Introduction to Management:

Definition of Management

"The art of getting things done with and through people"- Mary Parker Follett

"Getting things done through people by making the efficient use of resources".- Chester I. Barnard

According to Kast and Rosenzweig, "to make efficient use of resources and to get people and other resources to work harmoniously together in order to achieve objectives**.**

Functions of Management

There are four basic functions of management which is applicable to all industries. They include: planning, organizing, leading and controlling. Manager in process must first plan, then organize according to plan, lead other to achieve the plan, and finally evaluate the efficiency and effectiveness of the plan and activities undertaken.

•Planning is the primary function where manger creates a detailed action plan aimed at some organizational goal.

•Organizing is the second step which involves the manager determining how to distribute resources and coordinate them.

•Leading is the third step that is accomplished by communication, motivating inspiring and encouraging employees towards a higher level of productivity

•Controlling is the final function of management in which the manager, once a plan has been carried out, evaluates the results against the goals. If a goal is not being met, the manager must also take any necessary corrective action needed to continue to work towards that goal.

•Some adds staffing as the fifth function which includes tasks like, evaluating, recruiting, selecting, training, and placing appropriate individuals into defined job roles.

Planning:

•It is the foundation pillar of management. It is the base upon which the all other areas of management are built. Planning requires administration to assess where the company presently is and where it would be in the upcoming years. From there, an appropriate course of action is determined and implemented to attain the company's goals and objectives.

•Planning plays a pivotal role in business management; it helps to visualize the future problems and keeps management ready with possible solutions.

•According to KOONTZ, "Planning is deciding in advance - what to do, when to do & how to do. It bridges the gap from where we are & where we want to be".

•It is an exercise in problem solving & decision making determination to achieve desired goals.

•Planning is necessary to ensure proper utilization of human & non-human resources, it is all pervasive, an intellectual activity and it also helps in avoiding confusion, uncertainties, risks, wastage etc.

•This step involves mapping out exactly how to achieve a particular goal.

•Planning involves taking decisions on vision, mission, values, objectives, strategies and policies of an organization.

•Planning is done for immediate, short term, medium term and long term periods, it is a guideline for execution/implementation.

•It is a measure to check the effectiveness and efficiency of an organization.

Organizing:

•The second of the managerial functions is organizing. This step requires determine how to distribute resources and organize employees according to the plan.

•The second function of the management is getting prepared and getting organized. Management must organize all its resources beforehand, to put into practice, the course of action, which has been decided upon in the base function of planning.

•It is the process of bringing together physical, financial and human resources and developing productive relationship among them for achievement of organizational goals.

•According to Henry Fayol, "To organize a business is to provide it with everything useful or its functioning i.e. raw material, tools, capital and personnel's". To organize a business involves determining & providing human and non-human resources to the organizational structure.

•Organizing as a process involves: Identification of activities, Classification of grouping of activities, Assignment of duties, Delegation of authority and creation of responsibility, Coordinating authority and responsibility relationships, Designing organization structures and departmentation, Defining relationships between departments and job positions

Leading:

•Directing or leading is the third function of management. Working under this function helps the management in controlling and supervising the actions of staff. This helps them in assisting the staff, to achieve the company's goals and also accomplish their personal or career goals, which can be powered by motivation, communication, department dynamics, and department leadership.

•This step involves communicating, motivating, inspiring, and encouraging employees towards a higher level of productivity. An employee will follow the directions of a manager because they have to, but an employee will voluntarily follow the directions of a leader because they believe in who he or she is as a person, what he or she stands for, and for the manner in which they are inspired by the leader.

•Leading: Attracting people to the organization, Specifying job responsibilities, grouping jobs into work units, Marshalling and allocation of resources, creating good working conditions

•It is that part of managerial function which actuates the organizational methods to work efficiently for achievement of organizational purposes.

•It is considered life-spark of the enterprise which sets it in motion the action of people because planning, organizing and staffing are the mere preparations for doing the work. Leading is that inert-personnel aspect of management which deals directly with influencing, guiding, supervising, motivating sub-ordinate for the achievement of organizational goals.

•A manager needs to do more than just plan, organize, and staff her team to achieve a goal. She must also lead. Leading involves motivating, communicating, guiding, and encouraging. It requires the manager to coach, assist, and problem solve with employees.

Controlling:

•It implies measurement of accomplishment against the standards and correction of deviation if any to ensure achievement of organizational goals. The purpose of controlling is to ensure that everything occurs in conformity with the standards. An efficient system of control helps to predict deviations before they actually occur.

•Theo Haimann, "Controlling is the process of checking whether or not proper progress is being made towards the objectives and goals and acting if necessary, to correct any deviation".

•According to Koontz & O'Donell "Controlling is the measurement & correction of performance activities of subordinates in order to make sure that the enterprise objectives and plans desired to obtain them as being accomplished".

•Therefore controlling has following steps: Establishment of standard performance, Measurement of actual performance, Comparison of actual performance with the standards and finding out deviation if any, Corrective action.

•Controlling is the last of the four functions of management. It involves establishing performance standards based on the company's objectives, and evaluating and reporting actual job performance. Once management has done both of these things, it should compare the two to determine any necessary corrective or preventive action.

 Effective and efficient management leads to success, which is the attainment of objectives and goals that an organization sets for it. Of course, for achieving the ultimate goal, management needs to work creatively in problem solving and execute all the four functions. Management not only has to see goals accomplished, but also sees to it that the strategy adopted is feasible for the company.

Although there is a basic logic for describing these activities in this sequence (as indicated by the solid arrows), most managers engage in more than one activity at a time and often move back and forth between the activities in unpredictable ways (as shown by the dotted arrow), the true reality of management. The similarities that pervade most settings are the phases in the management process. the differences include the emphasis, sequencing, and implication of each phase.

Introduction to Management: Principles of Management

Principles of Management

Heneri Fayol (French Industralist):(1841-1925)

He attempts to systematize the practice of management to provide guidance and direction to manager.

He was the first to focus on management as function: planning, organizing, leading, and controlling, and believed as the core management process. Developed 14 principles of management.

1) DIVISION OF WORK: Work should be divided among individuals and groups to ensure that effort and attention are focused on special portions of the task. Fayol presented work specialization as the best way to use the human resources of the organization. This is because a division of work leads to specialization, and specialization increases efficiency, and efficiency improves the productivity and profitability of the organization.

2) AUTHORITY: The concepts of Authority and responsibility are closely related. Authority was defined by Fayol as the right to give orders and the power to exact obedience. Responsibility involves being accountable, and is therefore naturally associated with authority. Whoever assumes authority also assumes responsibility. According to Henri Fayol, there should be a balance between Authority (Power) and Responsibility (Duties). Authority must be equal to Responsibility. If the authority is more than responsibility then chances are that a manager may misuse it. If responsibility is more than authority then he may feel frustrated. (Delegation of authority)

3) DISCIPLINE: A successful organization requires the common effort of workers regarding obedience and respect. Penalties should be applied judiciously to encourage this common effort. Discipline means a respect for the rules and regulation of the organization. Discipline may be Self-discipline, or it may be Enforced discipline. Self-discipline is the best discipline. However, if there is no self-discipline, then discipline should be enforced through penalties, fines, etc. No organization can survive without discipline.

4) UNITY OF COMMAND: Workers should receive orders and instruction from only one manager. According to this principle, a subordinate (employee) must have only one superior (boss or manager). A subordinate must receive orders from only one superior. In other words, a subordinate must report to only one superior. According to Fayol, if one subordinate receives orders from more than one superior then there will be disorder. This will affect the discipline, efficiency, productivity and profitability of the organization.

5) UNITY OF DIRECTION: The entire organization should be moving towards a common objective in a common direction. All activities which have the same objective must be directed by one manager, and he must use one plan. This is called Unity of Direction. For example, all marketing activities such as advertising, sales promotion, pricing policy, etc., must be directed by only one manager. He must use only one plan for all the marketing activities. Fayol advocates "One head and one plan" which means that group efforts on a particular plan be led and directed by a single person. This enables effective co-ordination of individual efforts and energy. This fulfils the principles of unity of command and brings uniformity in the work of same nature. In this way the principle of direction create dedication to purpose and loyalty. It emphasizes the attainment of common goal under one head.

6) SUBORDINATION OF INDIVIDUAL INTERESTS TO THE GENERAL INTERESTS: The interests of one person should not take priority over the interests of the organization

as a whole. In an organization, there are two types of interest, viz., the individual interest of the employees, and the general interest of the organization. The individual interest should be given less importance, while the general interest should be given most importance.

7) REMUNERATION: Remuneration is the price for services received. Many variables, such as cost of living, supply of qualified personnel, general business conditions, and success of the business, should be considered in determining a worker's rate of pay. Fairness in remuneration must be assured in accordance with their contribution. This policy should give maximum satisfaction to both employer and employees. It should include both financial and non-financial incentives.

8) CENTRALIZATION: Fayol defined centralization as lowering the importance of the subordinate role. Decentralization is increasing the importance. The degree to which centralization or decentralization should be adopted depends on the specific organization in which the manager is working. The optimum balance must be found for each organization.

