

Operations Management

Prepared by Dr. Injy Nashaat

Orientation Session



the administration of business structure, practices, and processes to enhance efficiency and maximize profit.

It refers to the management of functions that a business needs to run effectively day-to-day, including multiple departments and providing goals.

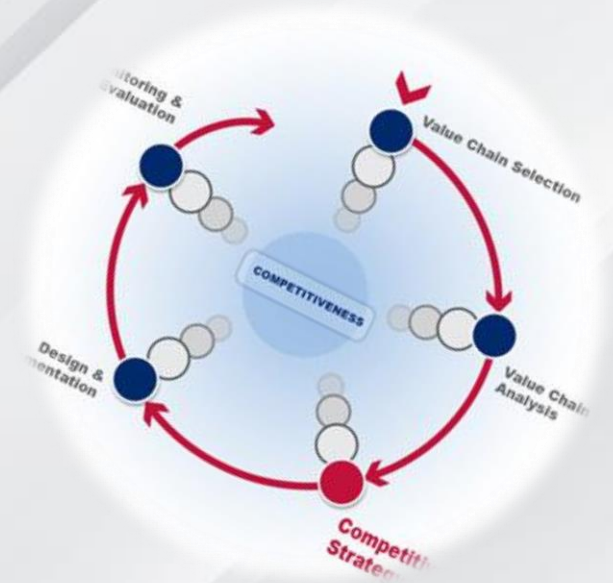
Ch 1: Introduction to Operations Management

1. Define the terms *operations management* and *supply chain*
2. Identify similarities and differences between production and service operations
3. Explain the importance of learning about operations management
4. Explain the key aspects of operations management decision making
5. Describe the current issues in business that impact operations management.
6. Explain the importance of ethical decision making
7. Explain the need to manage the supply chain



Ch 2: Competitiveness, Strategy, and Productivity

1. List several ways that business organizations compete
2. Name several reasons that business organizations fail
3. Define the terms *mission* and *strategy* and explain why they are important
4. Discuss and compare organization strategy and operations strategy and explain why it is important to link the two
5. Describe and give examples of time-based strategies
6. Define the term *productivity* and explain why it is important to organizations and to countries
7. Describe several factors that affect productivity



Ch 3: Forecasting

1. Explain why forecasts are generally wrong
2. List the elements of a good forecast
3. Outline the steps in the forecasting process
4. Summarize forecast errors and use summaries to make decisions
5. Describe four qualitative forecasting techniques
6. Prepare a moving average forecast
7. Prepare an expanding smoothing forecast
8. Prepare a trend-adjusted exponential smoothing forecast
9. Construct control charts and use them to monitor forecast errors



Ch 4: Reliability

1. Define *reliability*
2. Perform simple reliability computations
3. Explain the term *availability* and perform simple calculations



Ch 5: Strategic Capacity Planning for Products and Services



1. Name the three key questions in capacity planning
2. Explain the importance of capacity planning
3. Describe ways of defining and measuring capacity
4. Discuss factors to consider when deciding whether to perform in-house or outsource
5. Discuss the major considerations related to developing capacity alternatives
6. Describe the steps used to resolve constraint issues
7. Briefly describe approaches that are useful for evaluating capacity alternatives

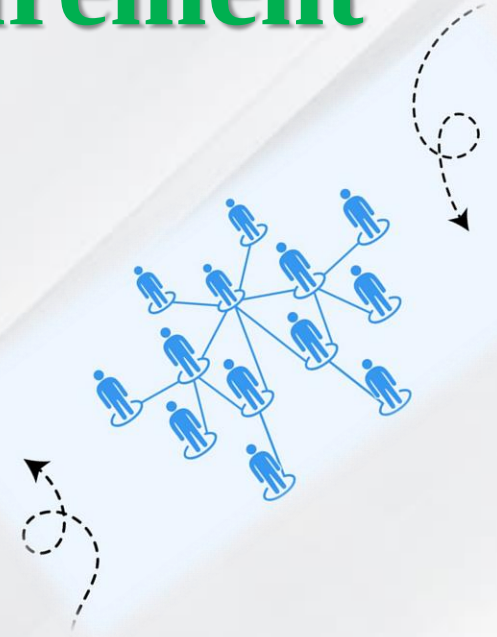
Ch 6: Process Selection and Facility Layout

1. Explain the strategic importance of process selection and the influence it has on the organization and its supply chain
2. Name the two main factors that influence process selection
3. Explain the need for management of technology
4. List some reasons for redesign of process
5. Describe product layouts and their main advantages and disadvantages
6. Describe process layouts and their main advantages and disadvantages
7. Solve simple line-balancing problems
8. Develop simple process layouts



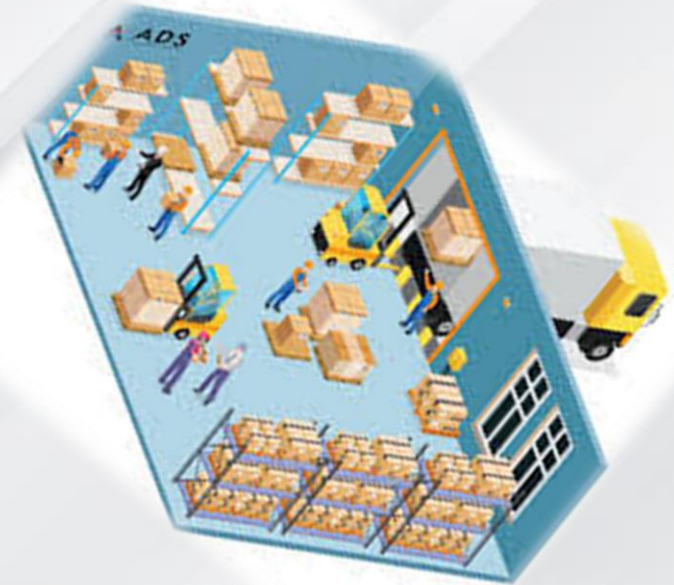
Ch 7: Work Design and Measurement

1. Explain the importance of work design
2. Compare and contrast the two basic approaches to job design
3. Discuss the advantages and disadvantages of specialization
4. Describe behavioral approaches to job design
5. Discuss the impact of working conditions on job design
6. Compare the advantages and disadvantages of time-based and output-based pay systems
7. Explain the purpose of methods analysis and describe how methods studies are performed
8. Define a standard time



Ch 8: Inventory Management

1. Define the term *inventory*
2. List the different types of inventory
3. Describe the main functions of inventories
4. Discuss the main requirements for effective management
5. Explain periodic and perpetual review systems
6. Describe the costs that are relevant for inventory management
7. Describe the economic production quantity model and solve typical problems
8. Describe the quantity discount model and solve typical problems
9. Describe reorder point models and solve typical problems



Chapter 9: Management of Quality

1. Discuss the philosophies of quality
2. Define the term *quality* as it relates to products and as it relates to services
3. Explain why quality is important and the consequences of poor quality
4. Describe and give examples of the costs associated with quality
5. Discuss the importance of ethics in managing quality
6. Discuss quality certification and its importance
7. Describe TQM
8. Give an overview of problem solving
9. Give an overview of process improvement
10. Describe and use various quality tools



Ch 10: Quality Control

1. Explain the need for quality control
2. Discuss the basic issues of inspection
3. List and briefly explain the elements of the control process
4. Explain how control charts are used to monitor a process, and the concepts that underlie their use
5. Use and interpret control charts
6. Perform run tests to check for no randomness in process output
7. Assess process capability



Thank You