

MANAGEMENT SCIENCE

MS

UNIT-I

- INTRODUCTION TO MANAGEMENT

What is Management Science?

Management science (MS), is an interdisciplinary branch of applied science including

- mathematical modeling;
- Engineering;
- Statistics; and
- algorithms
- improve an organization's ability to enact rational and meaningful management decisions.
- The discipline is typically concerned with maximizing profit, assembly line performance, crop yield, bandwidth, etc. or minimizing expenses, loss, risk, etc.

Applications

Applications of management science are abundant in industry such as [airlines](#), [manufacturing companies](#), [service organizations](#), [military branches](#), and in [government](#). The range of problems and issues to which management science has contributed insights and solutions is vast. It includes:

- scheduling airlines, both planes and crew,
- deciding the appropriate place to place new facilities such as a warehouse or factory,
- managing the flow of water from reservoirs,
- identifying possible future development paths for parts of the telecommunications industry,
- establishing the information needs and appropriate systems to supply them within the health service, and
- identifying and understanding the strategies adopted by companies for their information systems.

Concept of management

- Management is what managers do.
- It refers to people at top level in the organization, concerned with decision making.

Nature and features

- Management is a social process.
- Management is omnipresent and universal.
- It is an exact science.
- It is complex.
- Management is a situational in nature.

Characteristics of Management

- Setting goals for organizations
- Awareness of opportunities and resources
- Management is transformation process
- Management is universal
- Management is Dynamic
- System of authority

challenges to management

- Management is decision making
- Management is a profession

Importance of Management

- Effective utilization of resources
- Development of resources
- To incorporate innovations
- Integrating various interest groups
- Stability in the society

Levels of Management:

- 1. Top Management
- 2. Upper Middle management
- 3. Middle Management
- 4. Lower Management
- 5. Operating Force or Rank and file workmen

Top Management includes:

- a) Board of directors
- b) Managing directors
- c) Chief executives
- d) General Manager
- e) Owners
- f) Share

upper Middle Management includes:

- a) Sales executives
- b) Production executives
- c) Finance executives
- d) Accounts executives
- e) R & D

Middle Management includes:

- a) Superintendent
- b) Branch Managers
- c) General forecemeat

Lower Management includes:

- a) Foremen
- b) Supervisors or charge-hands
- c) Office Superintendent
- d) Inspectors etc.

Functions of Management

- Planning
- Organizing
- Staffing
- Directing
- Controlling
- Coordinating

Evolution of Management Theory

- Good management intends to achieve an objective with the least use of man, machine, money and material and at the same time maximum satisfaction of the participants.

Taylor's Scientific Management

- Definition: Scientific management may be defined as the “Art of knowing exactly what is to be done and the best way of doing it”.
- Scientific management is the result of applying scientific knowledge and scientific methods to the various aspects of management and the problems that arise from them.

Principles of Scientific Management

- Taylor through his principles of scientific management initiated a system in which there would be an effective and fruitful coordination and cooperation between the management and the workers.

Development of Science for each element of work ¹⁹

- Analyze the work scientifically, rather than using thumb rule. It means that an attempt is made to find out what is to be done by a particular worker, how he is to do it, what equipment will be necessary to do it. This information is provided to the worker, so as to reduce wastage of time, material etc. and improve the quality work .

Scientific selection, placement and training of workers

- This principle states that select the workers best suited to perform the specific task, and then train them within the industry in order to attain the objectives of the enterprise workers
- should also be trained from time to time to keep them informed of latest development in the techniques of production.
- 9

Scientific selection, placement and training of workers²¹

- Division of Labour
- Standardization of methods, procedures, tools and equipment
- Use of time and motion study
- Differential wage system
- Cooperation between labour and management

Administrative Management Theory²² (Henri Fayol and Others):

- Henri Fayol is called as father of Modern Management .
- Fayol 14 principles:
- Division of Work
- Authority and Responsibility
- Discipline
- Unity of Command

FAYOL PRINCIPLES

- Unity of Direction
- Subordination of Individual Interest
- Remuneration
- The Degree of Centralization
- Scalar Chain
- Order

Fayol principles

- Equity
- Stability of Tenure of Personnel
- Initiative
- Esprit de Corps

Elton Mayo's experiment

- Elton Mayo generally recognized as father of human relations approach Mayo led the team which conducted the study psychological reaction of workers in on-the job situations Mayo concluded that work arrangements in addition to meeting the objective requirements of production must at the same time satisfy the employees subjective requirement of social satisfaction at his work place.

Maslow's Theory:

- Self Actualization Needs
- Ego needs
- Social needs
- Safety needs
- Physical needs

Douglas McGregor Theory

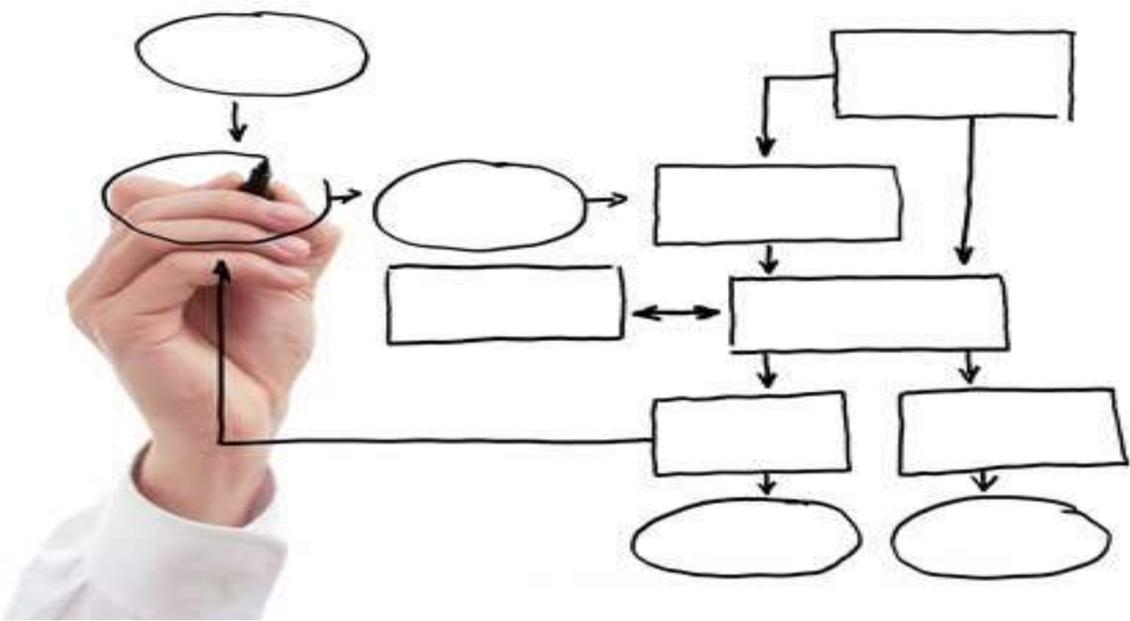
- He divides leadership is two styles labeled theory “X” and theory “Y”.
- Theory “X”:
- Theory of “Y”:

Herzberg's Two-factors Theory

- 1. Maintenance factors or dissatisfier
- 2. Motivational factor or satisfier



Organizational Structure



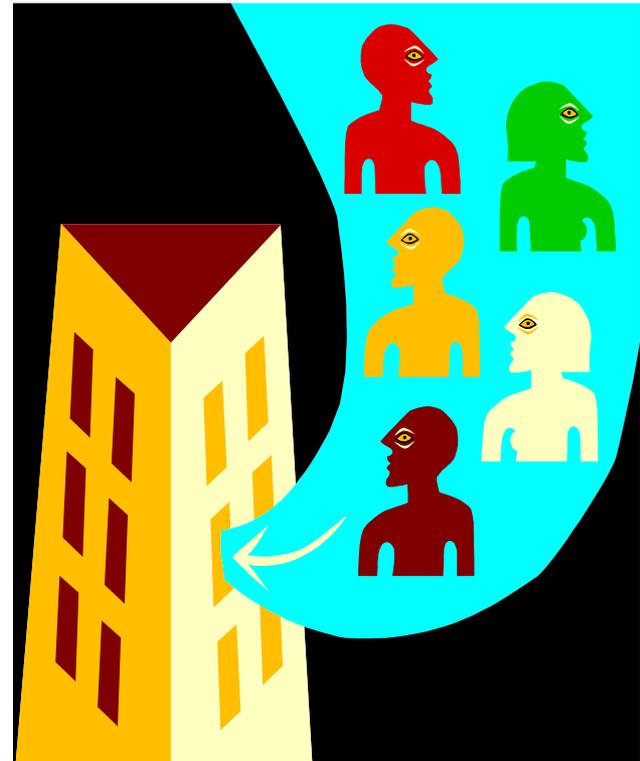
What is an Organization ?

A social unit of people, systematically structured and managed to meet a need or to pursue collective goals on a continuing basis.



ORGANIZATIONAL RELATIONSHIP

1. FORMAL RELATIONS
2. INFORMAL RELATIONS



ORGANIZATIONAL RELATIONSHIP

1. FORMAL RELATIONS

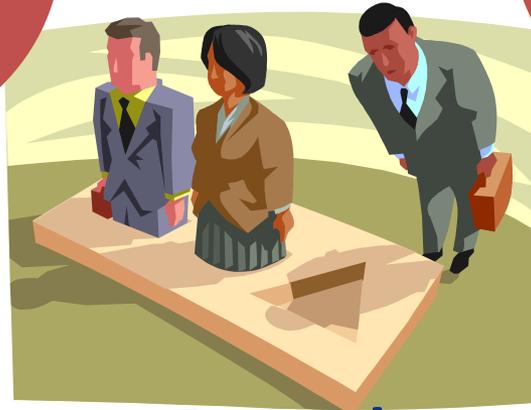
- Formal structure, through departmentalization and work division, provides a framework for defining managerial authority, responsibility and accountability



Formal Structure

Should
not be
flexible

Well
defined
jobs



**Formal
Organization**

Channeled
individual and
group efforts

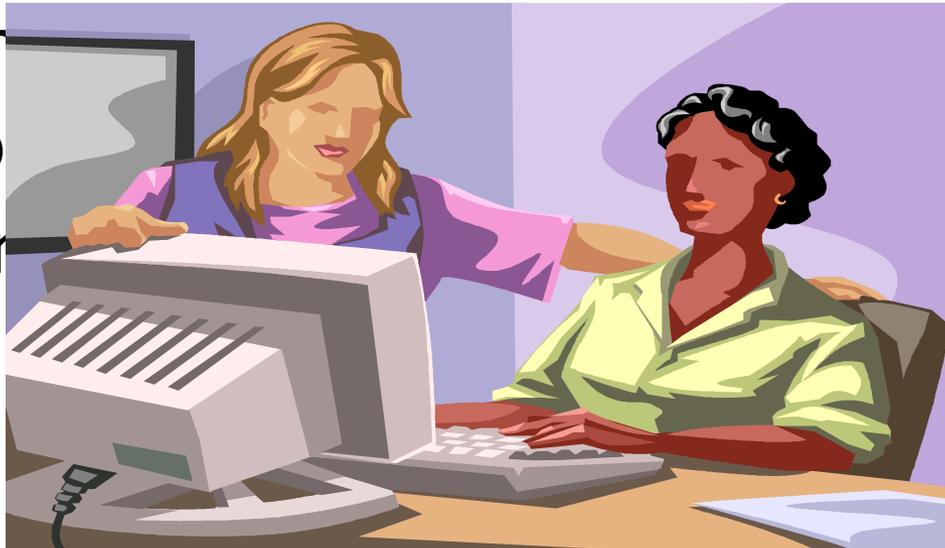
Definite
authority /
responsibility

ORGANIZATIONAL RELATIONSHIP

2. INFORMAL RELATIONS

- Informal structure is generally social, with blurred or shifting lines of authority and accountability.
- It also has its own channels of

communication. Informal communication systems distribute information more rapidly than formal systems.



Informal Structure

A network of personal / social relationships, not established, required by FORMAL organization but arising spontaneously



Structure (membership), communication networks (“grapevine”), and relationships behaviors and norms) do not necessarily follow those of the formal organization.

Informal organization

Loosely organized

flexible

ill defined

Spontaneous

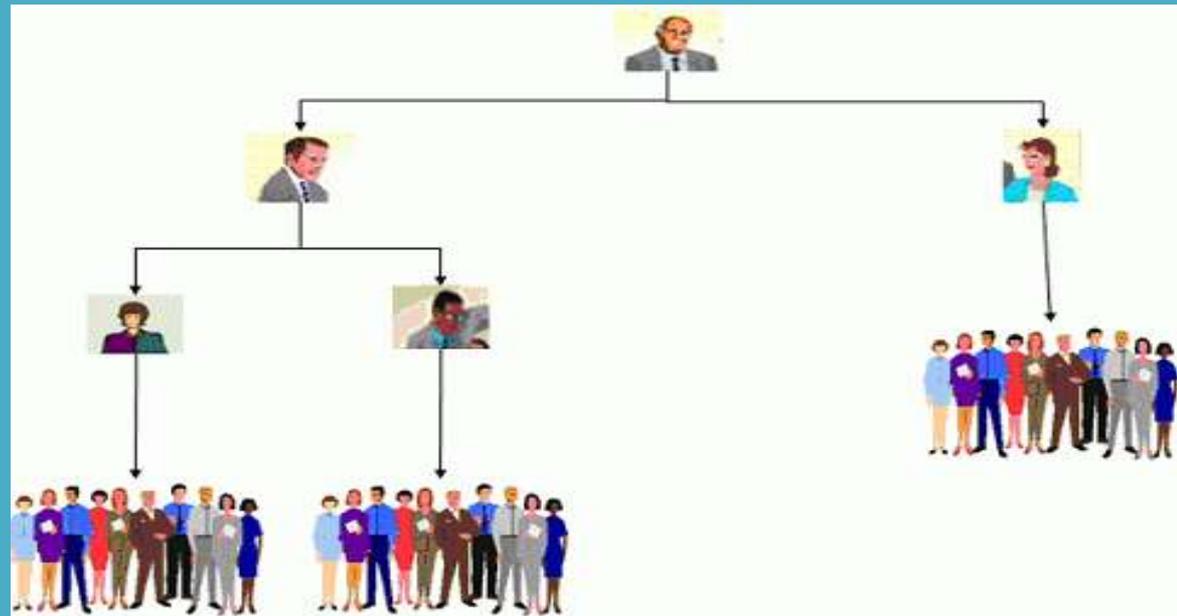
Why do we need an Organizational Structure ?

All Organizations have a management structure that determines the relationships b/w functions and positions and subdivides and delegates roles, responsibilities and authority to carry out defined tasks.



Organizational Structure

It is a framework within which an Organization arranges it's lines of authorities and communications and allocates rights and duties.