9) SCALAR CHAIN: Managers in hierarchies are part of a chain like authority scale. Each manager, from the first line supervisor to the president, possess certain amounts of authority. The President possesses the most authority; the first line supervisor the least. Lower level managers should always keep upper level managers informed of their work activities. The existence of a scalar chain and adherence to it are necessary if the organization is to be successful. Scalar Chain is a line of authority. This line joins all the members (managers and employees) from top to bottom. Every member must know who is his superior. He must also know who is his subordinate. Scalar Chain is necessary for good communication. Scalar Chain must not be broken in norm circumstances. However, if quick action is necessary, then this chain can be broken.

10) ORDER: For the sake of efficiency and coordination, all materials and people related to a specific kind of work should be treated as equally as possible and should be in their proper place. Misplacement will lead to misuse and disorder Putting right thing in right place so that it can be used in right time to get the right output.

11) EQUITY: All employees should be treated as equally as possible. The managers should use the equity while dealing with the employees. Equity is a combination of kindness and justice. There should not be any discrimination as regards caste, sex

and religion. An effective management always accords sympathetic and human treatment. The management should be kind, honest and impartial with the employees. In other words, kindness and justice should be exercised by management in dealing with their subordinates. Equity creates loyalty and devotion in the employees.

12) STABILITY OF TENURE OF PERSONNEL: Retaining productive employees should always be a high priority of management. Recruitment and Selection Costs, as well as increased product-reject rates are usually associated with hiring new workers. An employee needs time to learn his job and to become efficient. Therefore, he should be given time to become efficient. When he becomes efficient, he should be made permanent. In other words, the employees should have job security.

13) INITIATIVE: Management should take steps to encourage worker initiative, which is defined as new or additional work activity undertaken through self direction. Management should encourage initiative. That is, they should encourage the employees to make their own plans and to execute these plans. This is because an initiative gives satisfaction to the employees and brings success to the organization. Under this principle, the successful management provides an opportunity to its employees to suggest their new ideas, experiences and more convenient methods of work in respect of employee empowerment

14) ESPIRIT DE CORPS: Management should encourage harmony and general good feelings among employees. Esprit de Corps means "Team Spirit". Therefore, the management should create unity, co-operation and team-spirit among the employees. They should avoid the divide and rule policy

Others:

15. Span of control: The number of subordinate under the immediate supervision of one manger should be limited to manageable number.

16. Management by exception: Focus on selectivity in work and priority in decisions.

17. Shortest decision path: the decisions must be made as closely as possible in time and place to the object of the decision and to those affected by it.

Characteristics of Management

1. Achieving objectives.

2. Working with others.

3. Attaining effectiveness and efficiency,

i) Efficiency refers to doing things in a right manner.   Effectiveness refers to doing the right thing

ii) Focus on process, gives importance to means.   Focus on achieving end goal.

iii) It is concerned with present state or status quo.   It is concerned with future variable.

iv) It is documentation and repetition of the same steps.   It encourages innovation, demanding to think

v) Output to input ratio   Looks whether actual output

vi) Focus on getting max out put with minimum input.   Focus on the desired output with given input.

vii) Reactive to change   Proactive to change.

viii) It emphasizes on reduction of time and wastage.   It emphasizes on intended outcome.

ix) Using resources wisely and in a cost effective way   Making right decisions and implementing.

4. Takes situational approach/ contingency approach (suggest there will never be a generic solution to any particular problem).

5. Coping with the environment.

6. Continuous and never ending process.

7. Management is pervasive/ universality in application. (Spreading widely throughout an area or a group of people).

8. Responding to social needs (Focus on social responsibility, Organization takes input form society and give output to society).

9. Result oriented science (Management problem and issues can be approached in rational, logical, objective, and systematic way; manager use data, facts, and objective and can use quantitative model and decision-making techniques to arrive at correct decisions) and Art (Managers may often make decisions and solve problems on the basis of intuition, experience, instinct, and personal insight, relying on conceptual, communication, interpersonal, and time management skill).

Roles of Manager (By: Henry Mintzberg)

Interpersonal Role: This role involves human interaction (with subordinates and person outside the organization) and other duties that are ceremonial and symbolic in nature. This role is subdivided into three roles, they are:

1. Figurehead role: Symbolic and ceremonial head, gets into activities like, greeting visitors, chairing board meeting, signing legal documents, ribbon cutting .

2. Leader role: Formally and informally showing subordinate how to do things and how to perform under pressure, does activities like, directing, coordinating, training, motivating, staffing .

3. Liaison role: Maintains relations internally with different units and externally with all other stakeholders for building image, gathering resource, coordinating two project groups.

Informational Role: This role involves the sharing and analyzing of information. This role is subdivided into three roles, they are:

1. Monitor role: Actively seek and receives wide variety of internal and external information that may be of value, activities like scanning industry reports, reading periodicals and reports .

2. Disseminator role: provides information to subordinates and keep them informed of what is going on around the organization and the precautions to be taken while disseminating it.

3. Spokesperson role: Transmit information to outsiders on organization plans, policies, actions, result, etc. like, holding board meeting, organizing press conference.

Decisional Role: This role involves decision making. This role is subdivided into four role, they are:

1. Entrepreneurship role: The voluntary initiator of change, search organization and its environment for opportunities and initiates projects .

2. Disturbance handler role: Maintaining congenial working environment and organizational stability.

3. Resource Allocator role: Responsible for the allocation of organization resources (financial, informational, physical and human)

4. Negotiator role: Responsible for representing the organization at major negotiations with suppliers, unions, stakeholders.

What different skills manager require?

Technical skill: skills necessary to accomplish or understand tasks relevant to the organization. It is job specific knowledge and techniques that are required to perform organizational role. A technical skill is the ability to perform the given job. Technical skills help the managers to use different machines and tools. It also helps them to use various procedures and techniques. The low-level managers require more technical skills. This is because they are in charge of the actual operations.

Interpersonal Skills: It is manager ability to communicate with, understand, and, motivate both individuals and groups. The knowledge and techniques of communication, motivation, conflict management, group dynamics, etc are need in interpersonal skills. It is an ability to work with people. It helps the managers to understand, communicate and work with others. It also helps the managers to lead, motivate and develop team spirit. Human relations skills are required by all managers at all levels of management. This is so, since all managers have to interact and work with people.

Conceptual Skills: It is manager's ability to think in abstract by viewing organization in holistic manner. Conceptual skill is the ability to visualize (see) the organization as a whole. It includes Analytical, Creative and Initiative skills. It helps the manager to identify the causes of the problems and not the symptoms. It helps him to solve the problems for the benefit of the entire organization. It helps the manager to fix goals for the whole organization and to plan for every situation. According to Prof. Daniel Katz, conceptual skills are mostly required by the top-level management because they spend more time in planning, organizing and problem solving.

Diagnostic skill: Managers ability to visualize the most appropriate response to a situation. Problem solving skills are also called as Design skills. A manager should know how to identify a problem. He should also possess an ability to find a best solution for solving any specific problem. This requires intelligence, experience and up-to-date knowledge of the latest developments.

Communication skills: Is required equally at all three levels of management. A manager must be able to communicate the plans and policies to the workers. Similarly, he must listen and solve the problems of the workers. He must encourage a free-flow of communication in the organization.

Leadership Skills: Leadership skill is the ability to influence human behavior. A manager requires leadership skills to motivate the workers. These skills help the Manager to get the work done through the workers.

Who is a manager?

Managers are the individual who are responsible for coordinating and integrating activities of other people in the Organization.

Person responsible to carry out the management process.

Organizational members who tells others what to do and how to do it.

Manager is someone who achieves goals of the organization with people and through people.

What are different levels of manager or management?
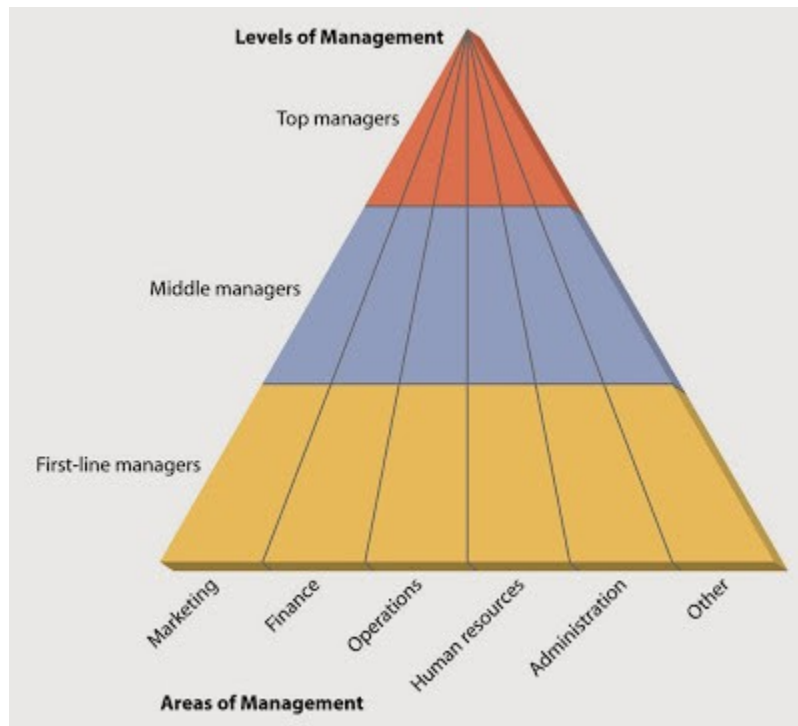
1. Top level management:- It includes board of directors, chief executive or general managers , senior strategist, decision making, directors . Corporate level goals, missions and objectives are determined. The major functions of this level are:-

