

OPERATIONS MANAGEMENT IN BUSINESS

UNIT 34

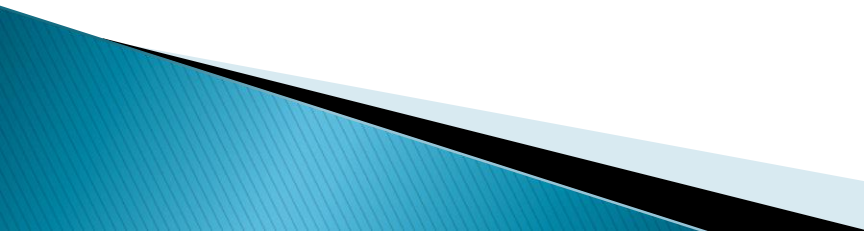
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The Importance of Operational Management



Introduction

- ▶ Operation is that part of an organization, which is concerned with the transformation of a range of inputs into services having the required quality level.
 - ▶ Management is the process, which combines and transforms various resources used in the operations of the organization into value added services in a controlled manner as per the policies of the organization
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What is Operations Management

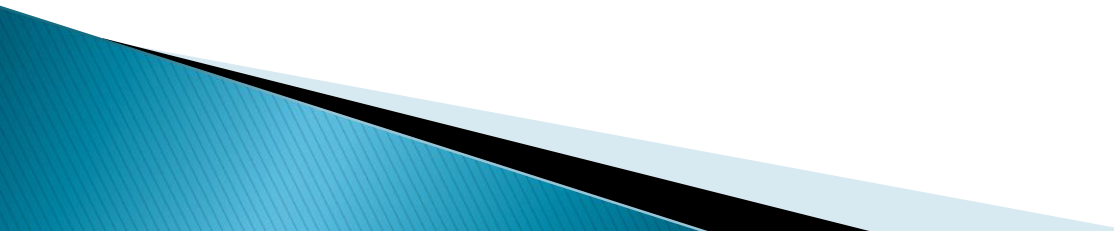
Operations Management, according to Joseph G .Monks is the process whereby resources, flowing within a defined system, are combined and transformed by a controlled manner to add value in accordance with policies communicated by management.

Management activities which are involved in manufacturing certain products, is called **production management** and if it is services then the management s is called as **operations management**.

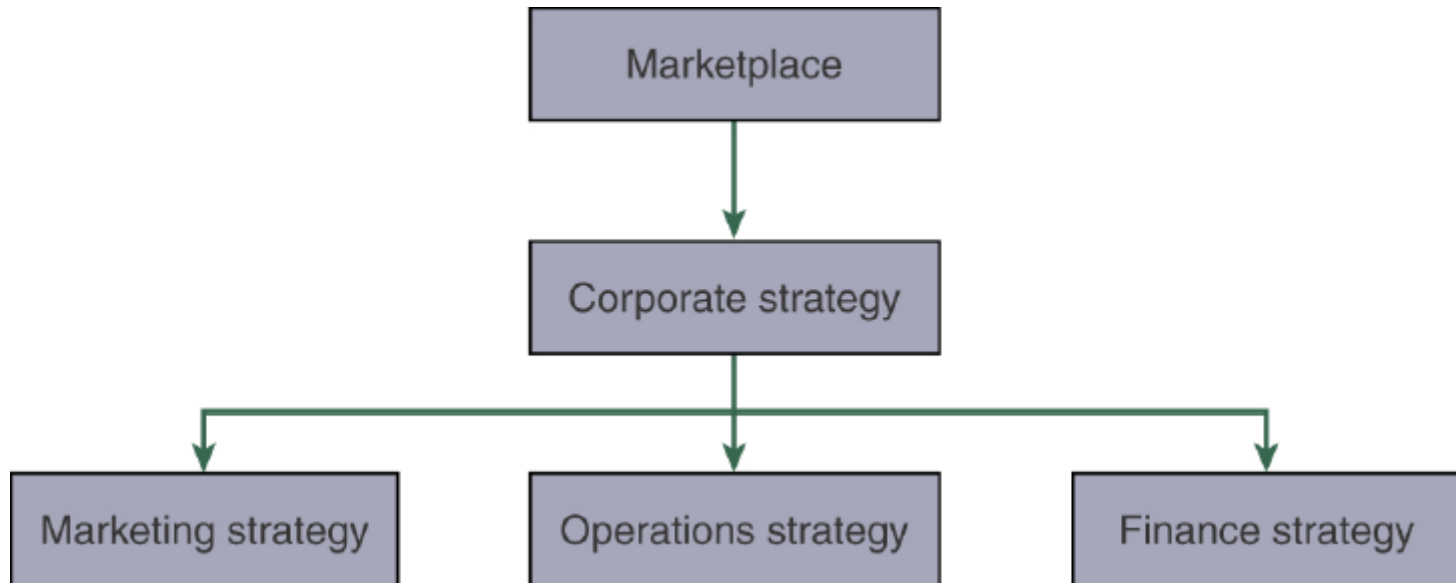
Historical Development of Operations Management