ORGANIZATIONAL CHART

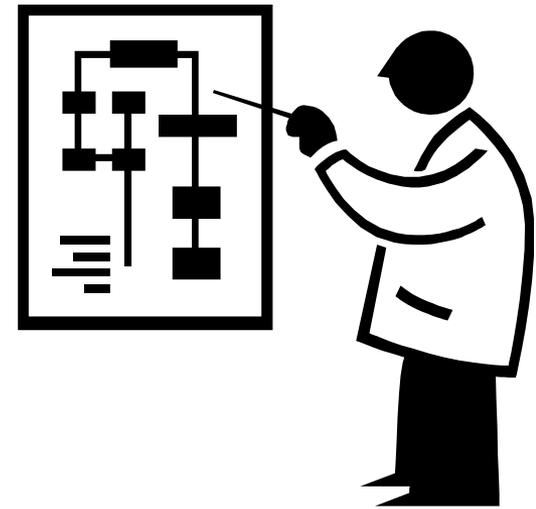
Organizational chart is a line drawing that shows how the parts of an organization are linked.

The organization chart establishes the following:

- Formal lines of authority—the official power to act
- Responsibility—the duty or assignment
- Accountability—the moral responsibility

Depicting the Organization

- Organization Chart
 - A chart that shows the structure of the organization including the title of each manager's position and, by means of connecting lines, who is accountable to whom and who has authority for each area.



Organization Chart

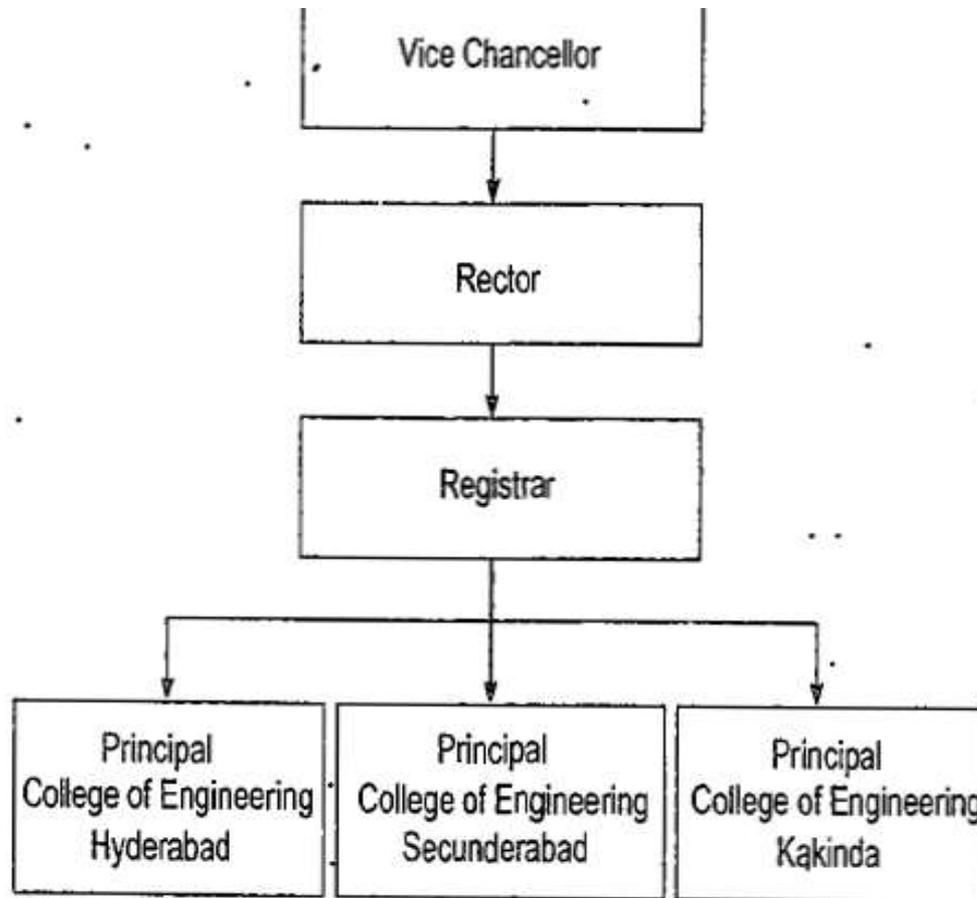


FIGURE 5.13 *Partial organisation chart of a university*

CHARACTERISTICS OF AN ORGANIZATIONAL CHART

- **Division of Labor/Work**
- **Chain of Command**
- **Span of control**
- **Unity of command**
- **Authority**

ADVANTAGES OF AN ORGANIZATIONAL CHART:

- (a) The chart identifies lines of authority-and responsibility, flow of work between individuals and span
- (b) It illustrates superior-subordinate relationship that is, who reports to whom..
- (c) It illustrate,show the activities of the entire organisation are coordinated into one unit.
- (d) It shows whether the functions are grouped together in a logical order or not.
- (e) It focuses what kind of managerial relationship (line, line and staff or functional organisation) is prevalent in the organisation.

DISADVANTAGES:

1. Charts become outdated quickly.
2. Does not show informal relationship.
3. Does not show duties and responsibilities.
4. Poorly prepared charts might create misleading effects.

Principles of Organization

- Principle of unity of objectives: An organization structure is effective if it enables individuals to contribute to entire objectives.
- Principle of co-ordination: The aim of the objective can be achieved if proper co-ordination exists for different activities .

Principles of organization

- Principles of organizational efficiency: An organization is efficient if it is structured to aid the accomplishment of enterprise objectives with a minimum of unsought consequences or costs.
- Span of management principle: In each managerial position, there is a limit to the number of persons an individual can effectively manage but the exact number will depend on the impact of underlying variables.

Principles of organization

- Scalar principle: The clearer the line of authority from the ultimate management position in an enterprise to every subordinate position, the clearer will be the responsibility for decision making the more effective will be organization communication.
- Principle of delegation by results expected: Authority delegated to all individual managers should be adequate enough to ensure their ability to accomplish the results expected.

Principles of organization

- Principle of responsibility: The responsibility of subordinates to their superiors for performance is absolute, and superiors can not escape responsibility for the organization activity of their subordinates.
- Principle of parity of authority and responsibility: The responsibility for actions can not be greater than that implied by the authority delegated, not should it be less

Principles of organization

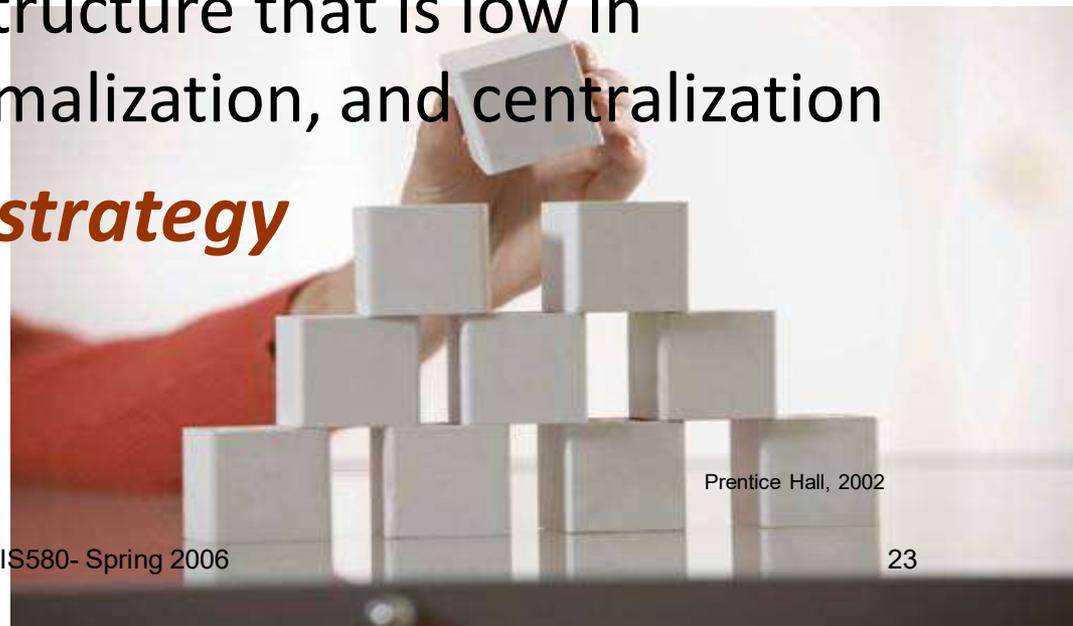
- Principle of unity command: The more complete an individual's reporting relationships to a single superior, the smaller the problem of conflicting instructions and the greater the feeling of personal responsibility for results.
- Authority level principle: Maintenance of intended delegation requires that decisions within the authority of individual managers should be made by them and not be referred upward in the organization structure.

Principles of organization

- Principle of balance: The application of principles or technique must be balanced to ensure the over all effectiveness of the structure in meeting enterprise objectives.
- Principle of flexibility: the more that provisions are made for building flexibility in to an organization structure can fulfill its purpose.

Types of Organizational structures

- Mechanistic organization
 - The bureaucracy; a structure that is high in specialization, formalization, and centralization
- Organic organization
 - An adhocracy; a structure that is low in specialization, formalization, and centralization
- ***Structure follows strategy***



Prentice Hall, 2002

Principles of Organization:

- Principle of unity of objectives
- Principle of co-ordination
- Principles of organizational efficiency
- Span of management principle
- Scalar principle
- Principle of unity command

A Simple Organizational Structure



Types of Organizations

On the basis of authority relationships organization classified as follows

- 1. Line organization or Military organization or Scalar organization
- 2. Functional organization
- 3. Line and Staff organization
- 4. Project organization
- 5. Committee organization
- 6. Matrix organization

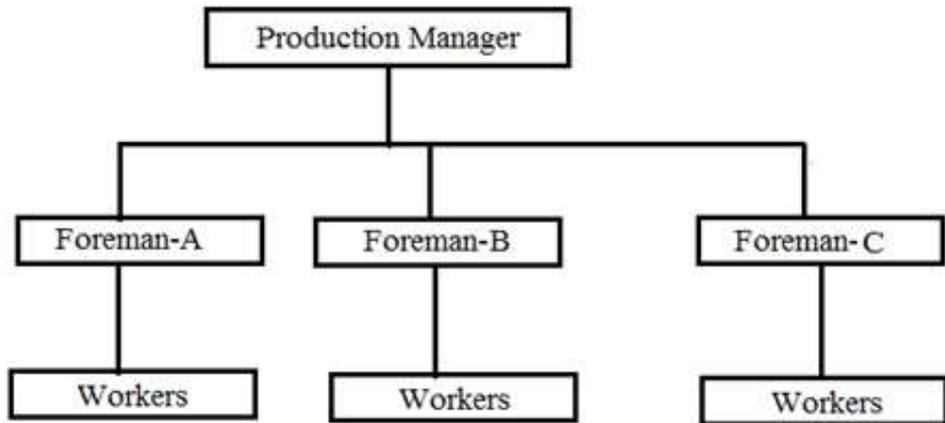
LINE ORGANISATION STRUCTURE

It is also known as scalar, military, or vertical organisation and perhaps is the oldest form

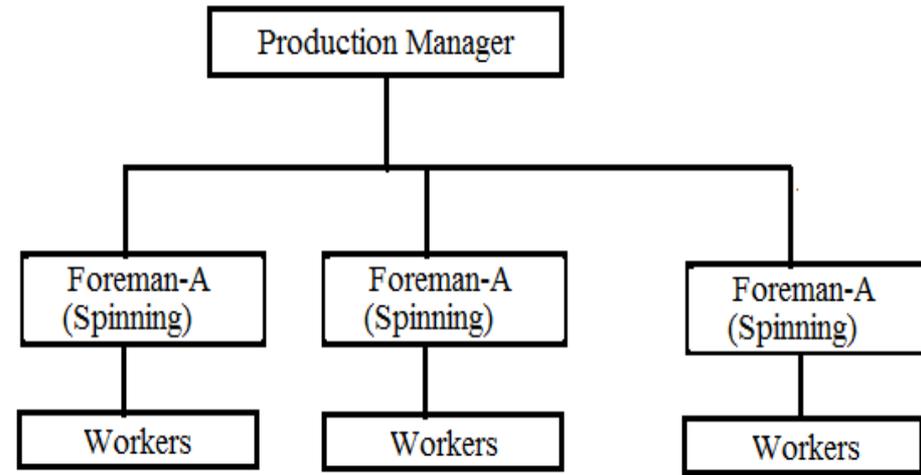
1. PURE LINE ORGANISATION

2. DEPARTMENTAL LINE ORGANISATION

Pure Line Organisation



Departmental Line Organisation



LINE ORGANISATION STRUCTURE

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Characteristics:

- @ Line authority and instructions are vertical, that is, they flow from the top to the bottom.
- @ The unity of command is maintained in a straight line.
- @ All persons at the same level of organisation are independent of each other.
- @ This structure specifies responsibility and authority for all the positions limiting the area of action.

Merits:

- ✿ **Simplicity**
- ✿ **Discipline**
- ✿ **Prompt Decisions**
- ✿ **Orderly Communication**
- ✿ **Easy Supervision & Economical**

Demerits:

- **Lack of Specialisation**
- **Absence of Conceptual Thinking**
- **Autocratic Approach**
- **Problems of coordination**

Suitability:-

It is suitable to small – scale organizations where the number of subordinates is quite small.

LINE & STAFF ORGANISATION STRUCTURE²⁷

Characteristics:

- @ It refers to a pattern in which staff specialists advise line managers to perform their duties.
- @ Line people will give advices
- @ The staff people have the right to recommend, but have no authority to enforce their preference on other departments

FEATURES:-

- This origin structure clearly distinguishes between two aspects of administration viz., planning and execution.
- Staff officers provide advice only to the line officers; they do not have any power of command over them.
- The staff supplements the line members.

Conflicts between Line & Staff: ²⁸

- More frequently line and staff relations become potent sources of friction, inefficiency and organisational ill health.
- Rivalry between them very often takes the form of animosity. Both line and staff have their own view points to offer relating to this problem.

