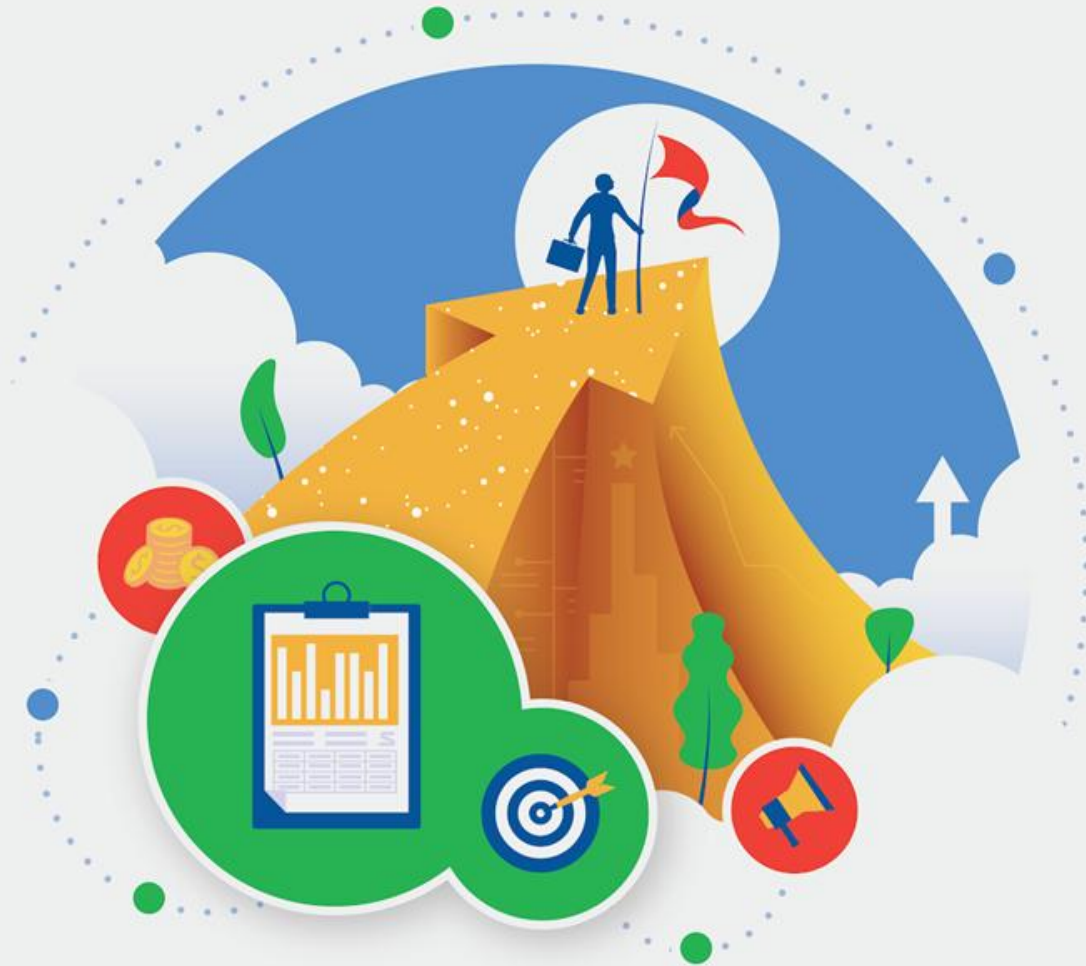


Before we start the next chapter...

- Results of your applications





CHAPTER 5

Competing with Operations Management

INTRODUCTION TO BUSINESS

Learning Objectives

- To define operations management and its roles
- To describe the difference between a product and a service
- To explain key decision variables in the make vs. buy-decision
- To compare different processes and when they are used
- To reflect on methods of keeping the customer satisfied



