

Chapter 1: Introduction to Operations Management

1. Define the term operations management.

Operations management manages the resources needed to produce the company's products and services. It involves managing people, machines and information.

2. Explain the decisions operations managers make and give three examples.

Operations managers must plan the production schedule. This entails deciding how much to produce and in what order. This information would be used to make purchasing and staffing decisions. Operations managers must manage inventory. They must arrange the inventory in the warehouse. They also facilitate the movement of inventory from the warehouse to the retail facilities or the customer. Operations managers also must manage quality levels. This may include inspection of materials, and the use of quality tools such as control charts.

3. Describe the transformation process of a business. Give three examples. What constitutes the transformation process at an advertising agency, a bank, and a TV station?

The transformation process involves taking the various inputs and transforming them into outputs. An advertising agency would transform the time of its staff into an advertising campaign. A bank may use the time of a teller, an input computer, and a bank branch to accept a deposit. A TV station could use the time of its production crew, the video equipment, and the studio to produce a news story.

4. What are the three major business functions, and how are they related to one another? Give specific examples.

The three major business functions are finance, marketing and operations. Operations entail the production of a product or service and must manage the inputs to production such as workers' time, aluminum, and machine time to create airplane parts. Finance manages the assets, such as the building used for production, investments and cash flows related to production, such as providing the needed machines. Marketing generates sales of the product or service, such as finding customers for the proposed airplanes.

8. Identify the two major differences between service and manufacturing organizations. Find an example of a service and manufacturing company and compare them.

Service organizations involve the customers in the operations to some degree, while manufacturing organizations do not. Manufacturing organizations produce a physical product that can be stored in inventory. Service organizations cannot create an inventory of the service since it is intangible. For example, *Ford Motors* is a manufacturer. It makes automobiles, customers have little contact with the operation, and they can create an inventory of vehicles. *McDonalds* is an example of a service organization. Customers go directly to the restaurant where they are served quickly by the staff.

9. What are the three historical milestones in operations management? How have they influenced management?

Three historical milestones are the industrial revolution, total quality management (TQM) and global competition. The industrial revolution changed production processes from a labor focus to a machine focus. TQM caused managers to be more focused on quality and preventing defects. Finally, global competition caused managers to further increase their focus on quality, realizing that to not improve was to "lose the race."

10. Identify three current trends in operations management and describe them. How do you think they will change the future of OM?

The lean systems concept is a current trend in operations management. This involves taking a total system approach to creating an efficient operation. This includes concepts such as just-in-time (JIT), total quality management (TQM), continuous improvement, resource planning, and supply chain management (SCM).

Companies are using the Internet to reach out to customers, and suppliers directly. Amazon.com has been able to sell books and many other items directly from its warehouse to people like you and me. The Internet is changing how the supply chains work since we can now eliminate the “middle man” or distributor by selling directly from the factory to the final or end customer. Companies can also ease transactions between businesses, known as B2B commerce, by using electronic trading networks.

Large information systems, called Enterprise Resource Planning (ERP) systems, are allowing companies to increase efficiency. These large, sophisticated software programs coordinate, across the entire enterprise, the activities involved in producing and delivering products to customers.

Each of these concepts makes intensive use of information and cooperation between partners. OM will most likely continue to be more information intensive and require greater cooperation among all the players in the value chain.

11. Define the terms total quality management, just-in-time, and reengineering. What do these terms have in common?

Total quality management (TQM) is a philosophy that focuses on meeting the needs of the customer. TQM is not inspection, but actually the prevention of defects. It involves everyone in the organization. Just-in-time is a philosophy that focuses on reducing inventory and other wastes and on the production of the right number of items at the right time. Reengineering focuses on improving business processes in order to improve efficiency. Each of these techniques strives to allow more responsive and more efficient production leading to higher quality and higher customer satisfaction.

12. Describe today's OM environment. How is it different from that of a few years ago? Identify specific features that characterize today's OM environment.

Today's OM environment is more global, more service oriented, and uses more information technology than that of even a few years ago. Companies can outsource steps of their operation easier. Now even service operations are outsourced off-shore. Information technology allows companies to cooperate more closely, creating tighter supply chains, quicker response and less waste. Specific features include greater outsourcing, greater use of information technology, and deeper cooperation in the supply chain.