Line View point:

- Staff undermines line authority
- Staff think in vacuum
- Staff steals Credit
- Staff fails to keep the line informed
- Staff fails to give the sound advice to line

Conflicts between Line & Staff:

Staff Point of View:

- Lack of authority to command line subordinates
- Resistance to change by the line
- Inability to make proper use of staff
- Allured by the special skill and ability in a particular field the staff is tempted to think that the solution to the problem recommended by him is best and needs be enforced on the line manager. Line is also charged with being short-sighted and resistant to change

How to minimise:

- Line and Staff should understand their proper position in the organisation
- Line should be educated and encouraged to use staff effectively
- Staff should render complete advice on the problem concerned
staff should constantly strive to acquire and increase its proficiency

LINE & STAFF ORGANISATION STRUCTURE

SUITABILITY:

It can be followed in large organizations where specialization of activities is required, because it offers ample opportunities for specialization

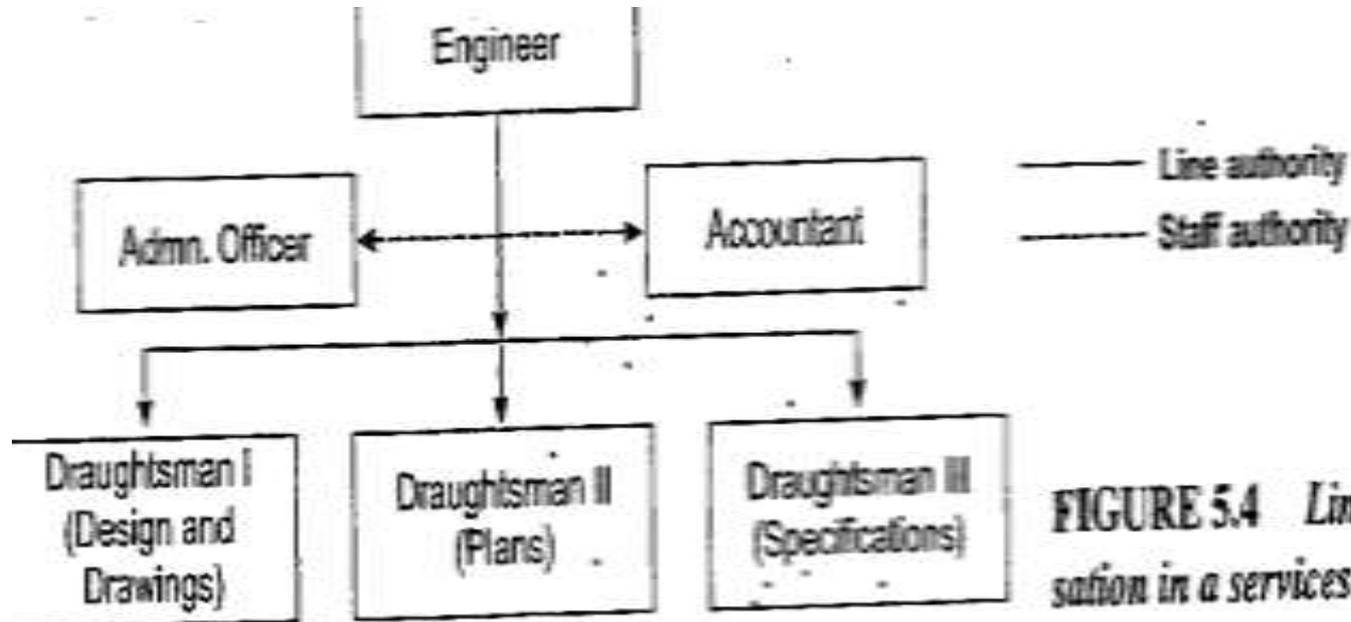


FIGURE 5.4 Line and staff organization in a services organisation

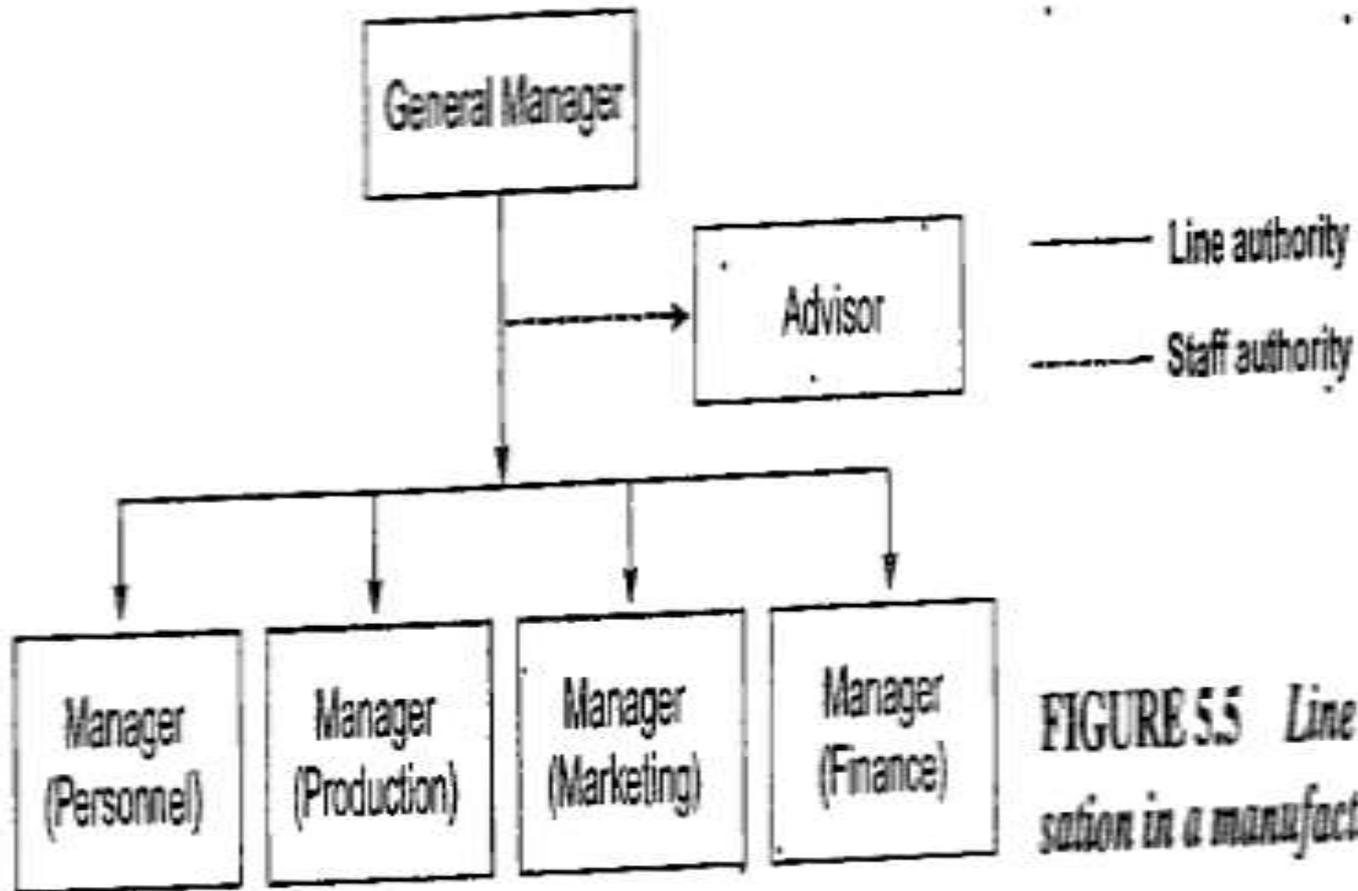


FIGURE 5.5 *Line and staff organization in a manufacturing unit*

LINE & STAFF ORGANISATION STRUCTURE

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ADVANTAGES:-

- It adds functional specialists to the pure line organisation and thus aims at combining the merits of the two.
- It brings expert knowledge to bear upon management.
- Functional specialists provide expert advice to the management on wide-ranging matters.
- It provides for better placement and utilization of personnel and leads to more skill development

DEMERITS:-

- The line and staff relationship often lead to many frictions and Jealousies
- Line managers may depend too much on staff experts and thus lose much of their judgment and initiatives
- The staff experts may remain ineffective because they do not get the authority to implement their recommendation.

FUNCTIONAL ORGANISATION STRUCTURE ³³

- ✿ Functional structure is created by grouping the activities on the basis of functional required for the achievement of organisational objectives
- ✿ For this purpose all the functions required are classified into basic, secondary and supporting functions

✿ Features:

- @ The whole activities of an organisation are divided into various functions
- @ Each functional area is put under the charge of one executive
- @ For any decision, one has to consult the functional specialist
- @ Limited span of control is there.

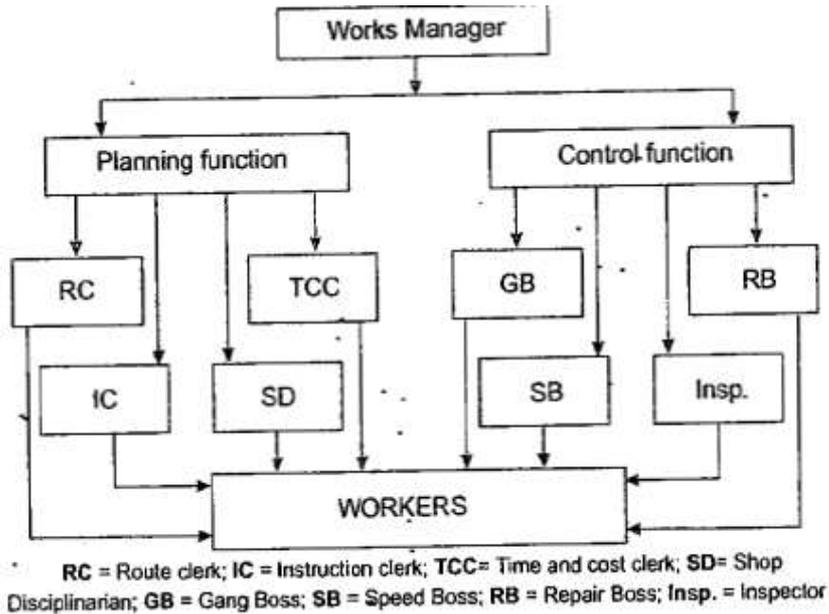


FIGURE 5.6 *Taylor's functional organisation*

- Route-clerk (identifies the route for the materials to pass on)
- Instruction clerk (gives instructions to the workers about what to do and what not)
- Time and cost clerk (identifies the time and cost for each job)
- Shop disciplinarian (maintains the discipline on the shop floor)

Gang Boss (assembles the machinery needed for the worker)

Speed boss (standardises and sets the speed of the machines)

- Repair boss (repairs the machinery in case of breakdown)
- Quality inspector (responsible for the matters relating to quality)

FUNCTIONAL ORGANISATION STRUCTURE

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Merits:

- High Specialisation
- Clarity in functioning
- No duplication
- Satisfaction
- Control and Coordinate

Demerits:

- Calls for more coordination
- Clear line of authority
- Slow decision making

Suitability:

The establishment of functional organisation structure becomes necessary as a small organisation grows and business activity becomes more and more complete

COMMITTEE ORGANISATION STRUCTURE

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- A committee does not represent a separate type of organization like line and staff, or functional.
- A committee may be defined as a group of people performing some aspects of Managerial functions.

Definitions:

“A committee consists of a group of people specifically designated to perform some administrative work”

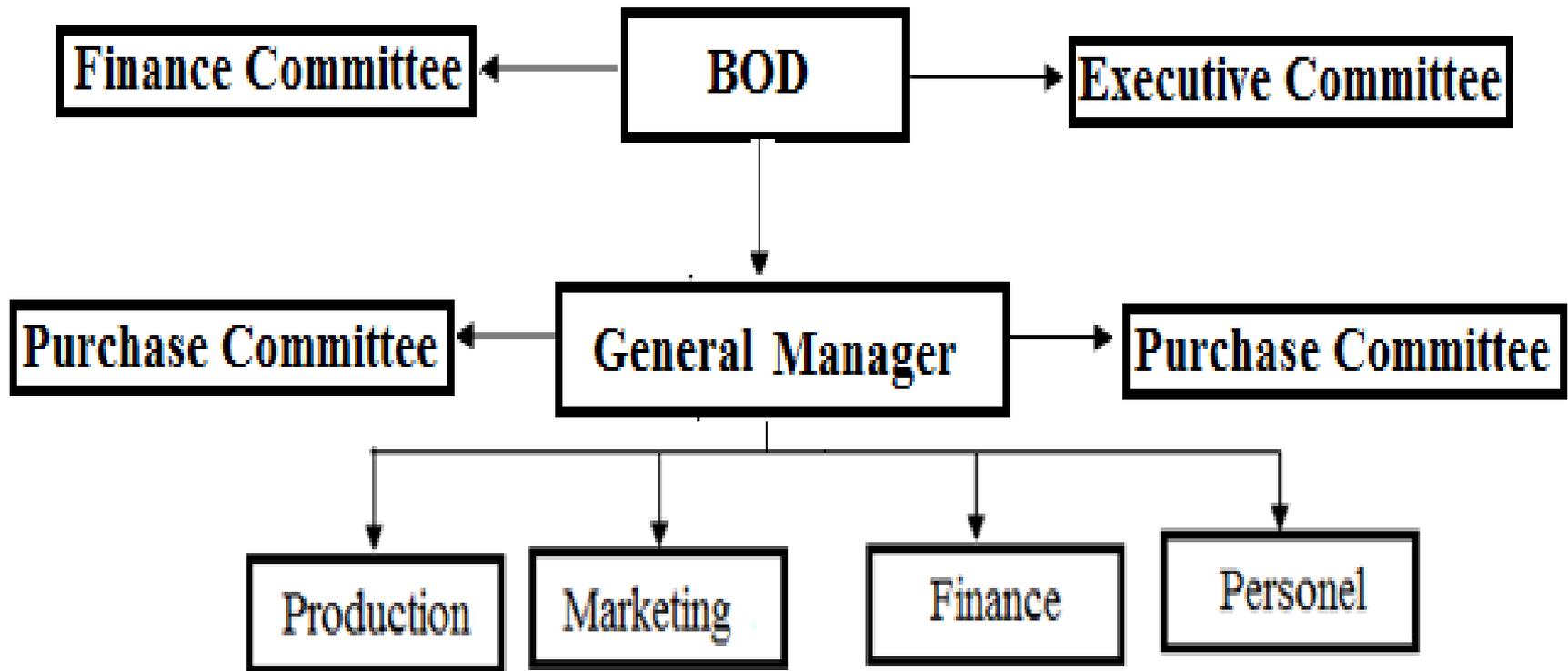
—————→ W.H. Newman

“ A committee is a body of persons appointed or elected to meet on an organised basis for the consideration of matters brought before it”.