- To formulate and determine the objectives and define the goals of the business

- To establish policies and prepare plans to attain the goals

- To set up an organizational structure to conduct the operations as per the plans

- To provide the overall direction in the organization

- To assemble the resources necessary for the attainment of the policy and execution of the paln

- To control effectively the business operations

- To judge and evaluate the results

2. Middle level management:- It includes departmental managers, divisional heads and section officers. It acts as a bridge between top level management and lower level management. The major functions of this level are:-

- To implement the task set up by top management

- To implement the policies framed by the top management

- To run the organizations effectively and efficiently

- To cooperate for the smooth functioning of the organizations

- To coordinate between different departments

- To recruit , select and train the employees for the better functioning of the departments

- To issue the instructions to the lower level management

- To motivate the workers and staffs for higher productivity and to reward them.

- To lead the departments and build up an organizational spirit

- To report and make suitable recommendations to the top level management for the better execution of the plans and policies

3. Lower level management:- It includes supervisors, foremen and workers. it is also known as supervisory level of management in which the supervisors or foreman like sales officers , account officers etc take responsibilities of the implementation and control of the operational plans developed by the middle level managers. The function of this level are: -

- To issue the orders and instruction to the workers to supervise and control the performance

- To plan the activities of the sections.

- To direct and guide the workers about the work procedures

- To provide job training to the workers

- To arrange the necessary tools, equipment , materials fro the workers and look after their proper maintenance

- To solve the problem of workers

- To develop sense of cooperation and high group spirit among the workers

- To advise the middle level about the work environment

- To inform the unsolved problems of the workers to the middle level management

Management Level and Skills

MANAGEMENT LEVELS

SKILLS NEEDED

Top management — *Needs* → Conceptual skills

Middle management — *Needs* → Human skills

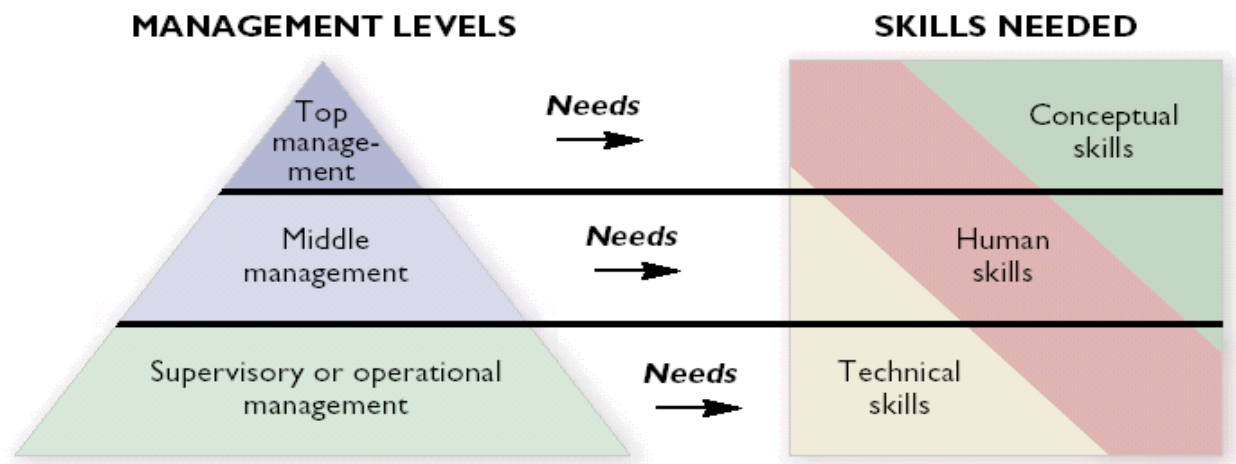Supervisory or operational management — *Needs* → Technical skills

Figure 1—7 As a manager moves from the supervisory to the top-management level, conceptual skills become more important than technical skills, but human skills remain equally important

Types of Manager

- On the Basis of Levels of Management

  - Top Level Managers

  - Middle Level Managers

  - Lower Level Managers

- On the basis of Nature or Area on Managerial Job

  - Functional Manager

  - General Manager

  - Staff Manager

Evolution of Management

Introduction:
Management : A form of work that involves coordinating an organization's resources- land, labor and capital-toward accomplishing organizational objectives. Management is a set of principles relating to the functions of planning, organizing, directing and controlling and application of these principles helps to create efficient and effectiveness to achieve organizational objectives. Good management is to an organization what health is to the body; the smooth efficient functioning of all its parts. Management concepts apply equally to public, private, not-for-profit, religious organizations, large corporations and small entrepreneurial firms.

Concept of Management
The concept of manangement is as old as the human race itself. The concept of management is begun from the concept of 'family'. The concept of 'family' required that life be organized and resources of food be apportioned in such a manner so as to maximize the utility of such resources. Taking proper steps to safeguard the family from attacks by wild animals, planning out where to go fishing and hunting and whom to go with, organizing these groups into and appointing hunting and fishing bands chiefs who would gave directions and so on, all are understated ingredients of management and organization. Application of current management techniques as far back as in 5000 B.C., when ancient Sumerians used written records assisting in governmental operations. The Egyptian pyramids built as early as in 3000 B.C., required the organized efforts of over 1,00,000 workers. Management as a system is not only an essential of organized society but also an integral part of others thing.

Definition of Management
"The art of getting things done with and through people"- Mary Parker Follett
"Getting things done through people by making the efficient use of resources".- Chester I. Barnard
According to Kast and Rosenzweig, "to make efficient use of resources and to get people and other resources to work harmoniously together in order to achieve objectives".

Characteristics of Management
   a. Achieving the Objectives
   b. Working with others
   c. Set of activities
   d. Adopting situational approach
   e. Coping with the environment
   f. Quality Assurance

g. Profit maximization

<u>Evolution of Management</u>

THEORIES OF MANAGEMENT		
Theory	Contributors	Major Contribution
1. Classical Theory h. Scientific Management	• Fedric W. Taylor (1900) • Frank Gilbreth ((1900) • Lilian Gilbreth (1914) • Henry Gnatt (1901) • H. Emerson (1910)	• One best method for doing each job (job focused) • Specialization for efficiency and productivity • Standardization through time and motion studies. • Worker development • Gantt Chart
i. Administrative Management	Henry Fayol (1916) L. Urwick (1943)	• Universal Principles for managing total Organization • Functions of management • Skills of management
j. Bureaucracy	Max Weber (1947) Chester Barnard (1938)	• Technical competence of employees. • Hierarchy with rules and procedures. • Impersonality of personal relations • Sociology of management

2. Human Relations Theory
  a. Industrial Psychology
  b. Hawthorne Studies
	Robert Owen (1810)
	Hugo Munsterberg (1910)
	Elton Mayo (1972)
		• Application of psychology to industrial settings.
		• Emphasis on social context of the workplace, group process and human element.

c. Participative Management	Mary Parker Follet (1930)	• Democratic and participative management; importance of human relations in management
d. Organizational behavior	Abraham Maslow (1954) Douglas McGregor (1960)	• Hierarchy of Needs influence human behavior • Theory X and Theory Y assumptions.
3. Decision theory	Herbert Simon (1955) James March (1965)	• Focus on rational decision making
4. Management Science Theory	PMS Blackett (1938) Joel Dean	• Application of quantitative techniques in decision making

THEORIES OF MANAGEMENT		
Theory	Contributors	Major Contribution
5. Systems Theory	Ludwig Von Bertalanffy (1951) Kenneth Boulding Fermont E. Kast and James E. Rasenzweig (1960)	• Organization as a total system comprising subsystems. • Interdependencies and environmental influences. • Integration for synergy and integrative approach to management.
6. Contingency Theory	Jay W. Lorsch and Paul R. Lawrence (1967) Kast and Rosenzweig (1973) James Thompson (1967)	• Situational approach to managerial Practice. • There is no one best way to deal with all situations • Integrative approach to management

Management Theories: Introduction

History

• It provides managers a sense of heritage (something inherited form past) and can help managers avoid the mistakes of others.

• "History is a record of human progress, a record of the struggle of the advancement of the human mind, of the human spirit, toward some known or unknown objectives". Jawaharlal Nehru.

Historical context of management

• Thoughts has been shaped over a periods by three major sets of environmental forces. They are social, economic and political.

• Social forces are norms and values that characterize a culture.

• Economic forces are associated with economic systems and general economic conditions and trends.