- ▶ Prior to 1900
 - Cottage industry produced custom-made goods.
- ▶ Scientific Management
- ▶ Other Management Pioneers: Frank and Lillian Gilbreth & Henry L. Gantt
- ▶ Moving Assembly Line (1913)
- ▶ Hawthorne Studies

Historical Development of Operations Management Cont'd

- ▶ Operations Research (Management Science)
 - ▶ **OM Emerges as a Field:** 1950–1960, OM moved beyond industrial engineering and operations research to the view of the production operation as a system.
 - ▶ The Marriage of OM and IT)
 - ▶ Operations Management in Services:
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Role of Operational Management within an Organization



Concept of Production

- ▶ **Production function** is ‘the part of an organisation, which is concerned with the transformation of a range of inputs into the required outputs (products) having the requisite quality level’.
- ▶ **Production** is defined as ‘the step-by-step conversion of one form of material into another form through chemical or mechanical process to create or enhance the utility of the product to the user’.
 - Some examples of production are: manufacturing custom-made products like, boilers with a specific capacity, constructing flats, some structural fabrication works for selected customers, etc., and manufacturing standardized products like, car, bus, motor cycle, radio, television, etc.

Production System

Resources, flowing within a defined system, are combined and transformed in a controlled manner to add value.

The production system has the following characteristics:

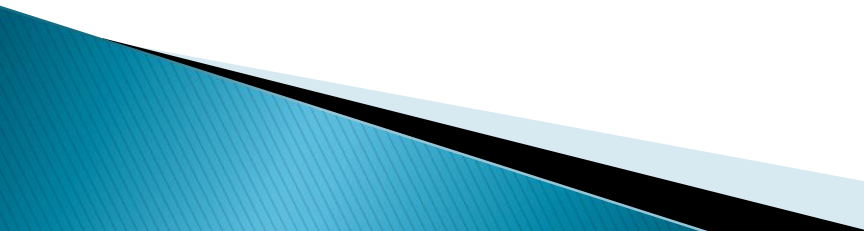
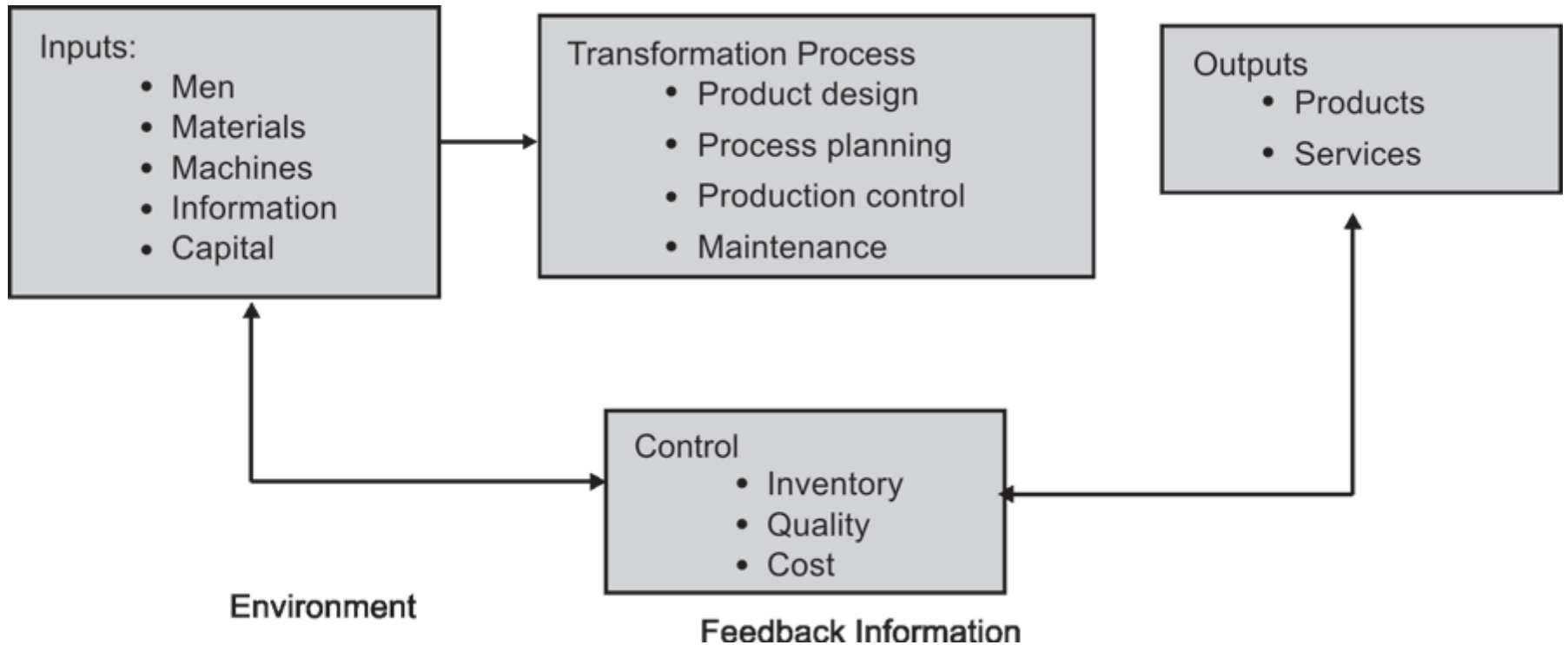
1. Production is an organised activity, so every production system has an objective.
 2. The system transforms the various inputs to useful outputs.
 3. It does not operate in isolation from the other organisation system.
 4. There exists a feedback about the activities, which is essential to control and improve system performance.
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Fig.1.1 Schematic production system




Differences between Goods and Services

Services	Goods
Intangible, nondurable	Tangible, durable
Output can't be inventoried	Output can be inventoried
Interaction with customer	No interaction with customer
Short response time	Long response time
Labor intensive	Capital intensive

Classification of Production System

- ▶ **Job-Shop Production:** manufacturing one or few quantity of products designed and produced as per the specification of customers within prefixed time and cost.
- ▶ **Batch Production:** job pass through the functional departments in lots or batches and each lot may have a different routing.
- ▶ **Mass Production:** Manufacture of discrete parts or assemblies using a continuous process are called *Mass Production*. This production system is justified by very large volume.
- ▶ **Continuous Production:** Production facilities are arranged as per the sequence of production operations from the first operations to the finished product. The items are made to flow through the sequence of operations through material handling devices such as conveyors, transfer devices, etc.