—————→ Allen

COMMITTEE ORGANISATION STRUCTURE

COMMITTEE ORGANISATION STRUCTURE



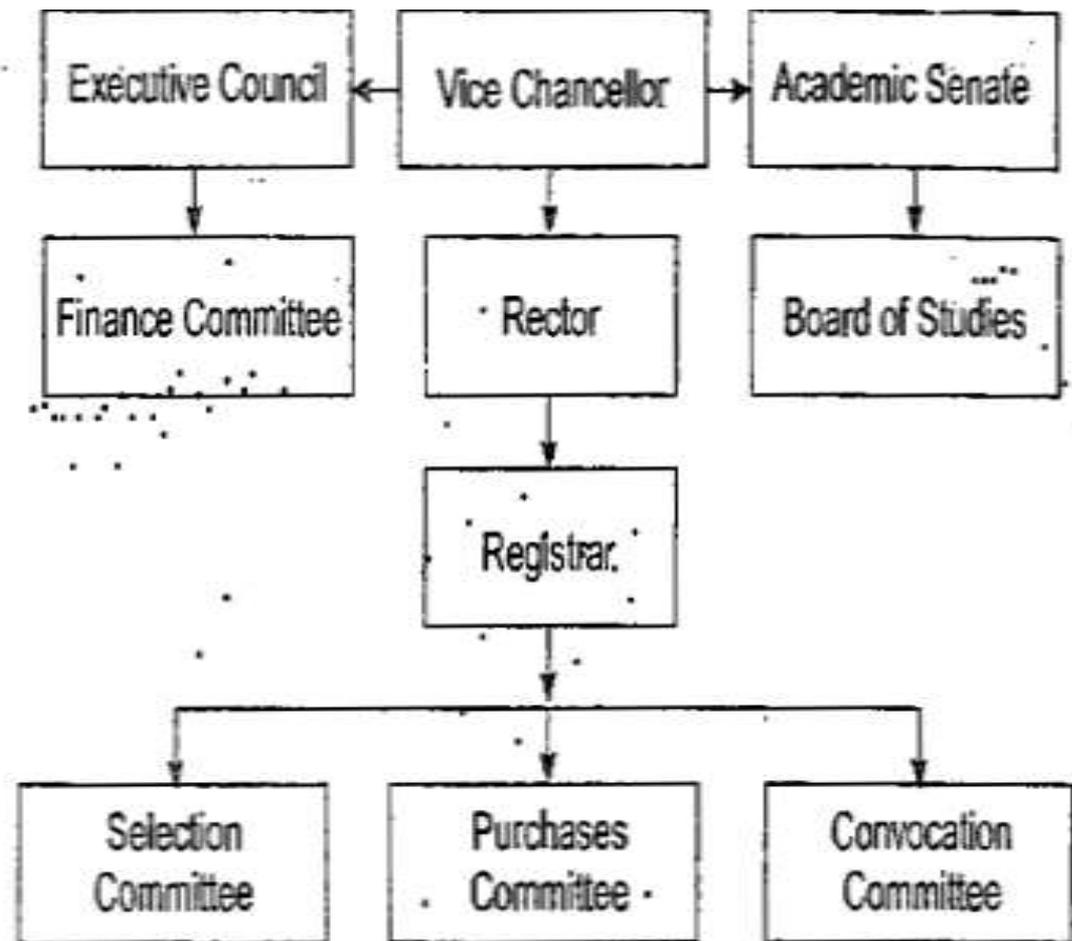
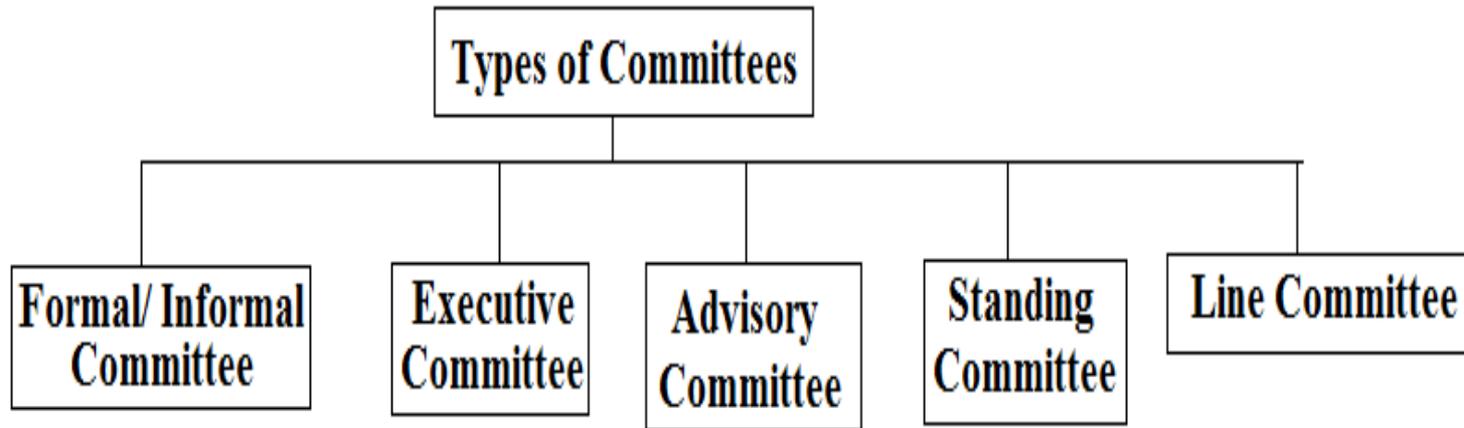


FIGURE 5.7 Committee organization in a university

COMMITTEE ORGANISATION STRUCTURE

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MERITS	DEMERITS
<ul style="list-style-type: none">• Pooling of Knowledge• Effective co-ordination is available• Effective Communication• Motivation through participation of employees	<ul style="list-style-type: none">• Slow decisions• Most Expensive• Difficult to maintain secrecy• Compromise

MATRIX ORGANISATION STRUCTURE ⁴⁰

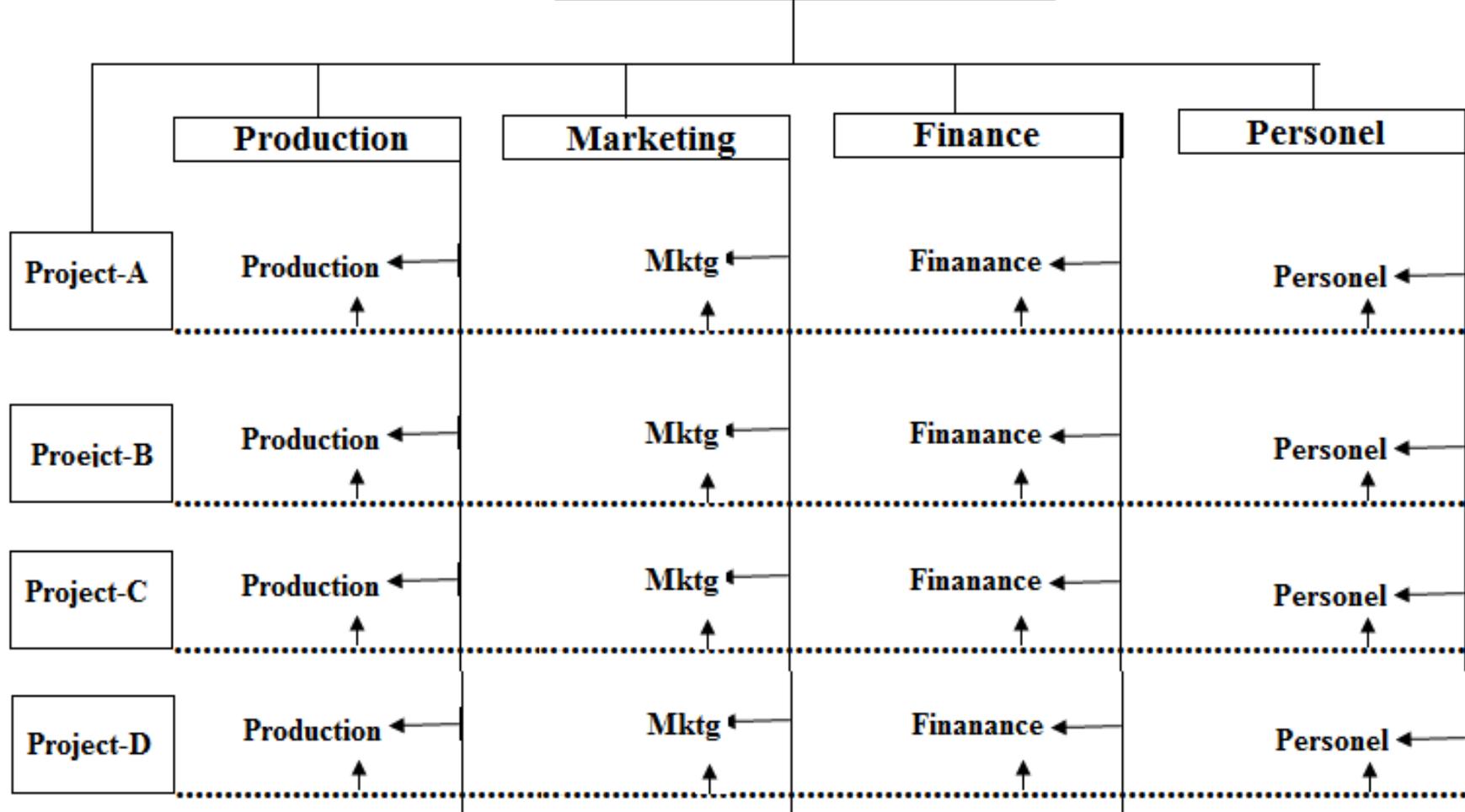
- Matrix organisation structure is essentially a violation of unity of command
- Matrix structure is the realisation of two-dimensional structure which emanates directly from two dimensions of authority.
- In matrix organization structure, a project manager is appointed to co-ordinate the activities of the project.
- Personnel are drawn from their respective functional departments.
- Each functional staff has two bosses his administrative head and his project manager.

Matrix Organisation = Matrix Structure + Matrix System + Matrix Culture + Matrix Behaviour

DESIGN OF

MATRIX ORGANISATION STRUCTURE

General Manager



———— Line authority

..... Project authority

MATRIX ORGANISATION STRUCTURE

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Merits:-

- It offers operational freedom & flexibility
- It focuses on end results.
- It maintains professional Identity.
- It holds an employee responsible for management of resources

Demerits:-

- ✿ It calls for greater degree of coordination,
- ✿ It violates unity of command.
- ✿ Difficult to define authority & responsibility.
- ✿ Employee may be demotivated.

Suitability

It can be applicable where there is a pressure for dual focus, pressure for high information processing, and pressure for shared resources.

Ex:- Aerospace, chemicals, Banking, Brokerage, Advertising etc.

Departmentation:

- Departmentation
 - The process through which an organization's activities are grouped together and assigned to managers; the organization wide division of work.
- Organizations based on departments

Departmentation

- When a company expands to
 - Supply goods or services
 - Produces variety of diff. products
 - Engage in several diff. marketsin such conditions the company can adopt Departmentalization.

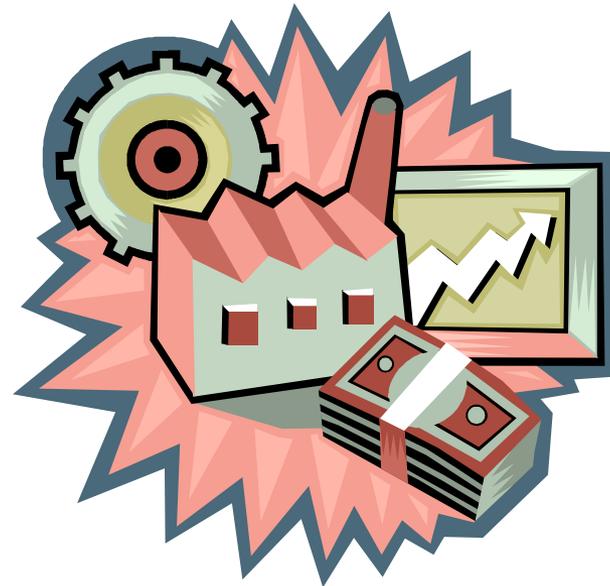
Forms of Departmentalization

- Functional
- Product
- Customer
- Geographic
- Process



Organizing Departments by Function

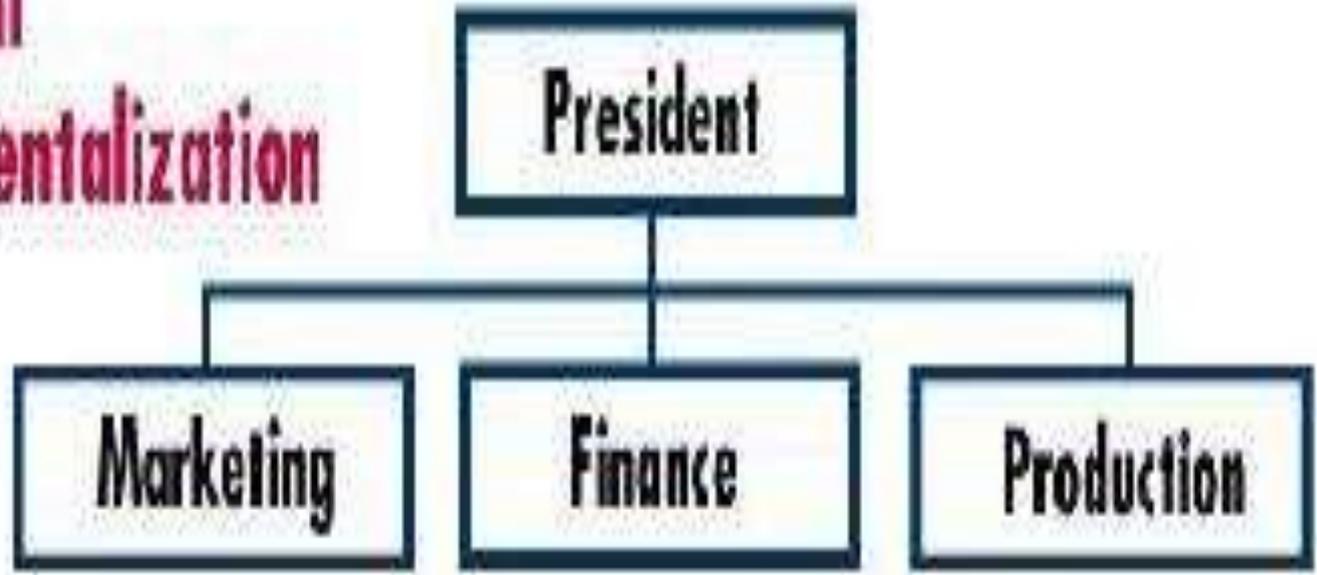
- Functional Departmentation
 - A form of organization that groups a company's activities around essential functions such as manufacturing, sales, or finance.



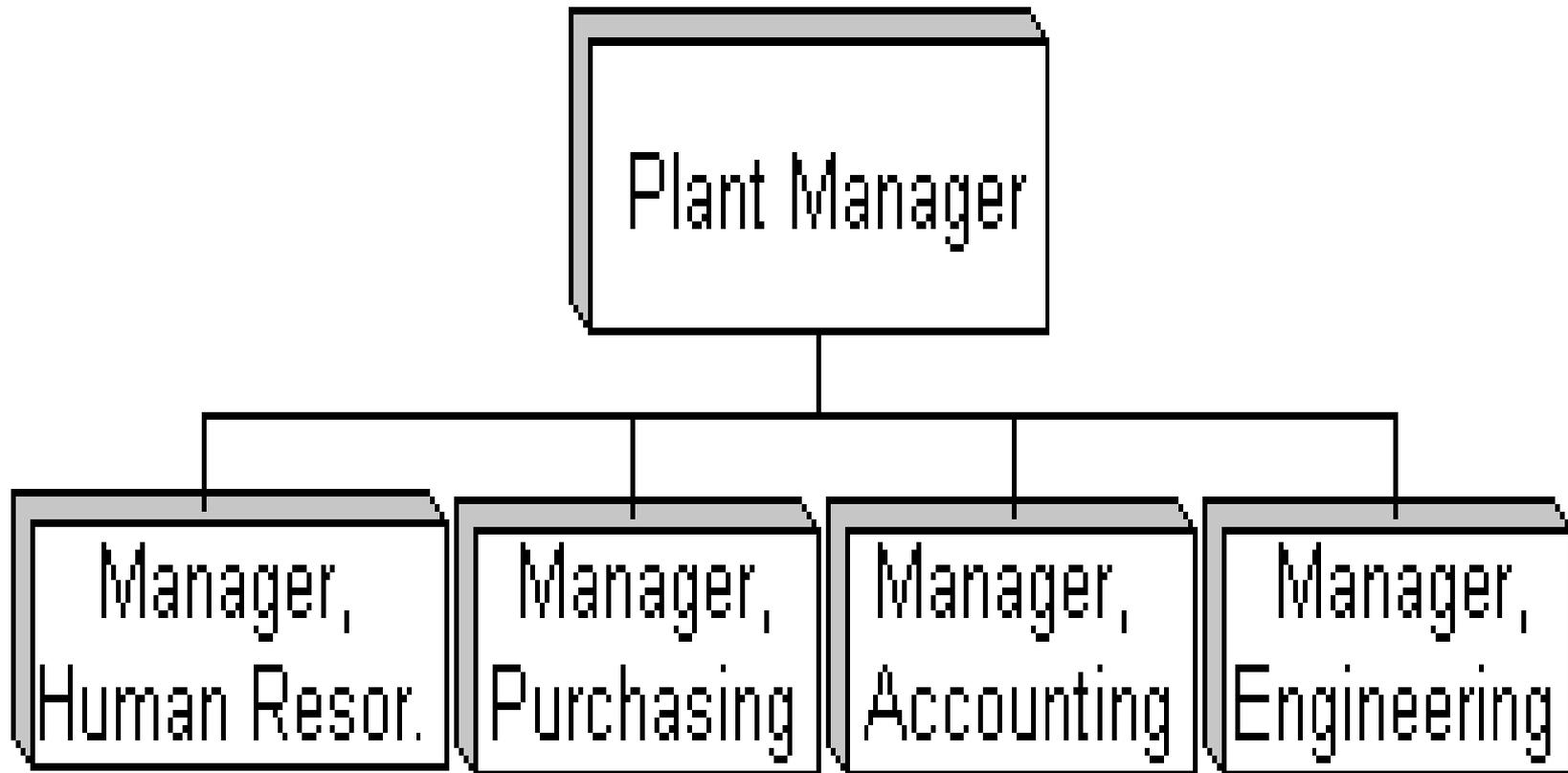
Functional Departmentalization

- Arranging the business according to what each section or department does.