• Political forces are governing institutions and general governmental policies and attitude toward business.

Management in Antiquity

1. Sumerians: used written rules and regulations for governance.

2. Egyptians: pyramids

3. Alexander : war

4. Babylonians: extensive set of laws and policies for governance.

5. Romans: used organization structure for communication and control.

6. Greeks: used different governing systems for cities and states.

7. Chinese: Great Wall of China

Early management pioneers:

8. Robert Owen: Focused to human aspect, employee welfare, and minimum working age for children, meals for employees, and reduced work hours. (1771-1858)

9. Charles Babbage: focused on profit sharing plan, division of labor, efficiencies of production.. (1792-1871)

Management theories: The classical perspectives on Management

School of management:

• It is based on different assumption on human beings and the organization.

• The schools of management thoughts are divided into six categories. Scientific, administrative, behavioral, management (Quantitative), systems Contingency

The classical perspective:

• Focused on increasing efficiency of the production process or productivity though one best way. (job and task focused)

• Divided into three parts:

1. Administrative management focused on the problems of top management faced in managing the entire organization, and

2. Scientific Management focused on the main factory work place or shop floor management and efficiency of production.

3. Bureaucracy

Scientific Management:

• Scientific management concentrated on the problems of shop-floor management and efficiency of production.

• Concerned with improving the performance of individual workers

• Propounded by F.W Taylor

• Addition made by Gilberths and Henry Gantt.

• Productivity and efficiency are the foundation of scientific management theory.

- States' productivity can be improved endlessly, inefficiency should not be allowed.

F.W.Taylor:

- Midvale Steel company Philadelphia(1878), observed "soldering"

- Design the most efficient way of doing each work (by timing each element of the job).

- Simonds Rolling Machine Company (redesigned job, introduced rest periods, put piece work pay system).

- Piece work pay system (more pay to employee who met and exceeded the target level).

- Bethlehem steel. (efficient way of loading and unloading rail cars)

- The main principles of Taylors scientific management are

  - Standardization

  - Time and task study

  - Systematic selection and training.

  - Pay incentives

  - Management and labor harmony.

- Steps in scientific Management to improve the efficiency of the workers.

  - Develop a science for each element of the job to replace old rule of thumb methods (Standardization

  - Scientifically select employees and then train them to do the job as described.

  - Supervise employees to make sure they follow the prescribed methods for performing their jobs.

  - Continue to plan the work, but use workers to actually get the work done.

- Labor argued that scientific management was just a device to get more work from each employee and to reduce the total number of workers needed by the firm.

Frank and Lillian Gilbreth : (Husband and wife team of industrial engineering)

- Analyzed and studied craft of bricklaying. (focused on doing the job more efficiently)

- Focus " Economy of movements"

- Use of technique and methods to help workers in developing to their full potential through training, tools, environment, and standardized work method.

- Contribution:

  - Work simplification through motion studies.

  - Used 'flow chart' to record process and work flow.

  - Study of worker fatigue affecting health and productivity.

Henry Gantt; (1861-1919)

- Associate of Taylor.

- Redefined production control and cost control technique.

- Develop other technique for improving worker output with Gantt chart.

- Gantt chart is essentially a means of scheduling work and can be generated for each worker or for a complex project as a whole.

- Redefine Taylors ideas about piece work pay system.

- A Gantt chart is a type of bar chart, developed by Henry Gantt, which illustrates a project schedule. Gantt charts illustrate the start and finish dates of the terminal elements and summary elements of a project.

Limitation of Scientific Management:

- Concerned with shop level only

- Assumption that organization remains stable and simple

- Failed to take into account the psychological and sociological context of work

- Did not favor groups.

- Workers were view as economic being.

Contribution of Scientific Management

- It laid the foundation of modern management theory.
- It promoted mass production.
- It facilitated job through specialization and standardization of work.
- It gave importance to proper selection, training and compensation of workers for improving efficiency.
- Its helps develop workers' efficiency by using improved machines and tools.
- It lead to greater economic prosperity and help improve the living standard of worker.
- It introduce rational method to solve management problem

Limitation of Scientific Management

- It lays too much emphasis on technical aspects of the work by ignoring human interest.
- It has not mentioned about informal relation between worker.
- Work becomes monotonous.
- There is no one best method.
- It does not favour group work.

Administrative management and bureaucracy:

Focus on managing the total organization.

Heneri Fayol (French Industralist):(1841-1925)

- He attempt to systematize the practice of management to provide guidance and direction to other manager.

- He was the first to Focus on management as function as: planning, organizing, leading, and controlling. And believed as the core management process.

- Develop 14 principles of management.

- Management Principles developed by Henri Fayol:

DIVISION OF WORK, AUTHORITY, DISCIPLINE, UNITY OF COMMAND, UNITY OF DIRECTION, SUBORDINATION OF INDIVIDUAL INTERESTS TO THE GENERAL INTERESTS, REMUNERATION, CENTRALIZATION, SCALAR CHAIN, ORDER, EQUITY, STABILITY OF TENURE OF PERSONNEL, INITIATIVE, ESPIRIT DE CORPS

Contributions of Administrative Management

- It identified management functions for the first time.
- This theory lays down universal principles of management.
- This theory identified skills needed for management.

Limitations of Administrative

- This theory has not paid proper attention to the human behavioural aspects in an organization.
- It has not considered the situational factors.
- No guidance as to when the principle must be applied.
- Principle is based on personal experience and little observation
- This theory regarded management as a profession.

Bureaucracy Max Weber: (German sociologist)*(1864-1920)

- Develop 'principles of bureaucracy" or a theory of Authority Structure and Relations formal systems of organization and administration design to increase efficiency and effectiveness.

- The system is characterized by division of labor, clearly defined hierarchy, rules and regulations and impersonal relationship.

- Its features were:

    - Job specialization: Division of labor

    - Authority hierarchy: clearly defined hierarchy and chain of command must be established.

    - Formal Selection and promotions: An employee should be chosen, placed, and promoted within an organization based on his/ her level of experience and competency to perform the job.

    - Formal rules and regulations: set of standards operating procedures that facilitate consistency in both organization and management practices.

    - Impersonality: must be there to promote fair and equal treatment to all employees, so that unbiased decision can be made.

    - Career oriented: employee anticipates life long career. It states that employee should be made aware of their career growth and security of tenure protecting form arbitrary dismissal.

Management Theories: Behavioural perspective

The Behavioral perspective:

- Focused on the human side of an organization.

- Emphasizes individual attitude and behavior and group processes and recognized the importance of behavioral process in the workplace.

- This school of management studied different factors associated with workers efficiency, happiness, and productivity. (It was observed that employees were not happy and satisfied with economic incentive alone).

- There are two findings in this perspective:

    1. Behavioral science approach: Interpersonal relations and behavioral patterns of workers.

    2. Human relations approach: attention to the importance of the individuals within the organization.

Human Relation approach:

Hugo Munsterberg(German psychologist (1863-1916):

- Contribution made in employee selection and motivation.

- He argued that psychologists could help industry in three major areas:

    1. Finding ways to identify individuals best suited to particular jobs.

    2. Identifying the psychological (the scientific study of mental functions and behaviors.) conditions for optimum efficiency.

    3. Finding ways to influence individual behavior to be congruent with management's objectives

Elton Mayo: the Hawthorne studies

- The Hawthorne studies were carried out by the Western Electric company at their Hawthorne plant in the 1927-1932.

- The Hawthorne studies were series of early experiments that focused on behavior in the workplace. In one experiment involving this group of workers, for example, researcher monitored how productivity changes as a result of changes in working conditions. The Hawthorne studies and subsequent experiments lead scientists to the conclusion that the human element is very important in the work place.

The Relay Assembly Test Room.

- Initially, the study focused on lighting or manipulating illumination for one group of workers and comparing their subsequent productivity with the productivity of another group whose illumination was not changed. When illumination was increased for the experimental group, productivity went up in both groups. Productivity continued to increase in both group, even when the lighting for the experimental group was decreased. Not until the lighting was reduced to the level of moon light did productivity begin to decline.

- Workers were motivated not with the degree of illumination but rather by their feelings of importance.

- Work hours, wage, incentives did not have independent effect on employee efficiency.

- Change in attitude of employee had significant effects on productivity than working condition.

- Team feeling led to increase in productivity.

The interviewing Program

- Social groups were formed informally at workplace.

- The groups have strong control over the behavior of their individual members.

Bank wiring Observation Room

- Another experiment established a piece work incentive pay plan for a group. (scientific management)

- They observe the influence of the informal groups on employees' performance.

- Over a period of time the informal groups develop their codes of behavior, hierarchy of members, and acceptable standard of output. As they approached this acceptable level of output workers slacked off to avoid overproducing.

- All members were following group standards and norms. Social system was found to be emerging in workplace.

Contribution of Human relation Theory

- This Theory shifted the focus of management to the human side of organization.
- This Theory stated that social setting and groups were important for productivity.
- Effective supervision plays an important role in maintaining employees' morale and productivity.
- This theory emphasized employee as a key determinant of performance.