THE OPERATIONS MANAGEMENT PROCESS

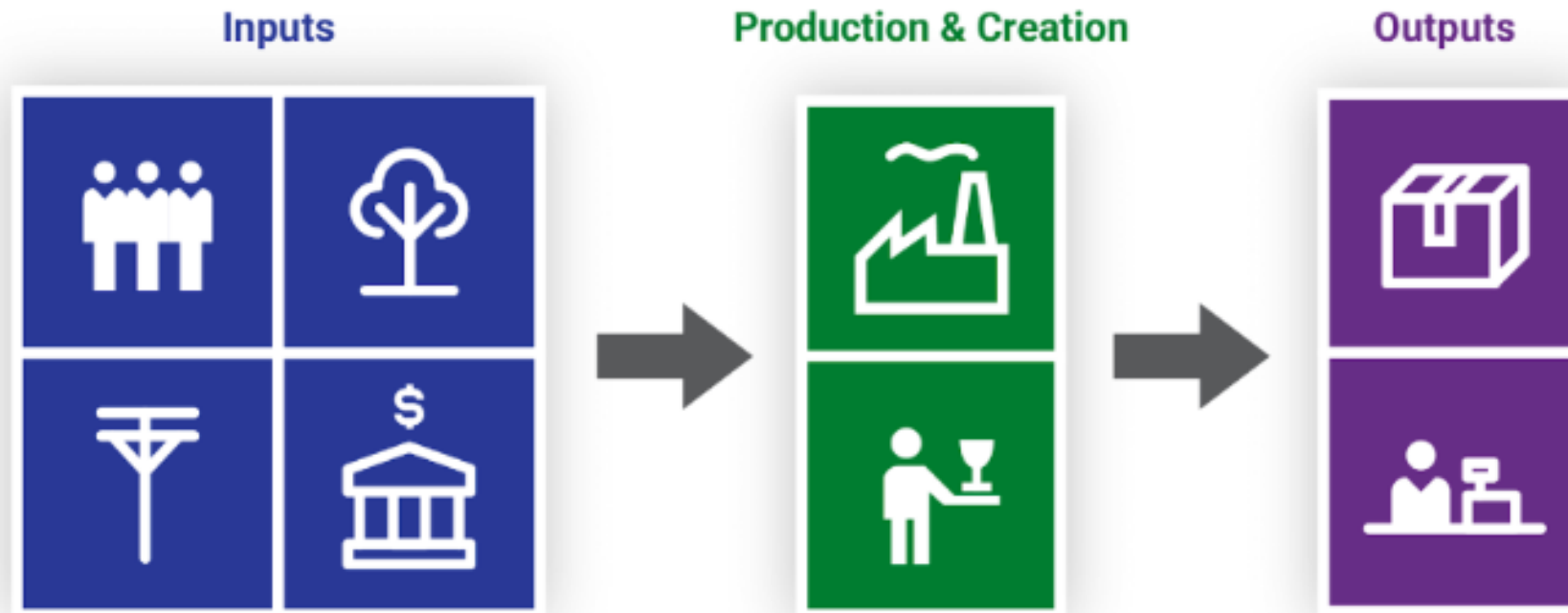


Figure 5.1.1 (Source: Stukent)

The role of **operations management** (OM) in a business is organizing the processes that turn inputs, such as labor, raw materials, purchased goods, and capital into **products** or **services** that the business can sell



The main objectives of OM

Efficiency: Streamlining processes to reduce waste and optimize resource use.

Quality: Ensuring that products and services meet specific standards and satisfy customer expectations.

Cost Reduction: Minimizing operational costs while maintaining quality and efficiency.

Flexibility: Adapting to changes in demand and market conditions to meet customer needs.

Timeliness: Ensuring products and services are delivered on time to enhance customer satisfaction.



Differences and similarities between a product and a service

A **product** is tangible. This means that it can be physically touched and put on a shelf until a customer wants it

A **service** is something that is intangible and cannot be touched or put it on a shelf, such as a haircut.

- One of the main advantages of a tangible product is that it can be made ahead of customer demand and inventoried: **decoupling demand**
- Services differ because they can only be done after a customer demands it.
- Both require inputs and processes that transform the inputs into something a customer is willing to buy



Check Your Understanding



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You are walking with your friends under the hot sun, and you decide to visit a café for some refreshing beverages.

Is this scenario about:

A Product

A Service

So how do products and services impact OM?

Quality

- A product can be thoroughly tested before the customer uses it
- The quality of the service is determined after it is provided, such as a good haircut
- The customer usually does not see the process of making a product
- A service provider is typically interacting with the customer



How else do products and services impact OM?

Capacity

- A product can be made before it is demanded and additional factories can be used if demand is high
- The amount of service provided is proportional to the number of providers such as barbers at the barber shop

Capital and automation

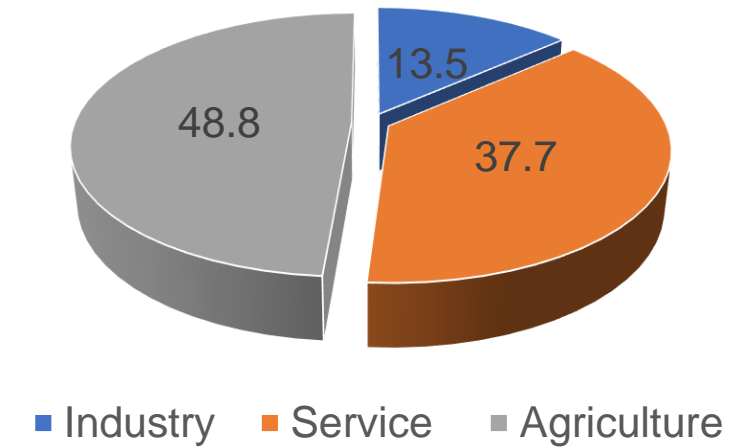
- Many products are made with capital, such as machines, and automation that makes workers more productive
- Services have some capital and automation but usually much less than products