Functional Departmentalization



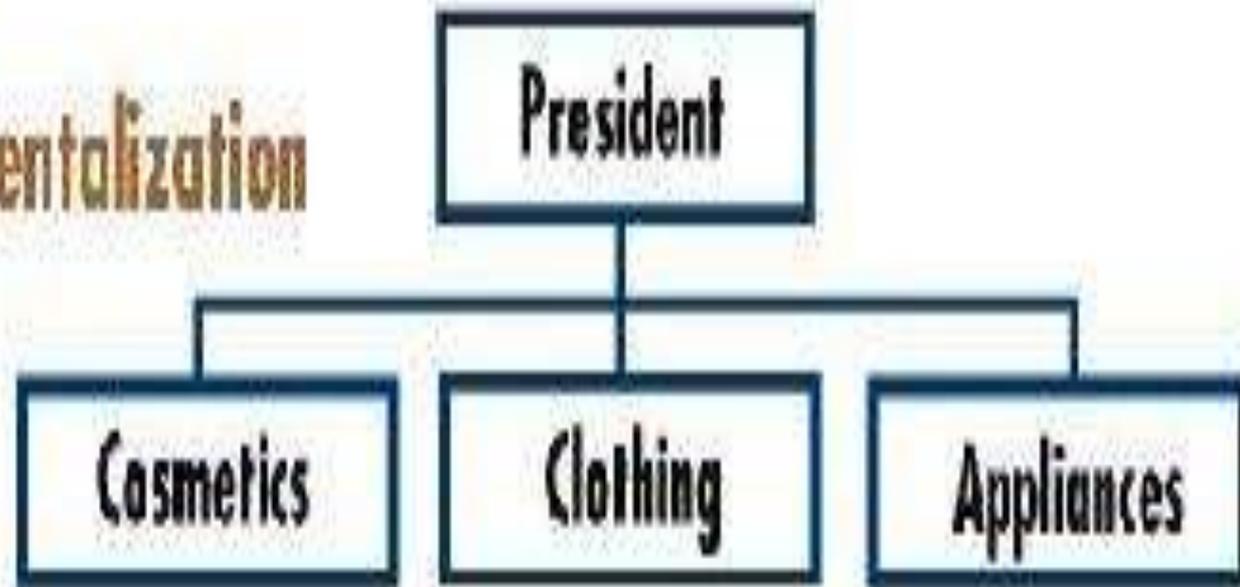
Functional Departmentation



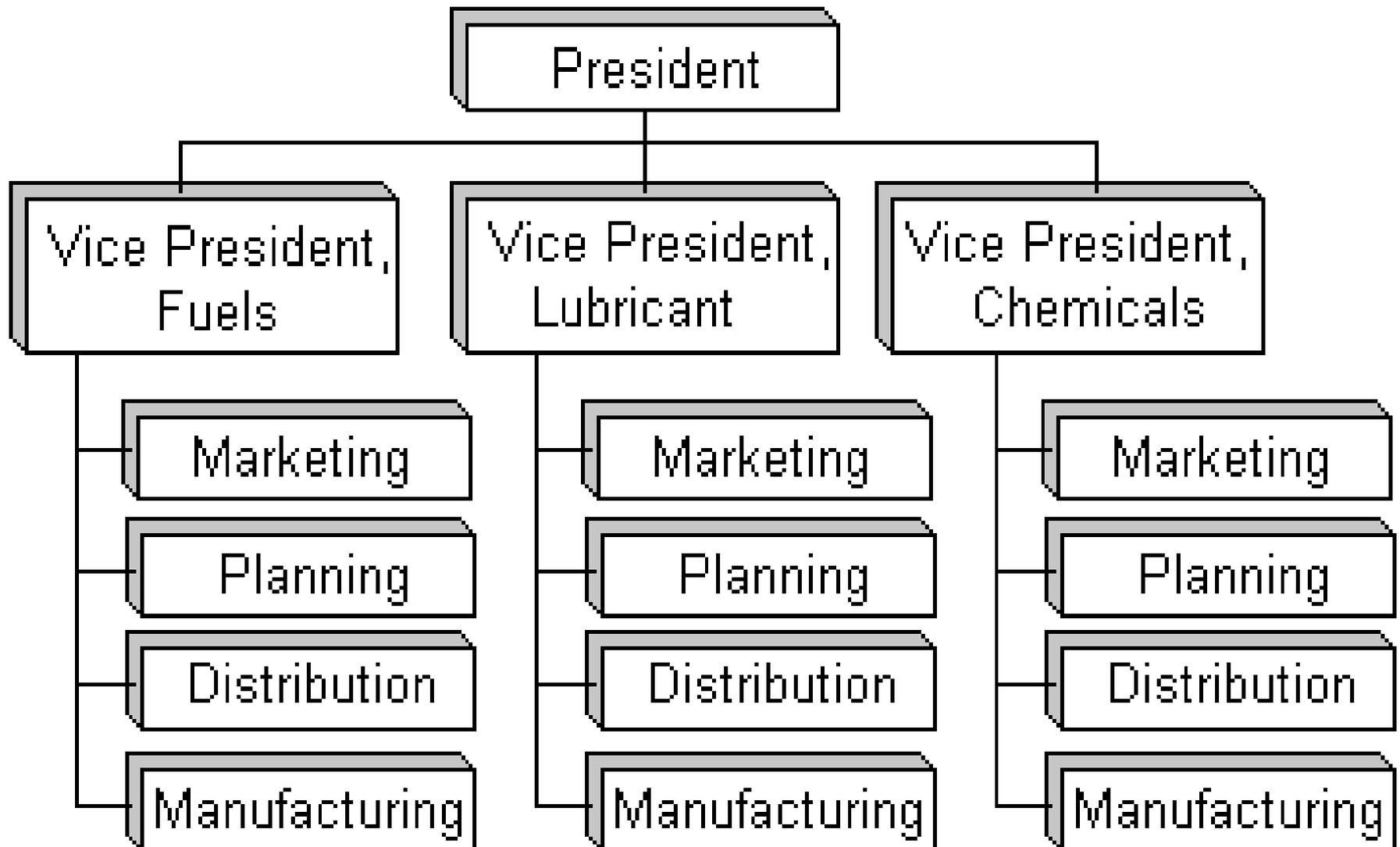
Product Departmentalization

- Organizing according to the different types of products produced.

Product
Departmentalization



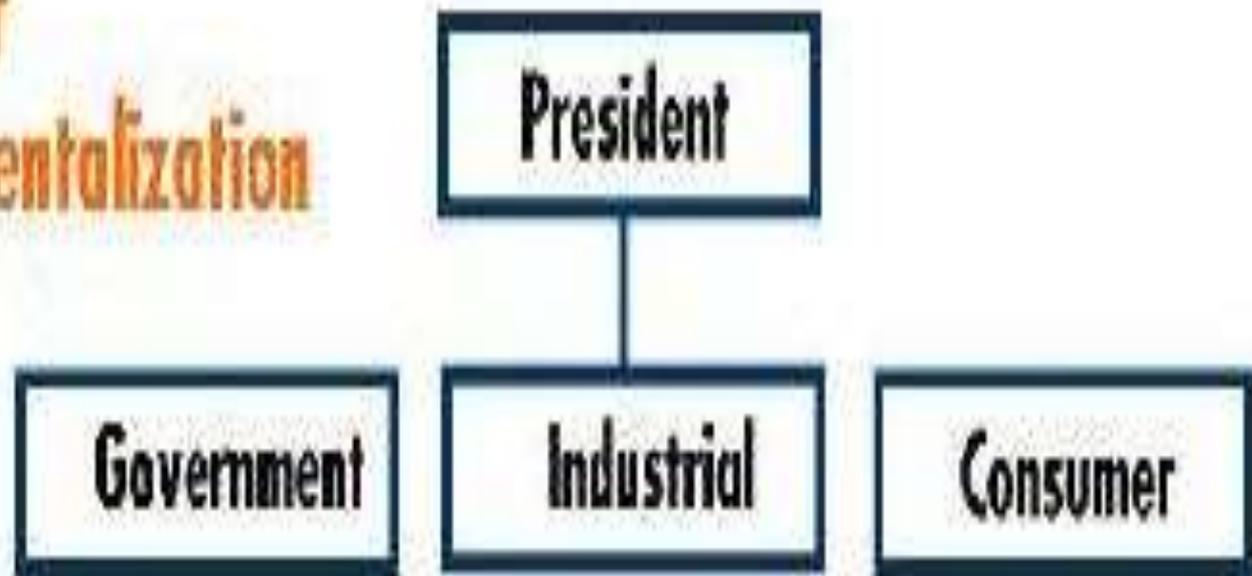
Product Departmentation



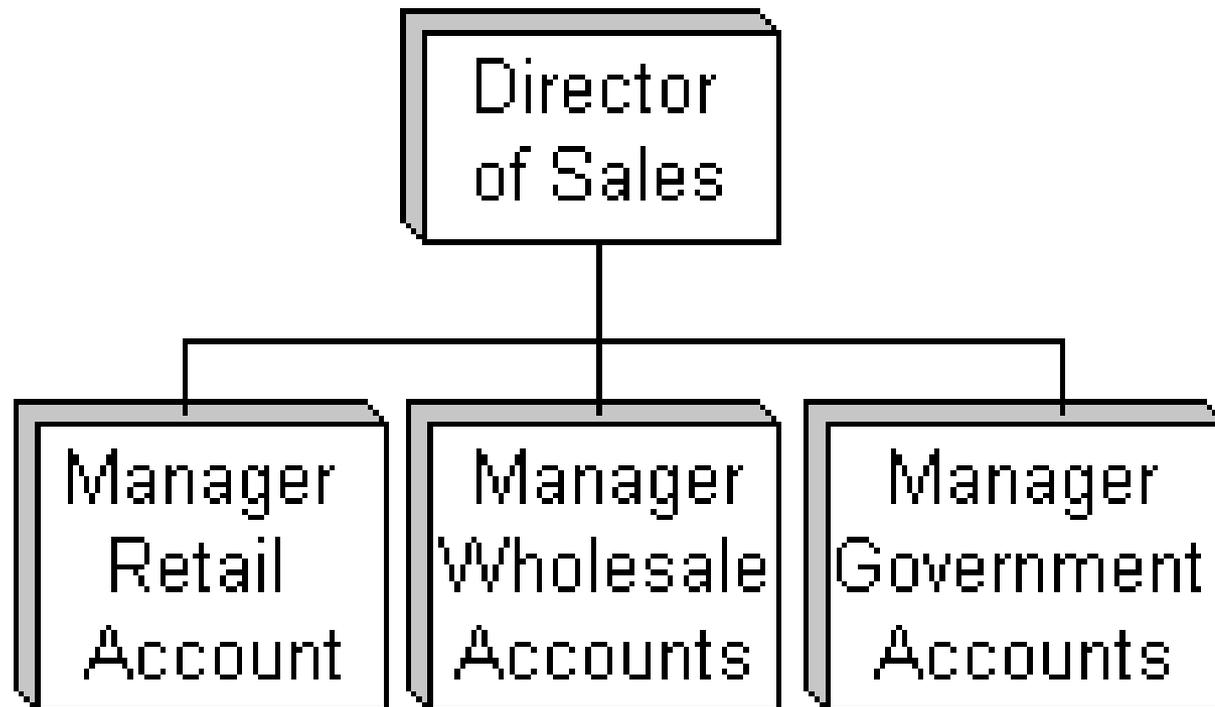
Customer Departmentalization

- Where different customer groups have different needs.

Customer
Departmentalization



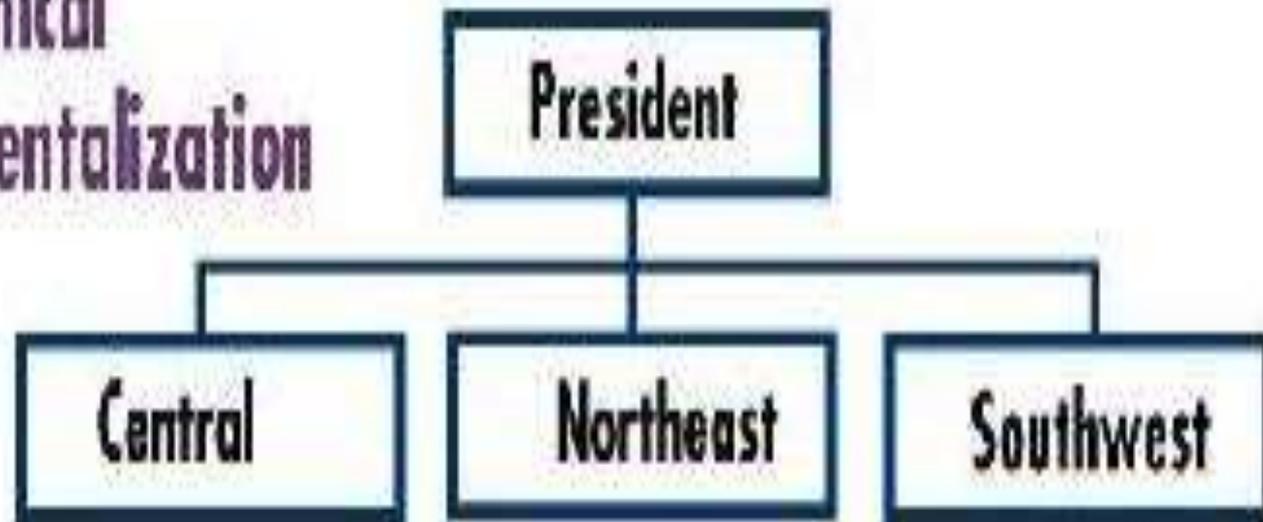
Customer Departmentation



Geographic Departmentalization

- It's based on geographical or regional structure.