Limitations of Human Relations

- This theory gave overemphasis on human variable. They undermine the tasks to be done.
- Financial rewards were ignored.
- This theory emphasized informal group. Informal groups don't make the task pleasant. They only make a worker's day pleasant.

Behavioral science approach

Abraham Maslow:

- Develop a theory of motivation that was based on three assumptions about human nature.

- Assumption:

  - Human beings have needs that are never completely satisfied.

  - Human behavior is aimed at satisfying the needs that are yet unsatisfied at a given point of time.

  - Needs fit into a somewhat predictable hierarchy ranging from basic, lower level needs to higher level needs:

  - Physiological ,Safety ,Belongingness or social ,Esteem ,Self-actualization

The Maslow's Pyramid of Human Needs is explained below:-
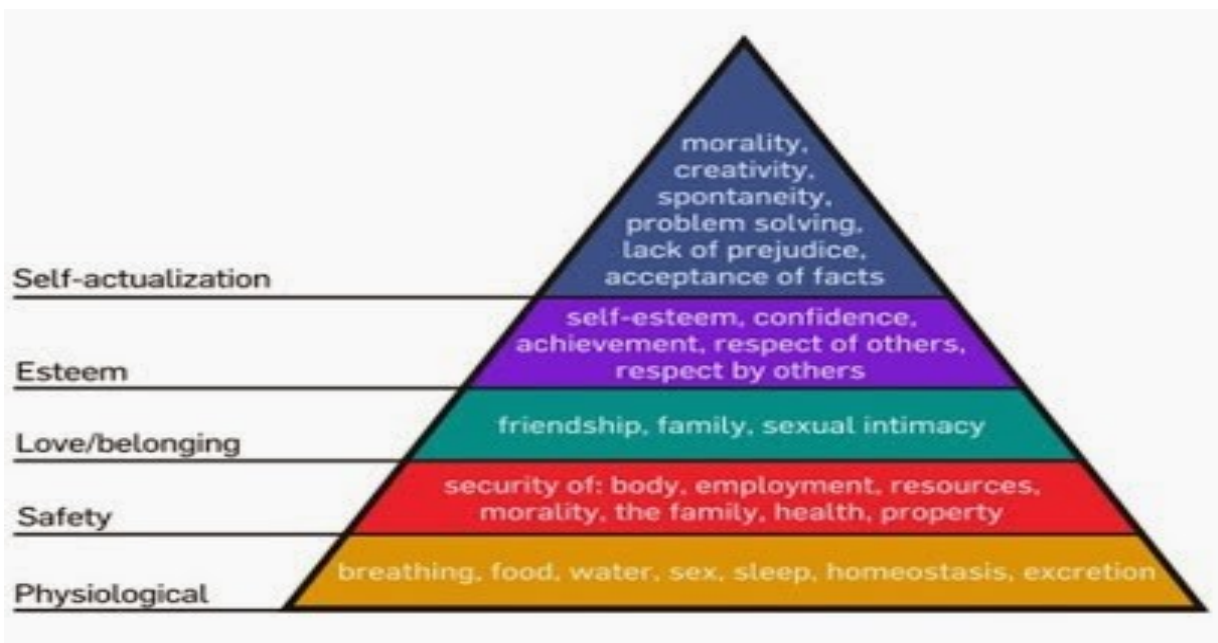
1. Physiological Needs: Physiological needs are the basic needs for sustaining human life. These needs include food, shelter, clothing, rest, air, water, sleep and sexual satisfaction. These basic human needs (also called biological needs) lie at the lowest level in the hierarchy of needs as they have priority over all other needs. These needs cannot be postponed for long. Unless and until these basic physiological needs are satisfied to the required extent, other needs do not motivate an employee. A hungry person, for example, is just not in a position to think of anything else except his hunger or food. According to Maslow, 'man lives by bread alone,' when there is no bread. The management attempts to meet such physiological needs through fair wages.

2. Security / Safety Needs: These are the needs connected with the psychological fear of loss of job, property, natural calamities or hazards, etc. An employee wants protection from such types of fear. He prefers adequate safety or security in this regard i.e. protection from physical danger, security of job, pension for old age, insurance cover for life, etc. The safety needs come after meeting the physiological needs. Such physiological needs lose their motivational potential when they are satisfied. As a result, safety needs replace them. They begin to manifest themselves and dominate human behavior. Safety needs act as motivational forces only if they are unsatisfied.

3. Social Needs: An employee is a human being is rightly treated as a social animal. He desires to stay in group. He feels that he should belong to one or the other group and the member of the group should accept him with love and affection. Every person desires to be

affiliated to such groups. This is treated as basic social need of an individual. He also feels that he should be loved by the other members. He needs friends and interaction with his friends and superiors of the group such as fellow employees or superiors. Social needs occupy third position in the hierarchy of needs.

4. Esteem Needs: This category of needs include the need to be respected by others, need to be appreciated by others, need to have power and finally prestigious position. Once the previous needs are satisfied, a person feels to be held in esteem both by him and also by others. Thus, esteem needs are two fold in nature. Self esteem needs include those for self confidence, self-respect, competence, etc. The second groups of esteem needs are those related to one's status, reputation, recognition and appreciation by others. This is a type of personal ego which needs to be satisfied. The Organization can satisfy this need (ego) by giving recognition to the good work of employees. Esteem needs do not assume the motivational properties unless the previous needs are satisfied.

5. Self-actualization Needs: This is the highest among the needs in the hierarchy of needs advocated by Maslow. Self actualization is the desire to become what one is capable of becoming. It is a 'growth' need. A worker must work efficiently if he is to be ultimately happy. Here, a person feels that he should accomplish something in his fife. He want to utilize his potentials to the maximum extent and desires to become what one is capable of becoming. A person desires to have challenges and achieves something special in his life or in the area of his specialization. Though everyone is capable of self-actualization, many do not reach this stage. This need is rarely fully satisfied.

Criticism of Maslow's theory:

- Five levels of need are not always present.

- There is no order of five needs which we satisfy one by one as Maslow said.

- What is a deficiency for one is not necessarily a deficiency for another.

Dauglas McGregor:

Developed the Theory X and Theory Y dichotomy about the assumptions managers make about workers attitudes and how these assumptions affect behavior.

Theory x ('authoritarian management' style)

- The average person dislikes work and will avoid it he/she can.

- Therefore most people must be forced with the threat of punishment to work towards organizational objectives.

- The average person prefers to be directed; to avoid responsibility; is relatively unambitious, and wants security above all else

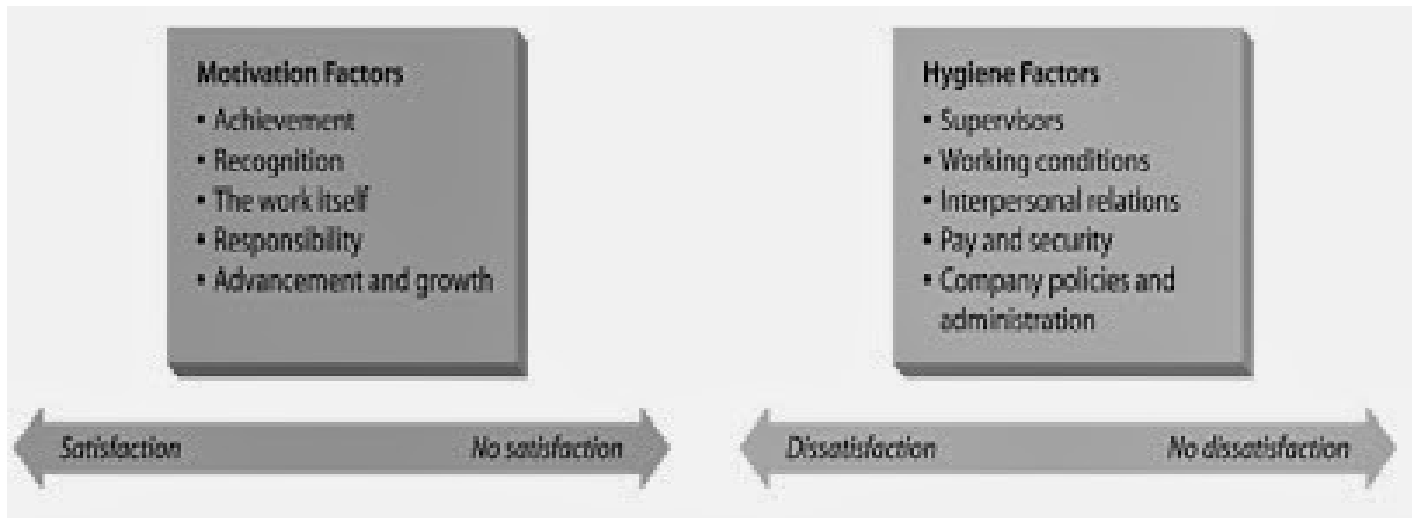## Theory y ('participative management' style)

- Effort in work is as natural as work and play.

- People will apply self-control and self-direction in the pursuit of organizational objectives, without external control or the threat of punishment.

- Commitment to objectives is a function of rewards associated with their achievement.

- People usually accept and often seek responsibility.