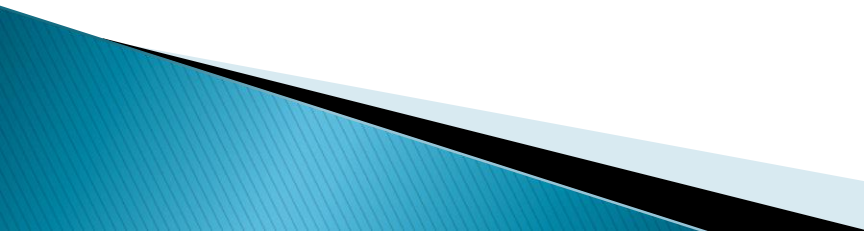
Production Management

- ▶ **Production** is defined as ‘the step-by-step conversion of one form of material into another form.’
 - ▶ **Production function** is ‘the part of an organization, which is concerned with the transformation of a range of inputs into the required outputs (products) having the requisite quality level’.
 - ▶ **Production management** is ‘a process of planning, organizing, directing and controlling the activities of the production function. It combines and transforms various resources used in the production subsystem of the organization into value added product in a controlled manner as per the policies of the organization’.
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Objectives of Production Management

- ▶ The objective of the production management is ‘to produce goods and services of Right Quality and Quantity at the Right time and Right manufacturing cost’.
- ▶ **1. Right Quality:** The quality of product is established based upon the customers need.
- ▶ **2. Right Quantity:** The manufacturing organization should produce the products in right number.
- ▶ **Right Time:** Timeliness of delivery is one of the important parameter to judge the effectiveness of production department.
- ▶ **Right Manufacturing Cost:** Manufacturing costs are established before the product is actually manufactured.

Operations System


- ▶ The **operation system** includes both manufacturing sector as well as service sector
 - ▶ **An operation** was defined in terms of the mission for the organization, technology it employs and the human and managerial processes it involves.
 - ▶ Operations in an organization can be categorized into Manufacturing Operations and Service operations.
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A Framework of Managing Operations


Managing Operations involves planning, organizing, and controlling the activities, which affect human behavior through models.

- Planning is the activity that establishes a course of action and guide future decision-making.
- Organizing is the activities that establish a structure of tasks and authority.
- Controlling is the activities that assure the actual performance in accordance with planned performance. Controlling costs, quality, and schedules are the important functions here.

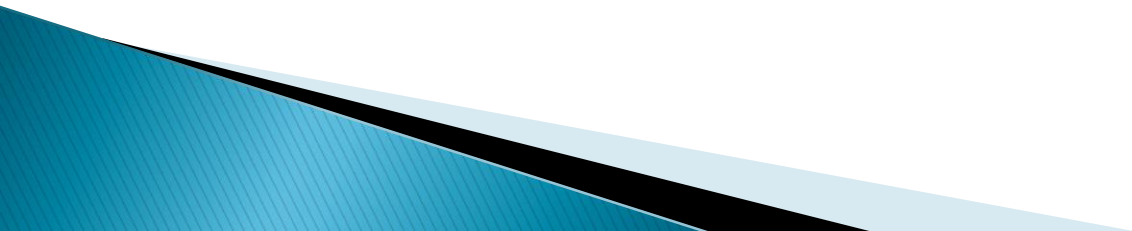
Operations Management and Operations Managers Responsibility

- ▶ The operations managers have the prime responsibility for processing inputs into outputs.
 - ▶ They must bring together under production plan that effectively uses the materials, capacity and knowledge available in the production facility.
 - ▶ Control must be exercised over such parameters such as costs, quality and inventory levels.
 - ▶ The definition of the operations Management contains following keywords: Resources, Systems, transformation and Value addition Activities.
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Key Terms in Defining Operations Management

- ▶ **Resources:** The human, material and capital inputs to the production process.
 - ▶ **Systems:** The arrangement of components designed to achieve objectives according to the plan.
 - ▶ **Transformation and Value Adding Activities:** The objective of combining resources under controlled conditions is to transform them into goods and services having a higher value than the original inputs.
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Exercise

1. Define Operations management. Explain the key concepts of Operations management
 2. Distinguish between manufacturing and service operation with example.
 3. Define the term operations management.
 4. Briefly explain how service producers differ from goods producers in important aspects of their operations.
 5. State the important objectives of production management.
 6. Define the term productive system.
 7. Explain the concept of productivity.
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