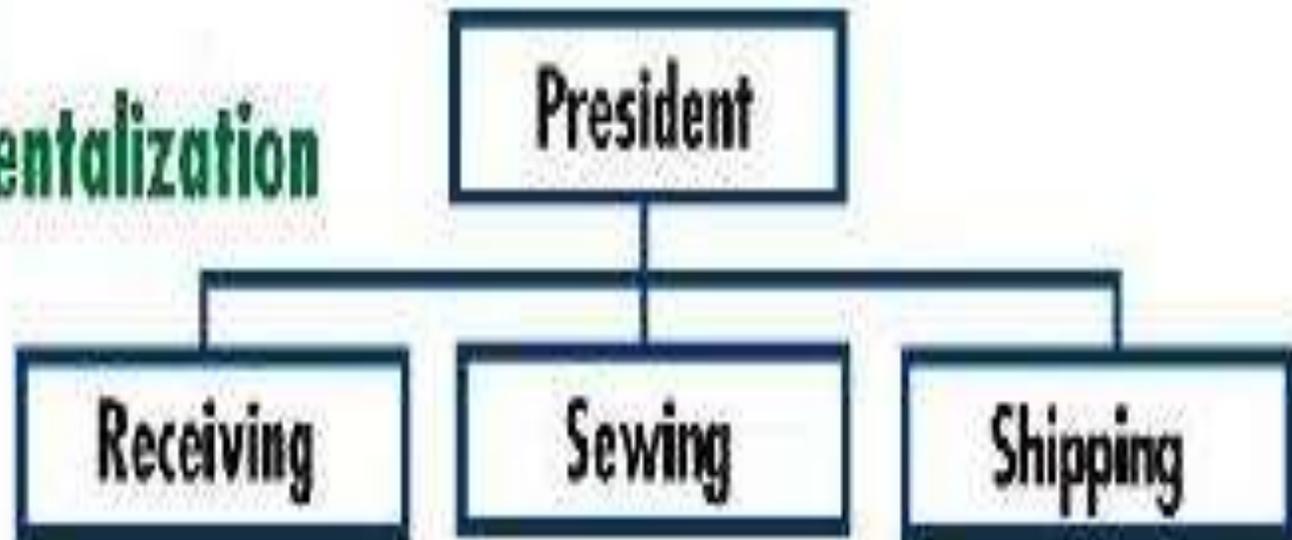
Geographical Departmentalization

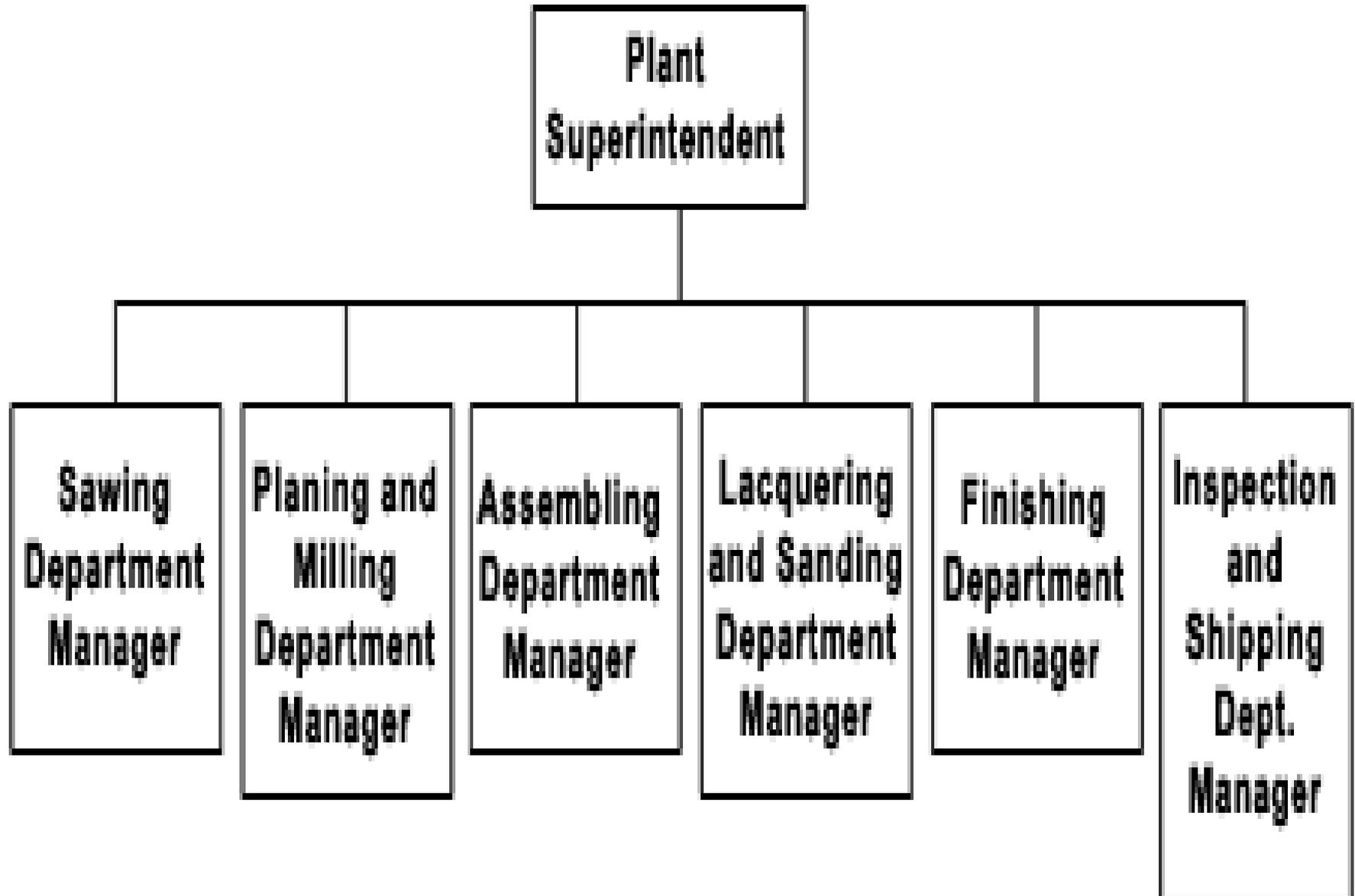


Process Departmentalization

- Where products have to go through stages as they are made.

Process Departmentalization





Pros of Departmentalization

- Department can be staffed with specialized training.
- Shared management responsibility.
- Supervision is facilitated.
- Coordination within the department is easier.

Cons of Departmentalization

- Inter department documentation of activities is not possible.
- Decision-making becomes slow.
- Delays when there are problems.
- Accountability and performance are difficult to monitor.

VIRTUAL ORGANISATION STRUCTURE

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- ✿ It facilitates competitiveness in the global markets
- ✿ There can be alliance & partnership with other organisations
- ✿ It is a flexible organisation remove all traditional boundaries
- ✿ It is a temporary network of companies that come together quickly to exploit fast changing opportunities
- ✿ It is bigger than traditional organisations
- ✿ It requires strong IT platform
- ✿ It is going to eliminate & avoid all boundaries for the business purpose

Virtual Organizational Structure

- Virtual organization can be thought of as a way in which an organization uses information and communication technologies to replace or augment some aspect of the organization.
- People who are virtually organized primarily interact by electronic means.
- For example, many customer help desks link customers and consultants together via telephone or the Internet and problems may be solved without ever bringing people together face-to-face.

BOUNDARYLESS ORGANISATION STRUCTURE

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Problems with traditional organizational structures:-

- ✿ Slow/poor in responding customer requirement.
- ✿ Failure to get things to done.
- ✿ Customer/vendor has a hard time dealing with the organization.
- ✿ Lack of flexibility to changing mission needs/rapidly changing

World

What are the boundaries?

Vertical: Boundaries between layers within an organization.

Horizontal: Boundaries which exist b/w organizational departments.

External: Barriers between the organization and the outside world.

(Customers, suppliers other govt. committees).

Geographic: Barriers among organization units located in different countries.

BOUNDARYLESS ORGANISATION STRUCTURE

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What is boundary less Organisation?

- ✿ It may be defined as an organisation structure that can avoid all the barriers**
- ✿ Boundary less organisation allows free flow of ideas/information / resources throughout the organisation and into others**
- ✿ At the name indicates, a boundary less organization eliminates internal boundaries among subsystems and external boundaries with external environment**
- ✿ It is a combination of team and network structures with the addition of temporariness**
- ✿ The key features of boundary less organization include knowledge-sharing, absence of hierarchy and bureaucracy**
- ✿ Creativity, quality, timeliness, increase in speed and flexibility are the benefits the boundary less organization yields**

What is Team Organisation?

- ✿ A structure in which the entire organization is made up of work groups or teams is known as “team structure”
- ✿ Team structures are both permanent and temporary in nature as situation demands
- ✿ **‘We report to each other’** is the main feature of team structure
- ✿ It leads to boundary less organisation in a borderless world.
- ✿ In team structures, we find cross-functional teams meant for improving lateral relations, solving problem, completing special projects and accomplishing routine tasks
- ✿ A cross-functional team comprises members from different functional departments such as marketing, finance, HR, production etc.
- ✿ Here employees are more involved and empowered because of reduced barriers among functional areas

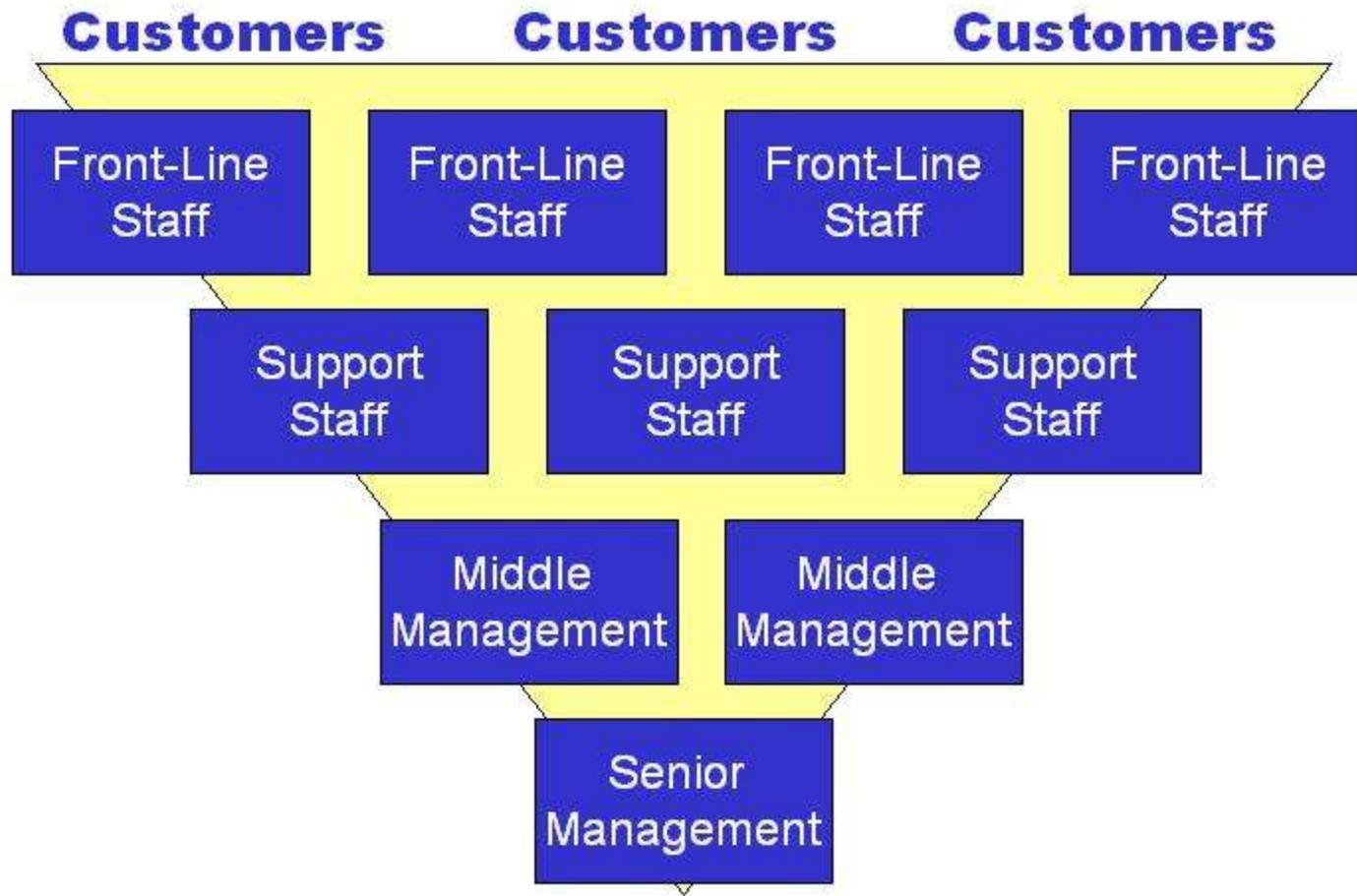
CELLULAR ORGANISATION STRUCTURE⁶³

- ✿ Organizations structured around the units/cells that complete the entire assembly process are called cellular organizations.
- ✿ In cellular organizations, workers manufacture total product or sub-assemblies in teams (cells)
- ✿ Every team (cell) of workers has the responsibility to improve or maintain the quality and quantity of its products
- ✿ Each team is free to recognize itself to improve performance and product quality
- ✿ It is both a lean and flat structure.
- ✿ These cells comprise self-managed teams

INVERTED PYRAMID ORGANISATION STRUCTURE

- ✿ This is an alternative to the traditional chain of command.
- ✿ This is a structure, which is narrow at the top and wide at the base.
- ✿ For instance, sales people and sales support staff sit on the top as the key decision makers for all the issues related to sales and dealing with the customers.
- ✿ Since the sales staffs are in touch with the customer and aware of the requirements of the customers, they are given all the freedom to follow their own best judgment at all levels.

INVERTED PYRAMID ORGANISATION STRUCTURE



Inverted Pyramid Organizational Structure

CONCLUSION

Leadership Styles

- **Types:**
- Autocratic leadership
- Democratic leadership
- Free – Rein leadership:

UNIT-III

- OPERATIONS MANAGEMENT

INTRODUCTION TO OPERATIONS MANAGEMENT

- **Plant location :**
- Plant location is a strategic decision several factors influence this decision. The main objective of any business is to optimize its cost and revenue that is, minimize its costs and maximize its returns.

