

**SWAMI DAYANANDA
COLLEGE OF ARTS AND
SCIENCE, MANJAKKUDI
612 610, TIRUVARUR DT.**

PRODUCTION MANAGEMENT

SUB.CODE: 16ACBB4

FACULTY NAME: Dr. R. VANITHA

INTRODUCTION

- ★ Management is a multipurpose organ that manages business i.e managers,workers and work. It is the act of getting people together to accomplish desired goals and objectives using available resources efficiently and effectively.
- ★ The systems aspects of manufacturing are more important than ever today. The word 'manufacturing' was originally derived from two Latin words 'manus' (hand) and 'factus'(make), so that the combination means 'make by hand'.



MEANING OF PRODUCTION MANAGEMENT:

- Production Management refers to the application of management principles to the production function in a factory.
- In other words, production management involves application of planning, organizing, directing and controlling the production process.

DEFINITION OF PRODUCTION MANAGEMENT

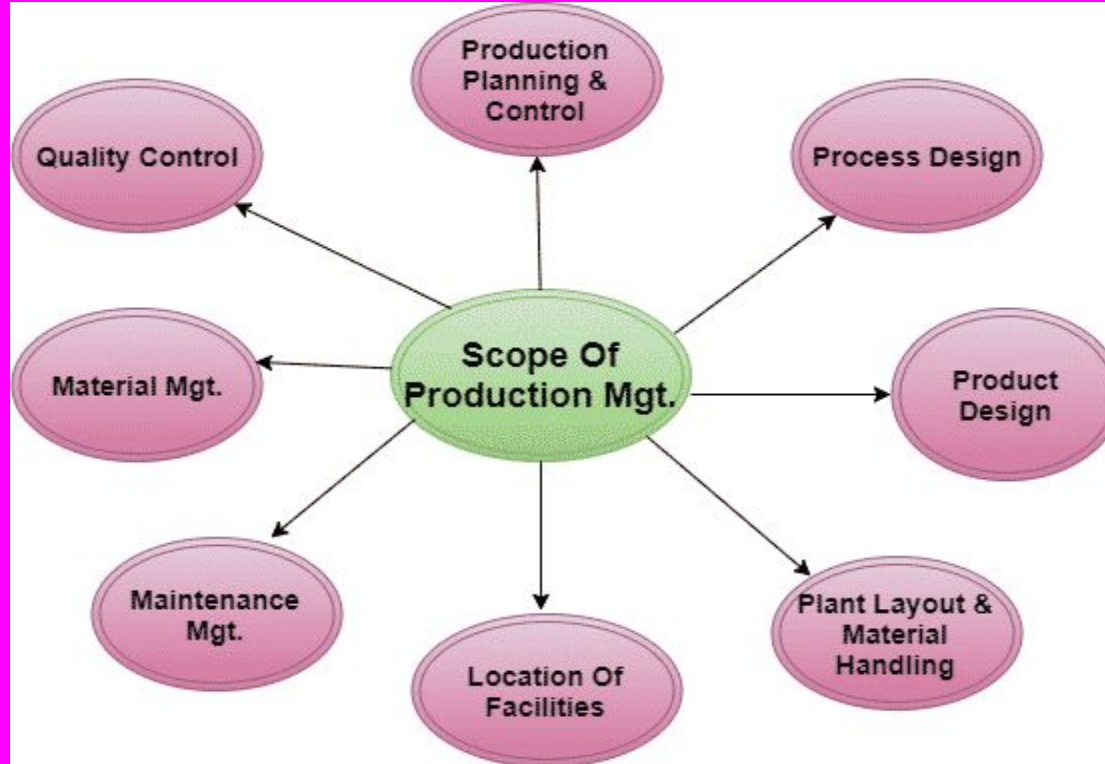
- Production Management can be defined as the management of the conversion process, which converts land, labor, capital, and management inputs into desired outputs of goods and services.
- It is also concerned with the design and the operation of systems for manufacture, transport, supply or service