The importance of services

- Employment is now 13% for manufacturing and 37% for services (National Statistic Committee)
- Services also play an important role in providing many of the products that we use
 - Retail services customers to help them find the right product
 - Accounting, sales, marketing, human resources, and even operations management are services

Employed population by industries





**Where does a business start
and end?**

A business starts and ends by deciding what to make and what to buy and OM helps to decide where the line is drawn

Make

- Might seem like an easy decision but cost and time should also be considered



Buy

- If making something is not feasible, a business needs to buy from another business
- **Outsourcing:** a business decides that it is easier and/or cheaper to purchase a product or service from another business

- Apple has suppliers in 43 countries in six continents
- Kumtor Gold Company has more than 600 suppliers





Choosing a process



Job Shop & Batch



Job Shop

A job shop is a manufacturing system that handles custom or semi-custom manufacturing processes

A bakery is a good example that makes custom wedding cakes.



Batch

When more volume is required, a batch process can be a good alternative.

The production of newspapers, magazines, books, and clothing in various sizes and designs serves as a good example.



Assembly Line & Hybrid



Assembly line

An assembly line is the highest volume process that offers much lower prices than the job shop or batch with the trade-off of very little variety.

Examples: automobiles and other transportation equipment, household appliances



Hybrid

Many businesses have figured out how to combine processes to produce something at batch or assembly line prices, while still offering a high degree of customization.

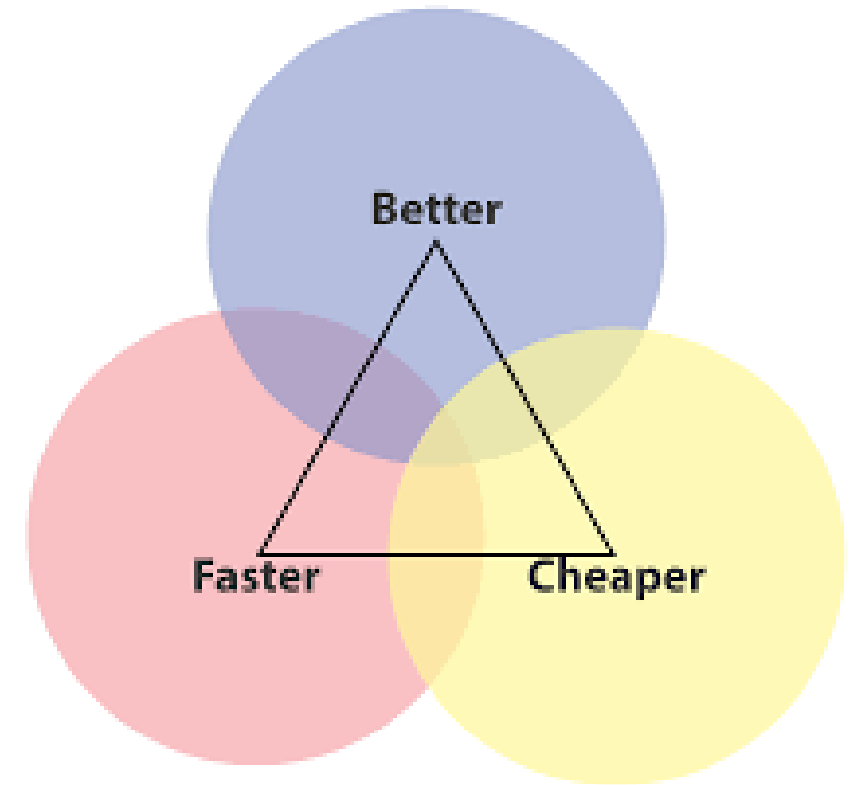
Example: Subway and Chipotle



Trade-offs: Speed vs. Efficiency

The speed at which a product or service can be provided versus the efficiency of providing it.

For example same-day delivery versus next-day delivery



Producing goods & services: Planning



- Demand planning focuses on getting the customer to buy the service when the business would like them to.

Demand

- Reservations and appointments
- Happy hours
- Early bird specials

- Capacity planning is used to ensure that enough production capability is ready to meet customer demand.