- The capacity to use a high degree of imagination, ingenuity and creativity in solving organizational problems is widely, not narrowly, distributed in the population.

Factors	Theory X	Theory Y
Work	Work avoiding	Work is natural
Control	Managerial Control	Self-Control
Direction	Formed by Supervisor	Self-Directed
Responsibility	Avoided	Accept and seek

Ambition	Security-Oriented	Creativity-oriented
Change	Resisted	Accepted
Needs	Lower order need	Higher order needs
Goals	Focus on organizational goals	Integration

Frederick Herzberg:

It (also known as Herzberg's motivation-hygiene theory and Dual-Factor Theory) states that there are certain factors in the workplace that cause job satisfaction, while a separate set of factors cause dissatisfaction. He discovered two kinds of factors:

Motivation Factors
- Achievement
- Recognition
- The work itself
- Responsibility
- Advancement and growth

Satisfaction ← → No satisfaction

Hygiene Factors
- Supervisors
- Working conditions
- Interpersonal relations
- Pay and security
- Company policies and administration

Dissatisfaction ← → No dissatisfaction

- **The hygiene factor:**

    - e.g. status, job security, salary, fringe benefits, work conditions) that do not give positive satisfaction, though dissatisfaction results from their absence. These are extrinsic to the work itself, and include aspects such as company policies, supervisory practices, or wages/salary)

- **The motivator factor:**

    - e.g., challenging work, recognition, responsibility) that give positive satisfaction, arising from intrinsic conditions of the job itself, such as recognition, achievement, or personal growth.

Contributions of Behavioral Science theories

- These theories emphasize understanding of human behavior at work.
- These theories gave importance to non-financial rewards such as recognition and appreciation for worker productivity.
- These theories advocated that needs influence behavior. Unfulfilled needs influence productivity in organization
- Emphasized in self-direction of subordinates through workers' participation in planning and decision making

Limitation

- No consideration was given to situational factors in behavioral theories.
- Human behavior is complex and cannot be predicted. This limits the practical application of these theories.
- These theories take a partial view of organization. They lack systems perspective.

Management Theories: Quantitative Management Perspective

Management Science school (Quantitative Management Perspective):

Developed during World War II, mathematicians, physicists, and other scientists from England and USA joined together to solve military problems, to help them to deploy its resources more efficiently and effectively.

The approach uses mathematical and quantitative models to solve complex business problems

The model is used to study, analyze, and predict the future events and recommends strategy to be used by organization.

The quantitative approach to management involves the use of quantitative techniques, such as statistics, information models, and computer simulations, to improve decision making, operation, resource allocation and economic effectiveness.

This school consists of three main branches:

Quantitative management: It focuses on development of mathematical techniques or models to management. It is the simplified representation of a system, process, or relationship in relation to models, equations and similar representation of reality.., e.g., SPSS, modeling, queuing theory etc.

Operations management: Provides manager with set of techniques which they can utilize in an organization's production system to increase efficiency. e,g inventory management, linear programming, queuing theory, breakeven analysis, and simulation.

Management information system: Helps management to design information system that provides information about events occurring within and outside an organization.

Management Theories: System, Contingency

System Perspective

Developed by Ludwig von Bertalanffy, Kenneth Boulding, Norbert Weinus, Herbert Simon, Shester Bernard. (1901-1972.

System is an interrelated set of element functioning as a whole

It studies management by putting all interrelated parts of an organization to accomplish a goal and recognition of environmental influences the system.

The system approach identifies four basic elements: input, transformation process, outputs, and feedback.

The various parts of a system have functional as well as structural relationships between each other. The parts that make up a system show degrees of integration – "compatible"

Every part of a system is affected by every other part. Usually there are several points of intervention and types of intervention than can help client systems to change.

A system can be defined as an aggregate of interrelated and interconnected elements and activities that form an identifiable, organized, and functioning whole.

All systems have boundaries. The boundary of a social system distinguishes between those who belong and those who do not.

The important elements or concepts of system are:

Goal oriented: Every system have certain purpose of existence. It is means to produce the desired end.

Sub- system: Is a single, predefined operating environment through which the system coordinates the work flow and resource use. A system within another system. A system consists of numerous parts called sub-systems.

Open and Closed system: An organizational system that interacts with its environment is called open system and which does not interacts with the environment is called closed system.

Synergy: the whole is greater than sum of its parts. Two or more subsystem working together to produce more than the total of what they might produce working alone.

System boundary: Boundary which separates it from its environment.

Flow of information: system continuously utilizes the processed information into action and opportunity.

Feedback: Important element which gives information to control deviation in system parts.

Entropy: a normal process leading to system decline, when organization does not monitor feedback from its environment and make appropriate adjustments. The tendency of systems to become disorganized, to disintegrate, or to run down and die. The primary objective of management is to re-energize to avoid entropy.
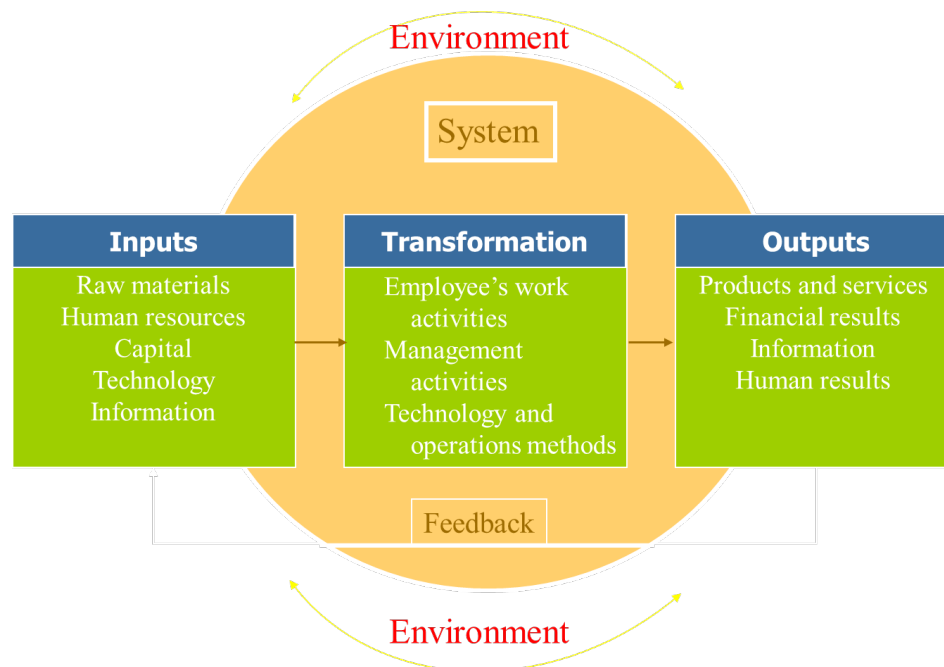
Contributions of System Theory

- This theory takes an integrative total view of organization.
- It recognizes the interrelation and interactions among subsystems for synergistic effects.
- It recognizes environmental influences.
- It is useful for studying complex organization.
- Feedback facilities changes in the system.

Limitation of system theory

- This theory does not provide specific guidance on the functions and duties of manager.
- The systems theory is complex for practical application. In small organization, it is not relevant.
- It does not considered the human relation.
- It does not offer any tools or techniques of intregration.

Contingency theory:

The classical, behavioral, and quantitative approaches are considered universal perspectives because they try to identify the "One best way" to mange organization.

Developed by Tom Burns, G.M. Stalker, P. Lawrence, J. Lorsch. " Particularistic approach to management"

"There is no one best way to organize", the concepts, tools, and techniques which are highly effective in one situation, are not at all effective in another situation.

Thus managerial behavior in a given situation depends on, or is contingent on, a wide variety of elements.

Each organization and situation is unique, thus no single principle or theory can not be applicable in all situations.

Thus it focuses to recognition of the situational nature of management and response to particular characteristics of situation.

- There are four contingency variables that determine management practice:
  - Organization Size
    - The number of people in an organization is a major influence on what managers do.
  - Routineness of Task Technology
    - Organizations apply technology to transform input into output
  - Environmental Uncertainty
    - The degree of uncertainty caused by political, technological change influences thee management process.
    - The style best in a stable environment may be totally inappropriate in a rapidly changing and unpredictable environment.
  - Individual Difference
    - Individuals differ in terms of their desire for growth, autonomy and expectation

Contributions of Contingency Theory

- This theory is widely used in practice of management.
- Manager become innovative and use better approaches to meet complex situations.
- It gives manager the capability to think in analytical and multidimensional ways.
- Managers are given more freedom.
- Managers become more sensitive and alert.

Limitations of Contingency Theory

- It fails to enlist all contingency variables.
- It focuses on situation but which tools should be used in what situation is not specified.
- It ignores human behaviour aspects.
- Every situation is unique. Managers may not be able to analyze each and every situation.

The Environmental Context: Introduction

Environment

- Environment refers to the forces that create conditions and influences on the capacity of an organization to make adjustment in the current system and compete in the market.

- The condition that affect or influence the behavior and development of something.

