

## Chapter 15 Notes: Producing Products and Value Chains

- Value Chains is how businesses produce products
  - a. How a business converts inputs to outputs that create value for its stakeholders
  - b. Description of the systems that comprise the business's model and strategy
- Example of a Value chain: Google
  - c. Market research to estimate what customers want to meet their needs
  - d. Figure out how to meet customer demands
    - i. Estimate the need for assets, people, and systems needed to produce
  - e. Determine the systems it will use to integrate the people and assets to produce and operate the search engine
- Companies have **different value chains** because they have different business models and strategies
  - o Strategies focus on using their value chains to create more value for the customer and business
- Production management and operations manager are the same thing
  - o Describe all the activities needed to create or make a product
  - o Management of the value chain= manage both quality and quantity of the product
- **Enterprise Resource Planning**: process of planning production inputs and systems
  - o **Inputs**: assets, people, and data
    - Long term assets= facilities and short term assets= working capital
    - **Operating cycle**: time that elapses between the acquisition of inventory and the receipt of cash from the sale of inventory
    - **Quantity and quality of employees matter!**
    - **Data** are the facts about everything a business does that are input into a system: captures what customers want
      - **Information** is the knowledge derived from data
      - Data is converted into information with **analytics**
      - **Data > Analytics > Information**
- **Analytical or Synthetic Production Process?**
  - o **Analytical**: breaks product into parts. Example is using harvested corn to create products
  - o **Synthetic**: combines inputs or products to create another product. Example is cosmetics
- **Standardized or Customized products?**
  - o **Mass production**: process of producing standardized products in large quantities. Cost efficient because it uses an assembly line
  - o **Customized mass production**: mass production process that permits limited customizations of the product (ex: color on a car)

- **Customized Production:** producing a unique product that meets the unique needs of a customer.
    - **Modular process** is one that uses teams, where team members do multiple tasks in the production of the product
- **Continuous or Intermittent?**
  - **Continuous:** production process that operates continuously, without interruption, for a long period of time
  - **Intermittent:** production process that frequently stops and starts due to the limited number of customers or the need to adjust the production process
- Flexible production is a process that is easily changed. Example being crest toothpaste in different flavors
- The Tools of Managing Operations:
  - **Gantt chart:** depicts how a product is produced over time
  - **PERT chart:** program evaluation review technique; depicts the tasks or activities needed to produce a product
    - **Critical path:** sequence of events that takes the longest time to complete
- Planning Production:
  - **Routing:** planning the sequence of tasks that will take place to produce a product
  - **Scheduling:** assigning tasks to specific people, machines, processes, or even departments; what will happen, who will do it, how it will be done, and when will it be done
  - **Budgeting:** what will be produced, when it will be produced, and what it will cost
    - **Standards:** goals a business desires to meet: when, how much, and cost
    - **Controllable costs:** cost that employees and managers can affect
    - **Non-controllable cost:** costs that employees and managers cannot affect
    - **Flexible budgets:** series of budgets and standards
- Executing Production:
  - **Control:** process that monitors activities that ensure that the plan is being adhered to and making corrections if needed.
  - **Cost accounting systems:** report to management the quality, quantity, and cost of production in a given period of time
    - **Job-order cost system:** allocates costs to individual or groups of products. Example: each automobile is given a number that identifies it as it goes through the production process
    - **Process cost system:** averages costs over large numbers of nearly identical products. Example: tide detergents
- Reviewing Production:

- o Comparing planned and actual
- o Costs that cannot be recovered are called sunk costs
- o Variances are computed for 1) quantity of products produced and 2) the cost of the products produced
- Managing the Productivity and Costs of Assets, People, and Systems Used in Production
  - o Goal of productivity is also to produce in the most economical way possible
    - =lean operations or attempting to be the low-cost-producer
  - o Productivity: measure of output per unit of input
    - Assets are costly and businesses don't want to have too many
    - **Supply chain management**: managing the interface between a business and its suppliers
    - **Just-in-time inventory**: when a business works with its supply chain to minimize the raw material on hand without causing production problems
  - o Outsourcing occurs when a business uses sources outside its organization to provide production or professional services
    - Reduces the cost of employees/ people assets
- Quality: producing products that meet customer expectations
  - o Business's goal to consistently produce quality products that meet customer expectations
  - o The business that sold the quality product gets future sales. Which increases its value
  - o Systems to control and ensure quality are expensive
- **Total Quality Management**: philosophy that producing quality products is an essential part of all aspects of a business= meeting customer expectations, maximizing the benefits from meeting customer expectations, and minimizing the costs of not meeting customer expectations.
  - o Quality assurance: designing products, marketing products, producing products, and supporting customers with services
  - o **Key to TQM is a business's workers and managers**
  - o **Quality circle**: team of employees that works with the parts of a business to address opportunities and challenges regarding quality
  - o **Six Sigma** focuses on the inputs and systems. It's goal is to produce products with no more than **3.4 defects per million parts or actions (99.999% success)**
  - o **International Standards Organization**: non-governmental organization of standard-setting groups throughout the world
    - **ISO 14000** is a program designed to recognize businesses that protect and enhance the environment
  - o **Baldrige Award**: awarded to businesses that show outstanding performance in obtaining quality