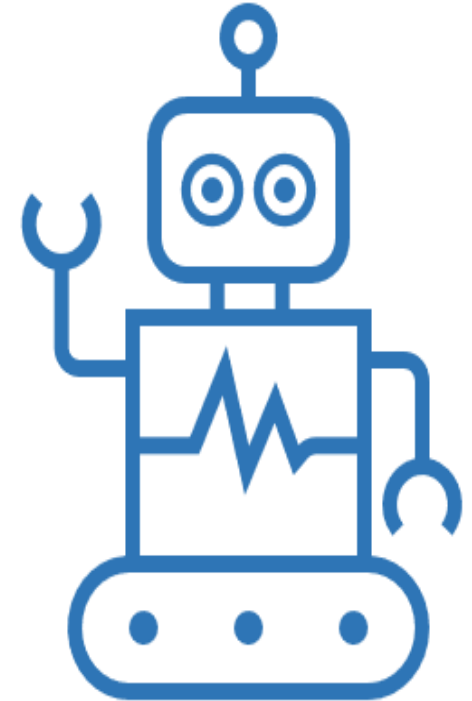
Capacity

- Employee scheduling
- Leasing extra space
- Outsourcing
- Overtime



Producing goods & services: Automation

- Defined as anything that helps someone do a task faster, easier, or with less effort
- Automation can be an ordering kiosk at a fast-food restaurant, a robot in a factory, or a computer system to help a call center employee answer customer questions.
- **Focus on people as much as technology**
- Employees also need to be part of the development and implementation



Producing goods & services: Inventory

- Inventory are the goods that a company makes and buys to be able to provide a good or service.
- Operations management needs to make sure that the right amount of inventory is on hand to meet consumer needs and to reduce company's risks.
- Three types of inventory that all businesses have:



Producing goods & services: Distribution

- Final process: distribution center vs. retail location
- **Centralized inventory** is holding the inventory at a centralized distribution center, allowing for low-volume products to be more efficiently held in inventory.
- **Decentralized inventory** also uses distribution centers before shipping products to a store. The main difference is that most of the inventory is kept at the store level and using the distribution center to replenish the products that have been sold at the store.
- **A hybrid approach**

CENTRALIZED INVENTORY

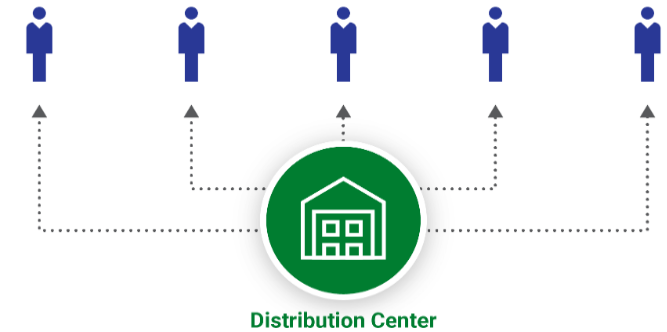


Figure 5.3.1 (Source: Stukent)

DECENTRALIZED INVENTORY

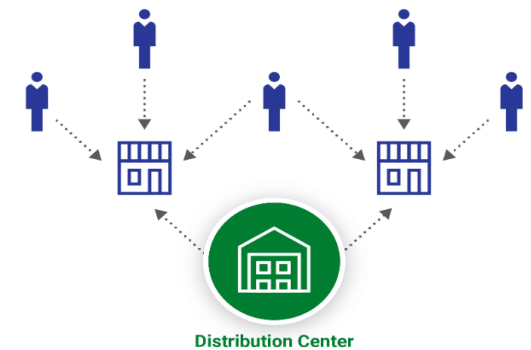


Figure 5.3.2 (Source: Stukent)





Keeping the Customer Satisfied



Quality

- Quality is not something that a business should see as a cost but as an investment – Philip Crosby, *Quality is Free*
- “Meeting or exceeding customer expectations”

Productivity

- Productivity is a ratio of how much time, energy, materials, and labor is needed to produce a product or provide a service
- It can pass the benefit on to customers by lowering the price

Lean

- Lean is the identification of waste anywhere in a process and removing it.
- Inventory, Overproduction, Transportation



Assignment 1.

Operations Management in Action

Instructions

Have students observe a restaurant, retail store, or some other service operation and answer the following questions in teams.

- a. What are the products and/or services provided? Why did you choose this business?
- b. Is there any automation in use? If so, describe how the employees and customers interact with it.
- c. What is the process type being used?
- d. Are there any demand planning strategies?
- e. What are the types of inventory in use?

This assignment should be completed in groups. Present your results and submit your report (include stud. No of team members in the title page). Submit your report before November 4, 2025 4PM.