- 'The set of forces surrounding an organization that have the potential to affect the way it operates and its access to scarce resources'. Gareth

- An environment refers to institutions or forces that are outside the organization and potentially affect the organization's performance.

- Business organization is an open system which, regularly interacts between the business system and its environment.

Characteristic:

1. Environment is complex:

   - The environment is not made of any one simple constituent but consists of a number of factors, events, conditions and influences, arising from different sources.

   - It is difficult to guess the factors that constitute a given environment. Hence, environment is at the same time complex and somewhat easy to understand in parts, but difficult in totality.

2. Environment is dynamic:

   - The environment does not remain constant but keeps on changing, For instance, the environment changes with the

competitor's products and strategies, government policies, customers' preferences, etc.

- Hence, in order to survive and grow, it becomes very important for every organization to understand its impact and adapt itself with such changes.

3. Environment is multi-faceted:

- Same element or influence of environment affects different firms in different ways.

- This is frequently seen when the same development, say liberalization, is welcomed as an opportunity by one company while another company perceives it as a threat.

4. Environment has a far reaching impact:

- The environment has a long term and lasting impact on organizations. The growth and profitability of an organization depend critically on the environment in which it exists.

Importance

1. Identification of Strength: The analysis of the internal environment helps to identify strength of the firm. For instance, if the company has good personal policies in respect of promotion, transfer, training, etc than it can indicates strength of the firm in respect of personal policies. This strength can be identified through the job satisfaction and performance of the employees. After identifying the strengths the firm must try to consolidate its strengths by further improvement in its existing plans & policies.

2. Identification of Weakness: The analysis of the internal environment indicates not only strengths but also the weakness of the firm. A firm may be strong in certain areas; where as it may be weak in some other areas. The firm should identify sue weakness so as to correct them as early as possible.

3. Identification of Opportunities: An analysis of the external environment helps the business firm to identify the opportunities in the market. The business firm should make every possible effort to grab the opportunities as and when they come.

4. Identification of Threats: Business may be subject to threats from competitors and others. Therefore environmental analysis helps to identify threats from the environment identification of threats at an earlier date is always beneficial to the firm as it helps to defuse the same.

5. Exploitation of Business Opportunities: Environment opens new opportunities for the expansion of business activities. Study of environment is necessary in order to discover and exploit such opportunities fully.

6. Keeping Business Enterprise Alert: Environment study is needed as it keeps the business unit alert in its approach and activities. In the absence of environmental changes, the business activities will be dull and lifeless. The problems & prospects of business can be understood properly through the study of business environment. This enables an enterprise to face the problems with confidence and secure the maximum benefits of business opportunities available.

7. Keeping Business Flexible and Dynamic: Study of business environment is needed for keeping business flexible and dynamic as per the changes in the environmental forces. This will enable the development of business organization.

8. Understanding Future Problems and Prospects: The study of business environment enables to understand future problems and prospects of business in advance. This enables business organizations to face the problems boldly and also take the benefit of favorable situation.

9. Making Business Socially Acceptable: Environment study enables businessmen to expand the business and also make it acceptable to different social groups. Business organizations can make positive contribution for maintaining ecological balance by studying social environment.

10.   Ensures Optimum Utilization of Resources: The study of business environment is needed as it ensures optimum use of resources available. For this, the study of economic and technological

environment is useful. Such study enables organization to take full benefit of government policies, concessions provided, and technological developments and so on.

11.   Ensures Survival and Growth: Business environment inform about suitable changes to be affected in business policies. This helps the business organizations to grow & prosper.

12.   Maintaining adaptability to changes: Business environment guides the business organization about socio-economic changes & the organization must accordingly adapt these change. This enables the business organization to survive for a longer period.

Types of environment

Task or micro or operating environment:

Macro environment

Internal environment
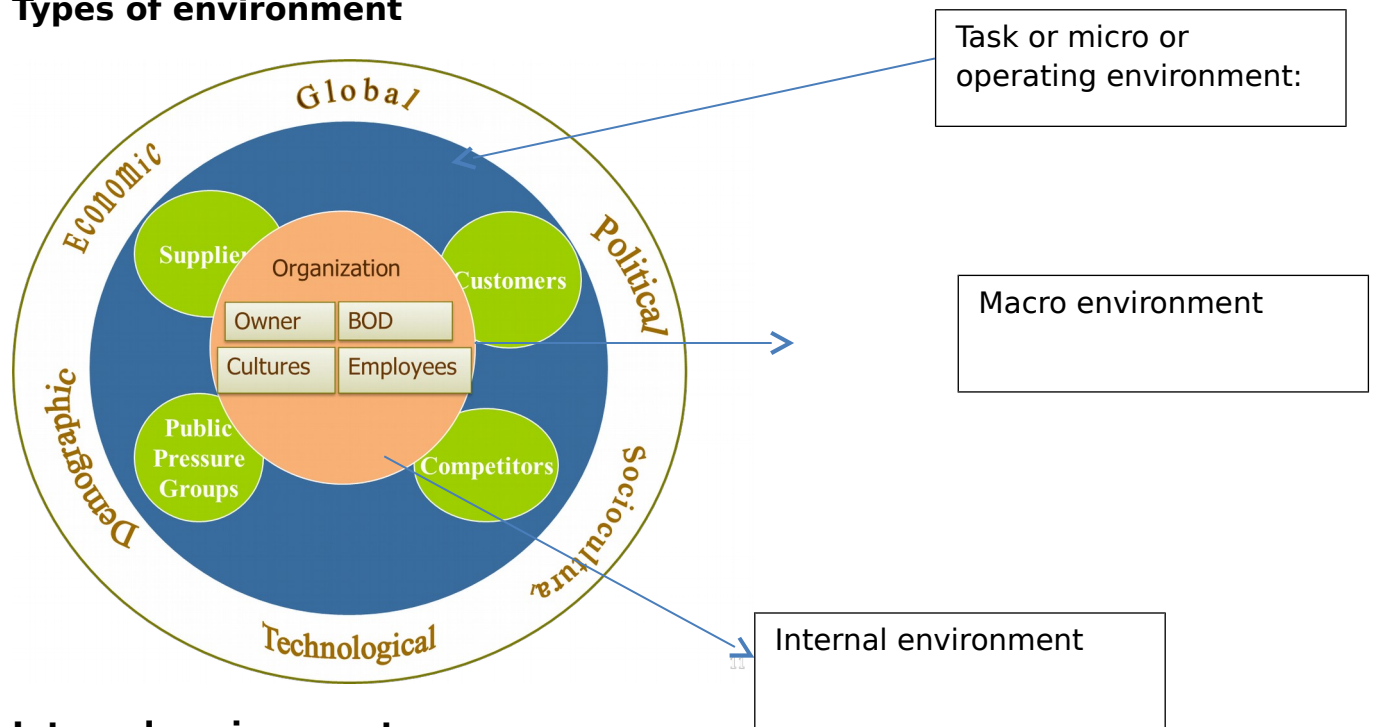
Internal environment:

The internal environment is the environment that has a direct impact on the business.

The internal forces are things that occur within the organization and are by-and-large under the control of the organization. These effects the way the organization operates in either a positive or negative way.

It is the conditions, entities, events, and factors within an organization that influence its activities, choices, and particularly the behavior of the employees.

The internal environment encompasses everything that is "inside" the business.

These are the variables over which the business has the highest degree of control, and therefore these are the things about which the most direct decisions can be made.

The internal business environmental factors are best viewed as the extent to which resources, and the ability to deploy them, will generate and sustain competitive advantage.

Here there are some internal factors which are: Owners/ shareholder, Board of directors, Employees/ unions, corporate culture, Structure, Rules and regulations.

Employees/ Human Resources: The human resource is the important factor for any organization as it contributes to the strength and weakness. The human resource in an organization must have characteristics like skills, quality, high morale, commitment towards the work, attitude, etc. There are many different types of employees who work with a discrete set of skills, and they will also have expectations about what the organization should do for them, and the manner in which the organization should "behave". This can create significant pressure, and will ultimately help to shape the direction that the organization must take. The involvement and initiative of the people in an organization at different levels may vary from organization to organization. The organizational culture and overall environment have bearing on them.

Shareholders: The shareholders are the people who own a publicly listed, large scale organization. These people will hope that the organization can assist in maximizing their wealth. This could be through dividends (the distribution of the company's profits), or by capital gain (an increase in the value of the shares due to the strong performance of the company). A company can only set the price of its shares during the initial public offering, after that it is up to free market forces to determine the price. On the other hand, the managers of the business will have very strong input into the dividend that is paid to shareholders. The final figure must be approved by the people who own the shares (after all, they do own the business!), but

standard practice is for the meeting of shareholders to ratify the amount that is suggested by the board of directors. The shareholders have right to choose some members for BOD too.

The Board of Directors: the board is the management level who works in the best interest of the shareholders. So, business is influence greatly by their decision. The BOD is a part of the internal environment of the business. This is significant because it suggests that appropriate governance procedures must be put in place by BOD to ensure that the people who manage the business remain accountable to the other stakeholders that are involved.