Factors affecting plant location:

- Nearness to Market
- Nearness to supply of raw materials
- Availability of labour
- Transport and communication facilities
- Availability of power and fuel
- Climatic conditions

Factors affecting plant location:

- Availability of water
- Ancillary industries
- Financial and other aids

Plant Layout:

- **Type of plant layout:**
- **Product or line layout**
- **Process or Functional layout**
- **Cellular or group layout**

Factors influencing plant layout:

- Management policy
- Manufacturing process
- Nature of product
- Type of equipment

Principles of plant layout:

- Principle of integration
- Principle of minimum movement
- Principle of smooth and continue flow
- Principle of cubic space
- Principle of satisfaction of safety
- Principle of flexibility

Method of Production:

- **Job production**
- **Batch production**
- **Mass production**

MATERIALS MANAGEMENT

- **Definition of Materials:** Materials refer to inputs into the production process, most of which are embodied in the finished goods being manufactured. It may be raw materials, work-in-progress, finished goods, spare parts and components, operating supplies such as lubricating oil, cleaning materials, and others, required for maintenance and repairs.

Objects of materials management:

- Minimization of materials costs
- To reduce inventory for use in production process and to develop high inventory turnover ratios.
- To procure materials of desired quality when required, at lowest possible overall cost of the country.
- To reduce paper work procedure in order to minimize delays in procuring materials

Function of Materials Management:

- Materials planning and programming
- Purchasing materials inspection of materials
- Inspection of Materials
- Classification, codification and standardization in stores

Function of Materials Management

- Storage of materials
- Issuing of materials
- Maintenance of proper inventory records
- Materials receiving

Inventory:

- It defined as a comprehensive list of movable items which are required for manufacturing the products and to maintain the plant facilities in working conditions.

Inventory Control

- The systematic location, storage and recording of goods in such a way the desired degree of service can be made to the operating shops at minimum ultimate cost

Objectives of Inventory Control:

- To support the production departments with materials of the right quality in the right quantity, at the right time and the right price, and from the right supplier
- To minimize investments in the materials by ensuring economies of storage and ordering costs
- To avoid accumulation of work in process

Objectives of Inventory Control:

- To ensure economy of costs by processing economic order quantities
- To maintain adequate inventories at the required sales outlets to meet the market needs promptly, thus avoiding both excessive stocks or shortages at any given time

ABC Analysis:

- ABC analysis is a technique of controlling inventories based on their value and quantities. It is more remembered as an analysis for 'Always Better Control' of inventory. Here all items of the inventory are listed in the order of descending values, showing quantity held and their corresponding value. Then, the inventory is divided into three categories A, B and C based on their respective values.

ABC Analysis

- A – Refers to high value item
- B – Refers to medium value item
- C – Refers to low value item

Economic Order Quantity (EOQ):

- Economic order quantity is defined that quantity of materials, which can be ordered at one time to minimize the cost of ordering and carrying the stocks. In other words, it refers to size of each order that keeps the total cost low.

Inventory costs

- The inventory costs can be classified into two categories, 1) Inventory ordering cost
- 2) Inventory carrying cost.

Purchasing

- It deals with investment, overheads dealing with other and also result in server losses mass production industries that requires large purchasing for a continues flow of materials, demand for an efficient purchase decision. It implies procurement of raw materials machinery, service etc. needed for production and maintenance of the concern

Objectives:

- To procure right material
- 9. To procure materials in desired quantities
- 10. To procure material of desired quality

Objectives:

- Purchasing from reliable source
- To pay less for materials purchased
- To receive and deliver materials at right place and time.

Purchasing process:

- Requisitioning purchases
- Exploring sources of supply
- . Issuing of tenders and obtaining quotations
- Opening of tenders and quotations and preparation of comparative statement

Purchasing process:

- Negotiating over the purchase price and terms of supply
- Placing purchase order
- Receiving of materials along with the invoice
- Checking inward invoice

Purchasing process:

- Checking inward invoice
- Inspecting and testing materials
- Forwarding the materials to stores
- Checking invoice and passing of bills for payments

Stores Management:

- It deals with planning, coordination and control of various activities pertaining or effective efficient and economic storage and store keeping.

Stores Records:

- Material requisition note
- Purchase order
- Invoice
- Goods received note
- Goods returned note
- Stores ledger account
- Bin card

Marketing Management

- **Marketing: Marketing as a social process by which individuals and groups obtain what they need and want through creating, offering exchanging products and services of value with others.**

Selling versus Marketing:

- Selling refers to the act of transferring the ownership of the goods and services from the seller to the buyer.

Marketing Function

- Buying
- Selling
- Transporting
- Storage
- Standardization and grouping
- Finance
- Marketing research

Marketing Mix:

- It refers to the combination of four basic elements, viz., product, price, promotion and the place, known as the four P's of marketing.

Marketing Mix

- Product Mix
- Price Mix
- Promotion Mix
- Place Mix

Product life cycle:

- Products have limited life.
- Products sales pass through distinct stages, each passing different challenges, opportunities and problems to seller.
- Profits rise and fall at different stages of product life cycle.

PLC Stages

- **Early growth**
- **Rapid growth**
- **Maturity**
- **Saturation**
- **Decline**

Type of Channels of Distribution

- Channels of distribution refer to the ways and means of reaching the customer through the intermediaries such as wholesalers, retailers, and other agencies, if any

Types of channels of distribution

- Manufacturer – consumer
- Manufacturer – wholesaler – consumer
- Manufacturer – retailer – consumer
- Manufacturer – wholesaler – retailer – consumer

UNIT-IV

- HUMAN RESOURCE MANGEMENT

HRM

- **Human Resource Management :**
- Human resource management is the process of managing the human resources of an organization in tune with the vision of the top management.

Personnel Management

- Defines personnel management as the planning, organizing, and controlling of the procurement, development, compensation, integration and maintenance of people for the purpose of contributing to the organizational goals.

Personal management versus Human⁴ resource management:

- Personnel management function is often viewed as a function of the specialized staff.
- Human resource management function is the responsibility of all the line managers in the organization

Personnel Management and Industrial Relations

- The word personnel management is popular with different names, such as staff management, labour management, manpower management, industrial relations and modern times as human resources management. Industrial relations refer to the relation between the employees and management.

Features in Personnel Management

- Personnel management is concerned with managing people at all level in the organization
- It is concerned with employees both as individuals and as a group

Functions of Personnel Management

- **Managerial Function**
- Planning
- Organizing
- Staffing
- Motivating
- Controlling

Operative Functions

- Procurement of personnel
- Development of personnel
- Compensation of personnel
- Employees benefits schemes
- Maintaining good industrial relations
- Record keeping
- Personnel planning and evaluation

Induction

- To ensure new recruits are provided with appropriate training,
- Orienting new employees into their jobs

Transfer/Promotion

- To utilize employees enhanced capabilities
- Continuously analyzing job description
- Evaluating employee qualification/performance
- Determining further training requirement

Manpower development

- To provide individual employees development
- Developing performance standards
- Appraising performance

Performance appraisal

- To appraise performance as per their duties and responsibilities
- Developing performance evaluating system
- Conducting performance evaluating interviews
- Analyzing evaluation results

Job Analysis

- Job analysis can be defined as the process of identifying the tasks comprising a particular job to assess whether they could be organized in a productive manner

Job Description

- Job description is an accurate and concise description of
- (a) the overall purposes of the job (b) the principal duties of the person doing this job. The job description emphasizes the job requirements

Job Specification

- Job specification identifies the requirements on the part of the person to perform the given job. It provides the interviewer an understanding of the job and helps him to assess the qualities necessary for its performance to an acceptable standard, at the time of interview.

Manpower Planning

- Manpower planning may be defined as a rational method of assessing the requirements of human resources at different levels in the organization. It ends with proposals for recruitment, retention, or even dismissal, where necessary

Objectives of Manpower Planning:

- Making correct estimate of manpower requirement
- Managing the manpower according to the need of enterprises
- Helps in recruitment and selection

Objectives of Manpower Planning

- Maintaining production level
- Making employees development programme effecting
- Establishing industrial peace
- Reduction in labour costs

Recruitment:

- Applications are invited at this stage for further scrutiny and short listing. Before advertising for the position, it common to check up of the position could be filled in internally

Selection

- The process of identifying the most suitable persons for the organization is called selection. Selection is also called a negative function because at a stage the applications are screened and short-listed based on the selection criteria.

Selection process involves the following stages:

- Initial screening/Short listing
- Comprehensive application/bio data screening
- Aptitude or written tests
- Group discussion

Selection process involves the following stages:

- Personal interviews
- Group discussion
- Personal interviews
- Medical examination
- Employment offer letter

Training and development

- Training: Training is short-term process of utilizing systematic and organized procedure by which the staff acquires specific technical knowledge and functional skills for a definite purpose

Training Needs

- High turnover among the new recruits
- Increase in wastage of materials
- Increase in the number of rejected units of production
- Increase in the number of customer complaints

Training Needs

- Increase in the accident rate
- Reduced productivity levels
- Increase in machine breakdowns

Methods of Training

- On-the job training
- Off-the job training

On-the job training

- It is designed to make the employees immediately productive. It is learning by physically doing the work. The focus here is to provide specific skills in a real situation. These methods include

On-the job training Methods

- Job instruction training
- Experiential learning
- Demonstration
- Apprentice training

Off-the-job training methods

- Lectures/talks and class room instructions
- Conferences
- Seminars
- Team discussions

Off-the-job training methods

- Case study
- Role-playing
- Programmed instruction
- Simulation exercises
- Group decision-making

Placement

- After training, the employee is placed in his/her position under the charge of a manager. The new recruit is allowed to exercise full authority and is held responsible for the results

Promotion

- Promotion refers to the advancement of an employee to a job with a higher authority and responsibility. It may also carry a better compensation package. Promotion can also be viewed as a means of filling up vacancies in the organization occurring from time to time.

Demotion

- Where an employee is not in a position to perform a given job, he may be demoted or transferred to a position with a lower authority and salary. In other words, demotion is a punishment

Transfer

- It is a lateral shift that moves an individual employee from one position to another. It may be in the same department, or to a different department or location. This does not involve any changes in the duties, responsibilities, or skills needed. The salary benefits also may remain the same.

Separation

- Separation refers to termination of employment. In other words, the employee is separated from his job. In case of misconduct or misbehavior, where the employee is not in a position to improve his performance despite notice, his/her employment is terminated. This is also called dismissal.

Absenteeism

- Absenteeism refers to the practice of an employee who does not report to work for any particular reason. Absenteeism affects the productivity adversely. It becomes difficult for the departments to cope up with the work pressures, if any particular employee is absent

Wages and Salary Administration

- Wages and salary administration is the process of fixing wages/salary for different jobs in the organization through job evaluation, negotiations with the unions, and so on.

Grievance Handling

- A complaint from employees, when ignored, takes the form of a grievance. Grievance is a complaint genuine or otherwise, about any issue relating to the job such as about supervisor, wages, working conditions and so on.

Performance Appraisal

- Performance appraisal is the process of measuring and evaluating the performance or accomplishments, including behaviour, of an employee on the job front for a given period

Why appraise the performance

- To assess the employee's present level of performance
- . To identify the strengths or weaknesses of individual employee
- To provide feedback to the employee so that he can improve his/her performance

Steps in performance Appraisal

- Create set up performance standards
- Mutually set identifiable and measurable
- Measure present level of performance

- Compare and appraise present level of performance with standard
- Discuss the appraisal with employee
- Identify and initiate the corrective action

Job Evaluation

- An attempt to determine and compare the demands which the normal performance of particular job makes on normal workers without taking account of the individual abilities or performance of workers concerned. It rates the job not the rank.

Objectives

- To establish correct wage differentials for all jobs within the factory
- To bring new jobs into their proper relative with jobs previously established

Method of Job Evaluation

- Qualitative Method
- Quantitative Method

Qualitative Method

- It can broadly be classified as ranking or classifying the job from lowest to highest
- Ranking techniques: In this method, the jobs in the organization are arranged in either in the ascending or descending order and numbered serially.

Classification Method

- This is also called job-grading method. Here, the number of grades and the salary particulars for each grade are worked out first. The grades are clearly described in terms of knowledge, skill and so on.

Quantitative Method

- Where point values are assigned to the various demands of a job and relative value is obtained by summing all such point values.
- Factor comparison method :Every job requires certain capabilities on the part of the person who does the job. These capabilities are considered as critical factors, which can be grouped as follows

Quantitative Method

- Mean effort Skill
- Physical
- Responsibility
- Working conditions

Point-rating method

- There are four widely accepted factors used in the point-rating method, skill, effort, responsibility and job conditions each of these factors is divided into sub-factors.
- **Merit Rating:** Merit rating is the process of evaluating the relative merit of the person on a given job. It is an essential task of the personnel manager to distinguish the meritorious employees from the other .

Objectives of Merit Rating

- To determine salary increments
- To decide who has to be transferred, promoted, or demoted
- To discover the workers needs for retaining and advanced training .
- To guide and monitor the performance of those who are lagging behind.

Method of Merit Rating:

- Ranking method
- Paired comparison method
- Rating scale
- Forced distribution method
- Narrative or essay method
- Management by objectives (MBO):

UNIT-V

PROJECT MANAGEMENT

PROJET MANAGEMENT (PERT/CPM)

- **Net work analysis** :It is refers to a number of techniques for the planning and control of complex projects. The basis of network planning is the representation of sequential relationships between activities by means of a network of lines and

Gantt's bar chart

- Gantt chart is a bar chart, which was developed by Henry Gantt around 1900.
- It consists of two coordinate axes, one represents the time and the other jobs or activities performed.

Limitation of Gantt Chart:

- This Gantt bar charts not useful for big projects, consisting of large number of complex activities
- It does not show the relationship between various operations. It is very difficult to find the sequence of various operations on the Gantt chart or the most probable date of completion.

Limitation of Gantt Chart:

- Does to indicate the progress of work
- It cannot reflect uncertainty or tolerance in the duration time estimated for various activities
- It simply a scheduling technique, but not effective planning tool.

Milestone chart:

- Milestone chart is an improvement over Gantt chart. It has become a good line between Gantt chart and PERT and CPM network. Every task represented by a bar in Gantt's bar chart, is subdivided in terms event or point in time.

PERT AND CPM

- **PERT:** Programme evaluation and review technique (PERT) is a tool to evaluate a given programme and review the progress made in it from time to time. A programme is also called a project. A project is defined as a set of activities with a specific goal occupying a specific period. It may be a small or big project, such as construction of a college building, roads, marriage, picnics etc.

CPM:

- **CPM:** Critical path method assumes that the time required to complete an activity can be predicted fairly accurately, and thus, the costs involved can be quantified once the critical path has been identified. Since time is an important factor, CPM involves a trade-off between costs and time. It involves determining an optimum duration for the project, that is, a minimum duration that involves the lowest overall costs.

Application of PERT and CPM:

- Construction of projects such as building, highways, houses or bridges, Preparation of bids and proposals for large projects such as multipurpose projects
- Maintenance and planning of oil refineries, ship repairs and other such as large operations
- Development of new weapon systems and new products and services

PERT Basic Terminology

- Event: A event is specific instant of time which indicates the beginning or end of the activity event is also known as a junction or node. It is represented by a circle and the event number is written with in the circle.