OBJECTIVE OF PRODUCTION MANAGEMENT

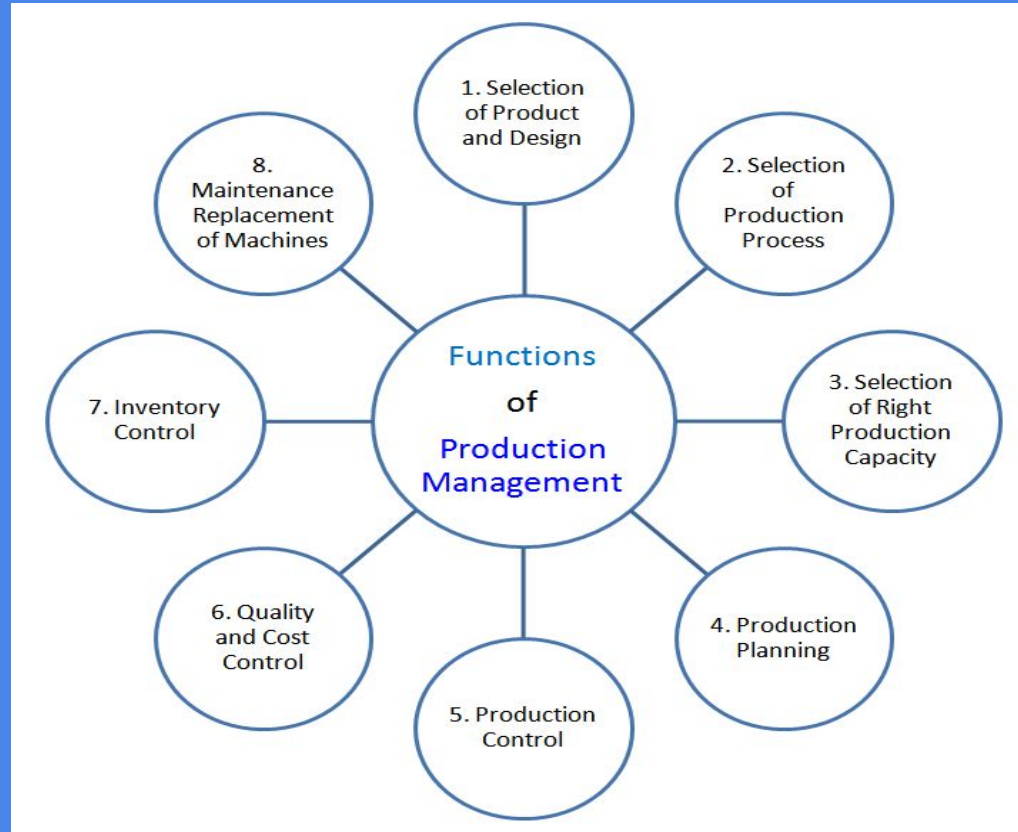
- Produce the desired product or specified product by specified methods so that the optimal utilization of available resources is met with.
- To produce goods that has marketability at the cheapest price by proper planning of the manpower, material and processes.
- To deliver right goods of right quantity at right place and at right price.

When the above objective is achieved, we say that we have effective Production Management system.

