbishing. Warehousing operations can consist of simple floor storage or can include various types of racking for high storage. Many facilities include sophisticated, automated material handling systems to increase speed and accuracy while reducing costs. Functions performed within warehouses or distribution centers have increased significantly; therefore, this function now plays a greater role in the overall supply chain. From picking items, to repacking them into multipacks, and to shipping individual orders or full truckloads, the complexity of warehousing has resulted in greater focus on the efficiency of these operations and how they impact the deliveries of customer orders.

Transportation Operations

Transportation focuses on the timely movement of materials and products within and between organizations. In order to control costs, goods must move at the right time from the right place and to the right place/customer, all while ensuring the right product, quantity, and quality. When this is achieved, it reduces the inventory, which, in turn, reduces expense. Transportation is more complex now than ever because the use of multiple modes of transportation. The combination of these transportation modes can vary daily depending on a number of factors: cost, values, dimensions, weights, time-definite delivery requirements, and other requirements (e.g., such as hazardous or refrigerated cargoes). For today's supply chain professional, it is important to understand the roles of the different modes of surface transportation (i.e., railways, road, water, pipeline), modes of air transportation, and the selection criteria of both the operating carriers and the various third party logistics intermediaries (i.e., forwarders and brokers). In today's logistics industry, it is critical to use resources effectively and to move products in a cost and time-efficient manner.

Supply Management & Procurement

Supply management and procurement is an area that has grown in importance over the last fifty years. Today, this function must take into account many risks based on climate, politics, and social trends. It must protect the reputation of corporations by ensuring ethical and socially responsible actions by suppliers and requires economic and financial understanding to monitor the fluctuations in availability, pricing, and currency fluctuations. Procurement is also a controlling element of the company. It makes sure that products are accurately described to ensure the purchase of the right products and works with other areas to determine specifications and quality. Procurement also balances the lowest purchase costs with all other impacts on the company, including time to receive the product. Procurement has become a global function with suppliers located close to production facilities or located on the other side of the globe.

Demand Planning

Demand planning consists of two parts: forecasting and demand planning. Forecasting focuses on what is needed to have ready for customers. Demand planning focuses on what is needed in order to meet inventory levels from forecasting. Demand planning is the process of planning materials from inbound to manufacturing, which is critical in today's environment of lean inventory and just-in-time manufacturing. The process starts with the general requirements of the sales department for finished, or semi-finished, products and the translation of those requirements into the just-right orders for raw materials. This function also includes the processes needed to address corrective actions when demand is out of balance with supplies and strategies for recovery.

Inventory Management

Inventory management is seeing, controlling, and managing inventory levels to maximize efficiency and profitability. Inventory management controls how efficiently resources are consumed in producing products and services for customers. Inventory management interacts with warehousing, transportation, demand planning, and other areas. Since the late 1980s, companies operating domestically and globally have reduced their levels of inventory and their inventory carrying costs. These trends are ongoing and make the management of inventory important in the supply chain function. Today, technology is used to a greater extent to meet customers' needs with high levels of service and lowered costs.

Manufacturing & Service Operations

Operations departments are the core of delivery by controlling the conversion of materials into products and services. In order to meet the needs of manufacturing as well as service delivery, there needs to be an accurate forecast of demand. In turn, this forecast is converted into demand for raw materials, equipment, space, and other resources. The systems that assist in this include the following: forecasting, requirements planning, work order scheduling, and other systems that may be stand-alone or modules of a robust ERP system. It is also critical that conversions are done with high quality to avoid customer service issues and to avoid costly defects. When and how jobs are scheduled helps to control efficiency and expense. A major focus of operations is to ensure lean and efficient flow. Manufacturing and service operations are key components in the supply chain process once the raw materials or semi-finished inputs arrive for production.