Types of events

- Tail event
- Head event
- Predecessor event
- Successor event

Activity

- Activity: Every project consists of number of job operations or tasks which are called activity.
- **Classification of activities:**
- Critical activity
- Non-Critical activity
- Dummy activity

Critical activity

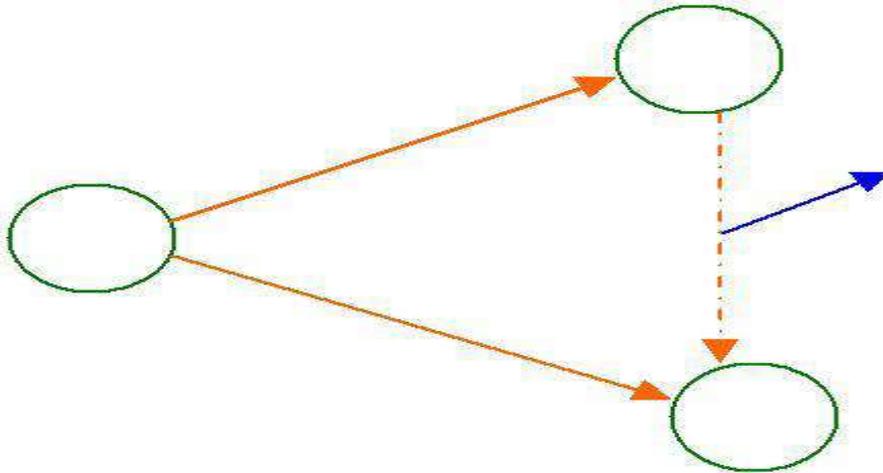
- Critical activity: In a network diagram critical activities are those which if consume more than their estimated time, the project will be delayed.  It shown with thick arrow.

Non-critical activity

- Non-critical activity: Such activities have a provision of float or slack so that, even if they consume a specified time over and above the estimated time

Dummy activity

- Dummy activity: When two activities start at the same instant of time like A and B the head event are jointed by dotted arrows and this is known as dummy activity.
- Ex:



CPM Basic terminology

- **Critical Path:** Critical path is that path which consumes the maximum amount of time or resources. It is that path which has zero slack value.
- **Slack:** Slack means the time taken to delay a particular event without affecting the project completion time. If a path has zero slack that means it is the critical path.

- $\text{Slack} = \text{LFT} - \text{EFT}$
- Earliest Start Time (EST): It is the earliest possible time at which an activity can start, and is calculated by moving from first to last event in the network diagram. Earliest Finish Time (EFT): It is the earliest possible time at which an activity can finish
- $\text{EFT} = \text{EST} + \text{Duration of activity}$

- Latest Start Time (LST): It is the latest possible time by which an activity can start without delaying the date of completion of the project.
- $LST = LFT - \text{Duration of the activity}$
- Latest Finish Time (LFT): It is the latest time by which the activity must be completed. So that the scheduled date for the completion of the project may not be delayed. It is calculated by moving backwards.

Float

- **Float:** Floats in the network analysis represent the difference between the maximum time available to finish the activity and the time required to complete it.
- The basic difference between slack and float times is a slack is used with reference to event, float is use with reference to activity

Types of floats

- 1) Total float
- 2) Free float
- 3) Independent float

Total float

- Total float: It is the additional time which a non critical activity can consume without increasing the project duration. However total float may affect the floats in previous and subsequent activities.
- Total float = $LST - EST$ or $LFT - EFT$

Free float

- Free float: Free float refers to the time by which an activity can expand without
- affecting succeeding activities.
- Free float = EST of Head Event – EST of Trail Event – Activity duration

Independent float

- Independent float: This the time by which activity may be delayed or extended without affecting the preceding or succeeding activities in any way.
- Independent float = EST of Head event – LFT of Trail event – Activity duration

- PERT AND CPM simple problems

Project Management – II

- **Project crashing:** In this chapter, we will discuss the concepts of direct and indirect costs, the relationship between project time and project cost, the concept of cost slope and how the optimum cost and optimum duration are ensured for a given projects while crashing.

Project costs

- **Project costs:** Costs associated with any project can be classified into two categories
- a) Direct cost
- b) Indirect cost

Direct cost

- Direct cost: These costs are those, which are directly proportional to the number of activities involved in the project Ex: Raw material cost.

Types of cost

- **Normal cost (Nc):** It is the lowest cost of completing an activity in the minimum time, employing normal means i.e. not using overtime or other special resource.
- **Normal time (NT):** It is the minimum time required to achieve the normal cost

Crash cost, Crash time

- **Crash cost (CC):** It is the least cost of completing an activity by employing all possible means like overtime, additional machinery, proper materials etc.
- **Crash time (CT):** It is the absolute minimum time associated with the crash cost.

Cost Slope

- **Cost Slope:** Cost Slope is the amount that has to be spent over and above the normal direct cost for reducing the duration by one unit of time (day, week etc.). Cost slope is defined as the additional cost for reducing one unit of time, assuming a given rate of increase in direct cost with a decrease in one unit of time.

Cost Slope

- $$\text{Cost slope} = \frac{\text{Crash COS } t - \text{Normal COS } t}{\text{Normal time} - \text{Crash time}}$$

$$\frac{CC - NC}{NT - CT}$$

Crashing of Network

- After identifying the critical path, it is necessary to identify the priority to crash the activities by calculating the cost slope.
- For reducing the duration extra expenditure to be incurred, but to save resources, organizations keep this extra expenditure at a minimum.

Indirect cost

- Indirect cost: In direct cost are those costs that are determined per day. Some of examples for indirect costs are supervisory personnel salary, supplies, rent, interest an borrowings, ads, depreciation. These costs are directly proportional to the number of days of the duration of the project. If the project duration is reduced the indirect cost also comes down.

- Simple problems of PERT & CPM ,crashing

UNIT-VI

Women Entrepreneurship

Scope of Women Entrepreneurship

- Time immemorial, women are described as the better half of men. But in reality, the women in developing countries do not tally with this description. It is a well-known fact that women have played and continue to play a key role in conservation of basic life support systems such as land, water, flora and fauna. Women have to play a dual role, as a housewife and as income earners.

Scope of Women Entrepreneurship

- Now a day educated women do not want to limit their lives in the four walls of the house. They demand equal respect from their partners. However, Indian women have to go a long way to achieve equal rights and position because traditions are deep rooted in Indian society where the sociological set up has been a male dominated one .

Reasons for Women Becoming Entrepreneurs

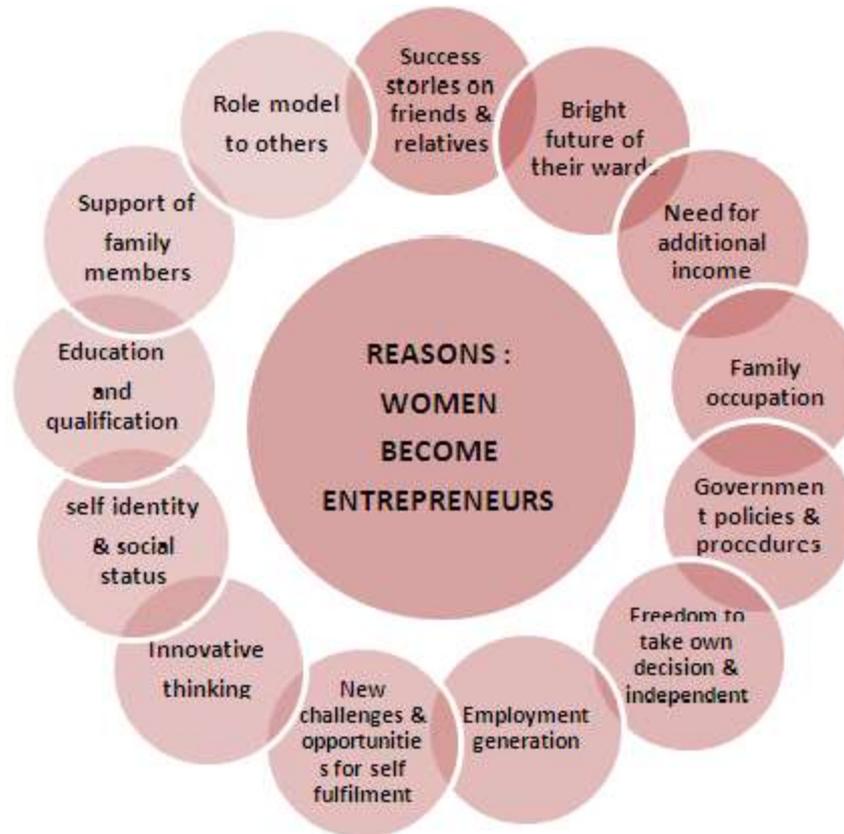
-
- **Innovative Thinking**
- **Role Model to Others**
- **Self Identity and Social Status**
- **Need For Additional Income**

Reasons for Women Becoming Entrepreneurs

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- **Support of Family Members**
- **Education and Qualification**
- **Self Fulfilment**
- **Freedom to Take Own Decision**
- **Government Policies and Procedures**

Reasons for Women Becoming Entrepreneurs



THE INDIAN APPROACH

- **When women move forward, the family moves, the village moves and the nation moves.....**
- **Earlier there were 3 Ks**
 - **Kitchen**
 - **Kids**
 - **Knitting**

THE INDIAN APPROACH

- **Then came 3 Ps**
 - Powder
 - Papad
 - Pickles
- **At present there are 3 Es**
 - Electronics
 - Energy
 - Engineering

CATEGORIES OF WOMEN ENTREPRENEURS IN INDIA

- **First category:**
- **Established in big cities**
- **Having higher technical qualifications.**
- **Sound financial positions.**
- **SECOND CATEGORY :**
- **Established in cities and towns.**
- **Having sufficient education.**
- **Undertaking women services- kinder garden, crèches, beauty parlours, etc.**

CATEGORIES OF WOMEN ENTREPRENEURS IN INDIA

- **THIRD CATEGORY**
- **Illiterate Women**
- **Financially weak**
- **Involved in family business like agriculture, dairy, handlooms, horticulture etc.**

Women Entrepreneurs in India

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- **Indra Nooyi:** Indian born American businesswoman, Indra Krishnamurthy Nooyi born October 28, 1955 is the Chairperson and Chief Executive Officer (CEO) of PepsiCo.
- **Dr. Kiran Mazumdar-Shaw:** Entrepreneur Dr. Kiran Mazumdar Shaw, Chairman & Managing Director of Biocon Ltd. She founded Biocon India with a capital of Rs.10,000. in her garage in 1978. Shaw held close to 40% of the stock of the company and was regarded as India's richest woman with an estimated worth of Rs. 2,100 crore.

Women Entrepreneurs in India

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- **Anu Aga:** This woman became the Chairperson of Thermax Engineering/ Bombay Management Association awarded her Management Woman Achiever of the Year Award 2002-2003. After retiring from Thermax, she took to social work, and 2010 was awarded the Padma Shri (Social Work) by Govt. of India.
- **Sulajja Firodia Motwani:** She is Joint Managing Director of Kinetic Engineering Ltd, she is the in charge of the Company's overall business developmental activities.

Women Entrepreneurs in India

- **Ekta Kapoor:** Ekta Kapoor, creative head of Balajji Telefilms, is the daughter of actor Jeetendra, and sister of actor Tushar Kapoor. She is a smart woman with a definite agenda` and has also been appropriately termed as Asia`s most powerful communicator and the lady no.1 in Hindi serials and movies.
- **Simone Tata:** With her visions, she changed a small unknown cosmetics company, one of the subsidiaries of Tata Oil Mills, into one of the leading cosmetic companies of India. Lakme changed the face of Indian fashion and cosmetics forever.

Women Entrepreneurs in India

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- **Priya Paul:** Priya Paul (born 1967), is a prominent woman entrepreneur of India, and currently the Chairperson of Appeejay The Park Hotels chain of boutique hotels. received several awards like, The Federation of Hotels and Restaurants Association of India conferred on her Young Entrepreneur of the Year award (1999-2000), nominated for The Economic Times Awards as the Businessperson of the year (2002-2003).

PROBLEMS FACED BY WOMEN ENTREPRENEURS

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- **Financial problems :**
- Limited working capital
- Sales on credit
- Lack of collateral security and margin
- Money to secure the money borrowed Fear of taking more loan

Financial problems

- Complicated lengthy procedures of loan sanctioning
- Apprehensions of financial institutions for the recovery of the loans
Reluctance of financial institutions to extend credit to women
Unawareness about the source of borrowing

Marketing problems

- Stiff competition
 - Exploitation by middlemen
 - Lack of traveling mobility
 - High cost of sales promotion
 - Lack of adequate marketing orientation
- Fluctuation in the demand of product/service
- Fluctuation in the prices of products .

Socio-personal problems

- Dual duties
- Limited liberty to women
- Resistance from husband /family at the time of start
Negative attitude of the labour force
Indifferent attitude of the society .
- Male dominance

Production Problems

- Inability to keep pace with recent advances in technology
- Inadequate availability of proper working area
- Problem of raw material

Labour problems

- Non availability of skilled and experienced personal
- Absenteeism General insufficiency of the personal
- High salary /wages/ bonus demand
- High turnover of the staff /workers Strained labour relations

Technical problems

- Difficulty in repairs & maintenance of machinery involved
- Lack of technical know how involved
- Non availability of modern technology
- Lack of specialized skills to work to a specific project

Challenges of women entrepreneurs

- Access to financial resources
- Inadequate training and access to information
- Work-family interface
- Women's safety and gender based violence
- Lack of societal support
- Legal barriers and procedures

Opportunities for Women Entrepreneurs

- Women entrepreneurs believe good enough to contribute for the society well being in order to tap the opportunities in entrepreneurship. They have many responsibilities towards society betterment. In recent days women entrepreneurs are performing extremely fantastic.
- •Eco-friendly technology
- • Bio-technology

Opportunities for Women Entrepreneurs

- IT enabled enterprises
- Event Management
- Tourism industry
- Telecommunication
- Plastic materials

Opportunities for Women Entrepreneurs

- Vermiculture
- • Mineral water
- • Sericulture
- • Floriculture
- • Herbal & health care
- • Food, fruits & vegetable processing

Promotional Efforts Supporting Women⁶ Entrepreneurs in India

- Self-Help Groups (SHGs)
- Federation of Indian Women Entrepreneurs (FIWE)
- Women's India Trust
- Small Industries Development Bank of India (SIDBI)
- Central and State Government Schemes

Promotional Efforts Supporting Women Entrepreneurs in India

- National Bank for Agriculture and Rural Development (NABARD)
- Indira Mahila Yojana (IMY)
- Swayamsidha
- Swa-Shakti
- Support to Training and Employment Programme (STEP) for Women

STEPS TAKEN BY THE GOVERNMENT

- Integrated Rural Development Programme (IRDP)
- Khadi And Village Industries Commission (KVIC)
- Training of Rural Youth for Self-Employment (TRYSEM)
- Prime Minister's Rojgar Yojana (PMRY)
- Entrepreneurial Development programme (EDPs)

STEPS TAKEN BY THE GOVERNMENT

- **Management Development programmes**
- **Women's Development Corporations (WDCs)**
- **Marketing of Non-Farm Products of Rural Women (MAHIMA)**
- **Assistance to Rural Women in Non-Farm Development (ARWIND) schemes**
- **Trade Related Entrepreneurship Assistance and Development (TREAD)**

STEPS TAKEN BY THE GOVERNMENT

- Mahila Samiti Yojana
- Mahila Vikas Nidhi
- Working Women's Forum
- Indira Mahila Yojana
- Indira Mahila Kendra