SCOPE OF PRODUCTION MANAGEMENT



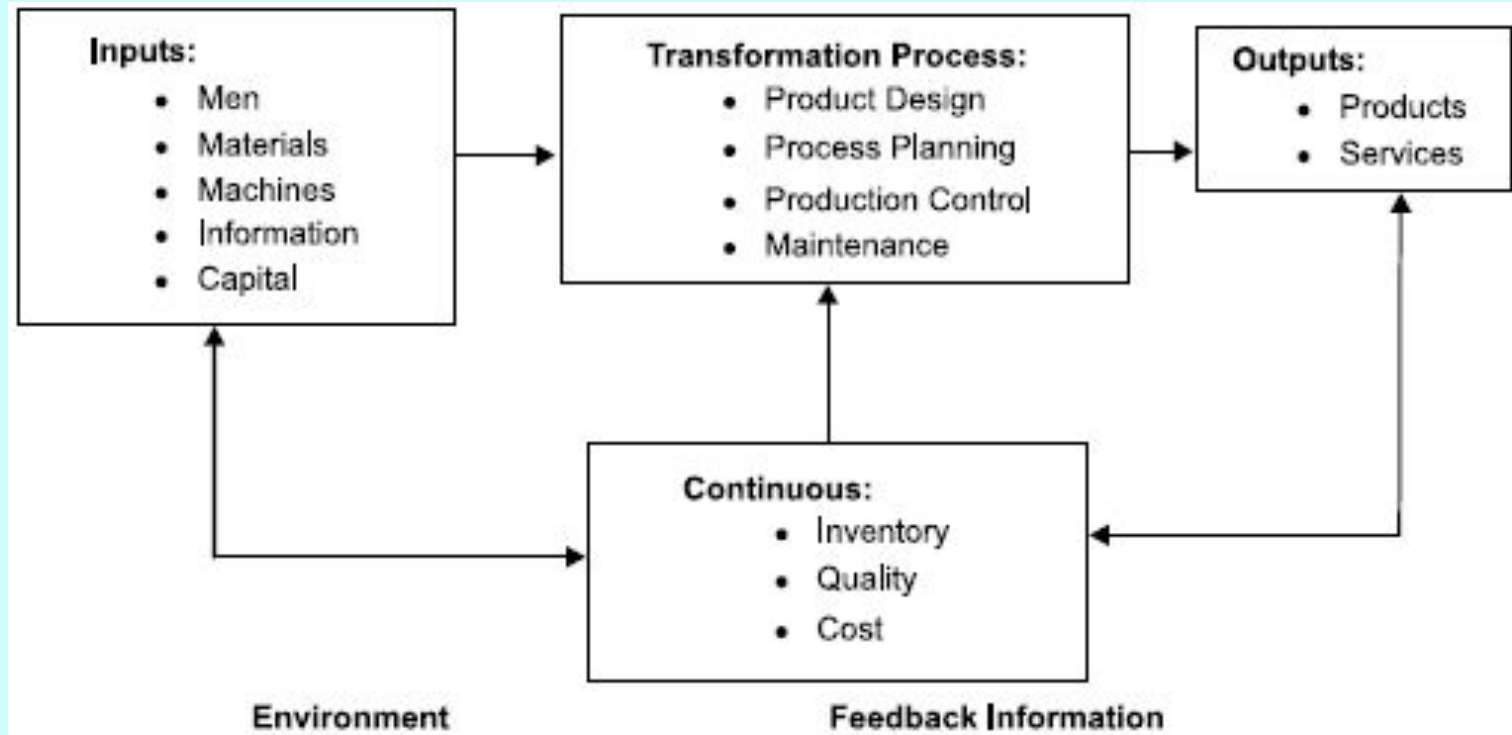
FUNCTIONS OF PRODUCTION MANAGEMENT



PRODUCTION SYSTEM

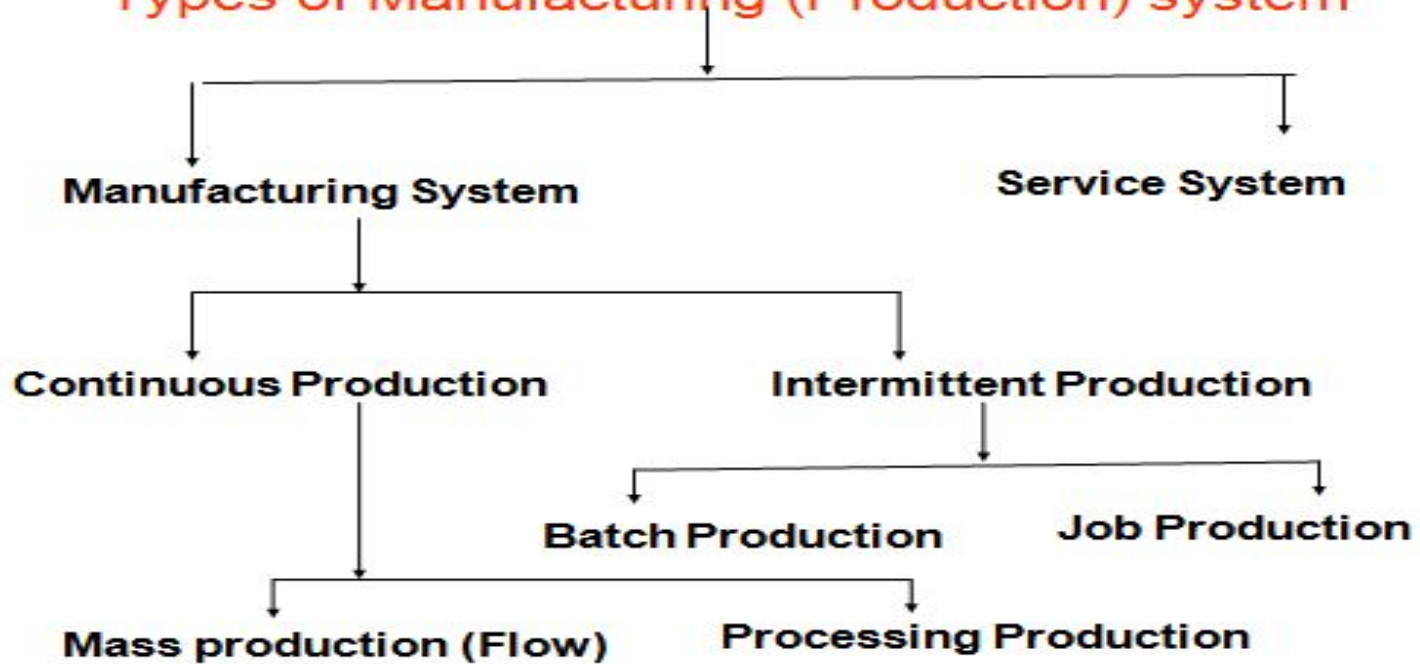
System: It consists of elements or components. The elements or components are interlinked together to achieve the objective for which it exists.

PRODUCTION SYSTEM



TYPES OF PRODUCTION SYSTEM

Types of Manufacturing (Production) system



Continuous production system

- In the continuous production system, goods are produced constantly as per demand forecast. Goods are produced on a large scale for stocking and selling. They are not produced on customer's orders. Here, the inputs and outputs are standardized along with the production process and sequence.

INTERMITTENT PRODUCTION SYSTEM

- Starts and stops at irregular intervals
- Production is irregular according to the job and then , the process starts again with new and customised specifications
- Intermittent production system is of two types viz , job production and batch production

Differences between Intermittent and Continuous Process



Intermittent	Continuous
<ul style="list-style-type: none">• Same product is not produced continuously• Items produced for order• Production process flexible.• Equipment used for limited time.• Wide range of products can be produced.• Smaller scale of production• Planning and control operations complicated and tedious	<ul style="list-style-type: none">• Same product produced continuously• Items produced for stock• Process not flexible• Regular use of equipment• Only particular type of product is produced• Large scale production• Planning and control operations simple and easy.

Job production:

Characterised by make-to-order strategy.

There are three possible situations for production quantity

1. Product is manufactured only once
2. Small quantities of product are repeated at irregular time intervals (demand not certain)
3. Small quantities of product are repeated at regular time intervals In Job shop production, first and second situations are common. End product is most of the time as per the customer need.

Batch production

Batch of identical articles are manufactured

The demand rate is lesser than the rate of production and hence batch production method is traditionally adopted

There is a built-up of inventory in batch production

There are three possible situations

1. A batch is manufactured only once (make-to-order)
2. Batch is repeated at irregular time intervals (make-to-order)
3. Batch is repeated at regular time intervals (make-to-stock) Final product is usually standard. The basic design is same.

Mass production

1. The demand rate is more than the rate of production.
2. Similar product is manufactured and hence, standard method and time standard is to be analysed.
3. Most of the machines used in mass production are special purpose.
4. The equipment is dedicated to the manufacture of a single product type such as light bulbs, medicines etc.
5. The system is capital intensive and a long term planning needed before the investment.

PLANT LOCATION AND PLANT LAYOUT

- ❖ **Plant location** refers to the choice of the region where men, materials, money, machinery and equipment are brought together for setting up a business or **factory**

- ❖ **Plant location** refers to the choice of region and the selection of a particular site for setting up a business or **factory**. But the choice is made only after considering cost and benefits of different alternative sites

FACTORS INFLUENCING PLANT LOCATION

It is appropriate to divide the factors, which influence the plant location or facility location on the basis of the nature of the organization as

1. **General locational factors**, which include controllable and uncontrollable factors for all type of organizations.
2. **Specific locational factors** specifically required for manufacturing and service organizations.

CONTROLLABLE FACTORS OF PLANT LOCATION

1. Proximity to markets.
2. Supply of materials
3. Transportation facilities
4. Infrastructure availability
5. Labour and wages
6. External economies
7. Capital

UNCONTROLLABLE FACTORS OF PLANT LOCATION

8. Government policy

9. Climate conditions

10. Supporting industries and services

11. Community and labor attitudes

12. Community Infrastructure

Objectives of Layout

1. Efficient utilization of available floor space
 2. To ensure that work proceeds from one point to another point without any delay
 3. Provide enough production capacity.
 4. Reduce material handling costs
 5. Reduce hazards to personnel
 6. Utilize labor efficiently
 7. Increase employee moral.
-

KINDS OF PLANT LAYOUT

1. PROCESS LAYOUT

It is also known as 'functional layout'. The main feature of this type of layout is that, similar machines or similar kind of processes are kept in a group in a department . The specialised department works for all type of production.

2. PRODUCT LAYOUT

It is also called as line layout. The main feature of this layout type is that, various operations on raw material are performed in a sequence and machines are placed along the product flow line i.e machines are arranged in a sequence in which they would be used in a process of manufacture of the products or group of related products.

3.COMBINATION LAYOUT

This type of a layout is a combination of process and product layout and hence combination advantages of both types of layouts.

4. FIXED POSITION LAYOUT

In this layout men, machines, equipments, material moved up and position of the product remains same. This type of layout is useful in ship building, aircraft manufacturing, and big units of fabrication like huge process equipment.



Thank
You