The Organizational Structure: It is the hierarchical arrangement of various positions which have check and balance system. It establishes the relationship among various position through delegation of responsibility, authority and accountability. The structure of the organization also influences the business decisions. The organizational structure like the composition of board of directors influences the decisions of business as they are internal factors. The structure and style of the organization may delay a decision making or some other helps in making quick decisions. The choice of structure will affect the performance of the business, and as such it is a significant internal variable that can be controlled.

The Corporate Culture: The culture of an organization is typically described as the values and beliefs that are shared by the internal stakeholders. These things will help to shape the decisions that are made. For example, if a business places a high value on its environmental impact, then decisions will be made to ensure that this is minimized. This will filter down through all levels of the organization. The culture of a large scale organization can be changed, although this can take an extremely long time. Despite this it should still be considered a variable in the internal environment; if the business will benefit through a change to the corporate culture, then the change should be pursued.

Internal power relationships: The relationship among the three levels of the organization also influences on the business. The mutual co-ordination among those three is an important need for a business. The relationship among the people working in the three levels of the organization should be cordial.

Company image and brand equity: The image of the company in the outside market has the impact on the internal environment of the company. It helps in raising the finance, making joint ventures , other alliances, expansions and

acquisitions , entering sale and purchase contracts , launching new products, etc. Brand equity also helps the company in same way

Labor union: A trade union is an organization of workers who have banded together to achieve common goals such as protecting the integrity of its trade, achieving higher pay, increasing the number of employees an employer hires, and better working conditions. The trade union, through its leadership, bargains with the employer on behalf of union members and negotiates labor contracts (collective bargaining) with employers. The most common purpose of these associations or unions is "maintaining or improving the conditions of their employment".

External environment:

- External driving forces are those things, situations, events that occur outside of the organization and affect it in either a positive or negative way.

- This occurs outside the organization and by-and-large out or beyond the control of the organization. External environment is analyzed under Task Environment and General Environment.

Task or micro or operating environment:

- The micro environment is also known as the task environment and operating environment because the micro environmental forces have a direct bearing on the operations of the firm.

- The organization gets affected by these environments and can also affect this environment.

- They are: Customers, Suppliers, Distributors, Unions, Creditors, Competitors, Regulatory Agency, Strategic allies.

    - Competitors: A competitor is another business that operates in the same market. Every move of the competitors affects the business. Business has to adjust itself according to the strategies of the Competitors.

    - Suppliers: An important force in the micro environment of a company is the suppliers, i.e., those who supply the inputs like raw materials and components to the company. The importance

of reliable source/sources of supply to the smooth functioning of the business is obvious. They must be reliable and business must have multiple suppliers i.e. they should not depend upon only one supplier.

- Customers: The major task of a business is to create and sustain customers. A business exists only because of its customers. The choice of customer segments should be made by considering a number of factors including the relative profitability, dependability, and stability of demand, growth prospects and the extent of competition. Types of Customers are Wholesalers, Retailers, Industries, Government, and Other Institutions Foreigners

- Pressure Groups/ unions: Employees are part of the internal environment, but it is very likely that a percentage of the employees will belong to a union. A union is a formal group that acts to represent the views of employees. The union will often be used when there is a disagreement with the managers, or during the process of negotiating the wages and conditions of the firm. This type of pressure group retains a fairly direct association with the large scale organization; there are other pressure groups that may operate with a less direct influence.

- Creditors: Large scale organizations require large amounts of money. This means using the financial services that are offered by banks. When a bank provides access to a loan, it is normal for certain conditions to be attached. In this way the bank (which is external to the business) can affect the operations of the large scale organization. At a simple level, a loan must be repaid, which will require the commitment of future cash flow to make this possible.

- Regulatory Bodies: While the broader impact of government policy decisions should be considered as part of the macro environment, there are often specific government bodies that will have a more direct impact on the actions of a large scale business. The regulatory bodies make regulation in consultation with the industry professionals.
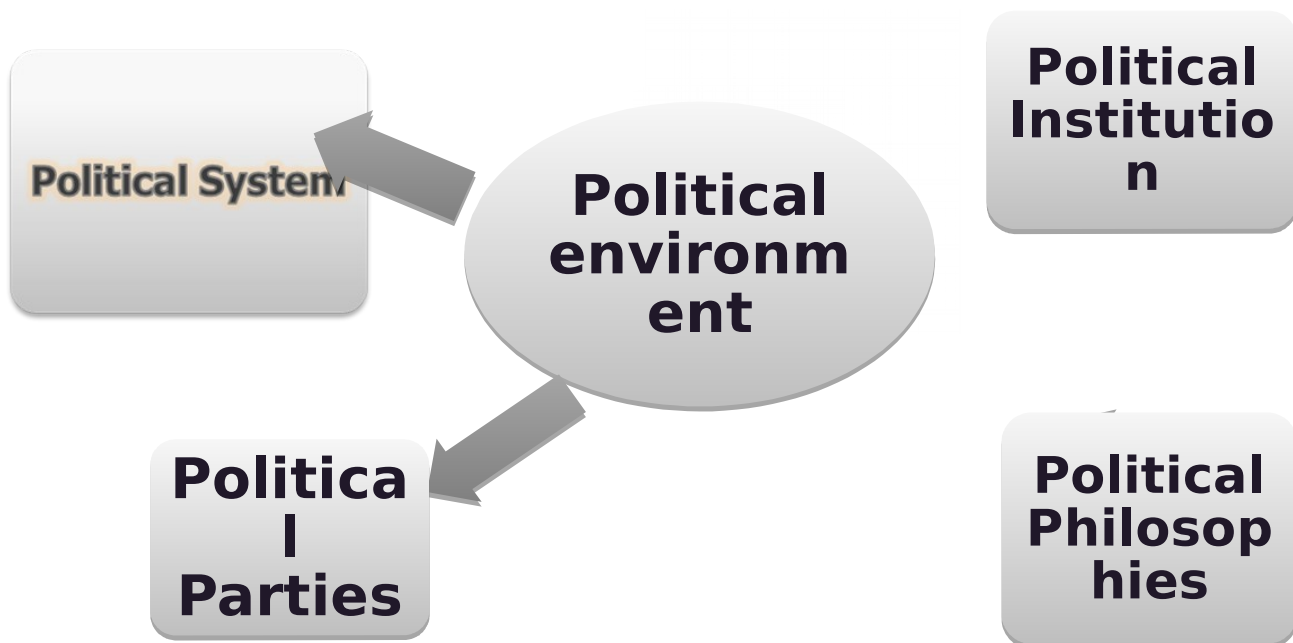
Macro Environment

- Macro environment is also known as General environment and remote environment.

- Macro factors are generally more uncontrollable than micro environment factors.

- When the macro factors become uncontrollable, the success of company depends upon its adaptability to the environment.

- The successful businessman visualizes the external factors affecting the business; anticipating   prospective market situations and makes suitable to get the maximum with minimize cost. Macro environment factors are discussed below:

  - Economic Environment: Economic factors which have their affect on the working of the business are known as economic environment. It includes system, policies and nature of an economy, trade cycles, economic resources, level of income, distribution of income and wealth etc. Government frames economic policies. Economic Policies affects the different business units in different ways. It may or may not have favorable effect on a business unit. The Government may grant subsidies to one business or decrease the rates of excise or custom duty or the government may increase the rates of custom duty and excise duty, tax rates for another business. All the business enterprises frame their policies keeping in view the prevailing economic policies. Important economic policies of a country are as follows:-Monetary Policy, Fiscal Policy, Foreign Trade Policy, Foreign Investment Policy, Industrial Policy, etc

  - Social Environment: The social dimension or environment of a nation determines the value system of the society which, in turn affects the functioning of the business. Sociological factors such as material culture, language, aesthetics, education, religion, attitudes and values and social organization, etc. have far-reaching impact on the business. These factors determine the work culture and mobility of labour, work groups etc.

- Political Environment: A political system is composed of the members of a social organization (group) who are in power. The political environment of a country is influenced by the political organizations such as philosophy of political parties, ideology of government or party in power, nature and extent of bureaucracy influence of primary groups etc. The political environment of the country influences the business to a great extent. Political Environment: constitution, political parties, government, government – business relationship, political risk factor, International political events.

- Legal Environment: Legal system refers to the rules, or regulations that regulate the behavior Legal systems vary from country to country. The legal environment is derived partly from the political climate in a country and has three distinct dimensions to it:

    - The domestic laws of your home country

    - The domestic laws of each of your foreign markets

    - International law in general

- Legal environment includes flexibility and adaptability of law and other legal rules governing the business. It may include the exact rulings and decision of the courts. These affect the business and its managers to a great extent. Laws like; competition law, employment law, health and safety law, product safety etc are important once affecting the business.

- Technical Environment: A systematic application of scientific knowledge to practical task is known as technology. Technological environment include the methods, techniques and approaches adopted for production of goods and services and its distribution. Technology can reduce costs, improve quality and lead to innovation. These developments can benefit consumers as well as the organizations providing the products. New technologies create new products and new processes Technological environment influences the business in terms of investment in technology, consistent application of technology and the effects of technology on markets
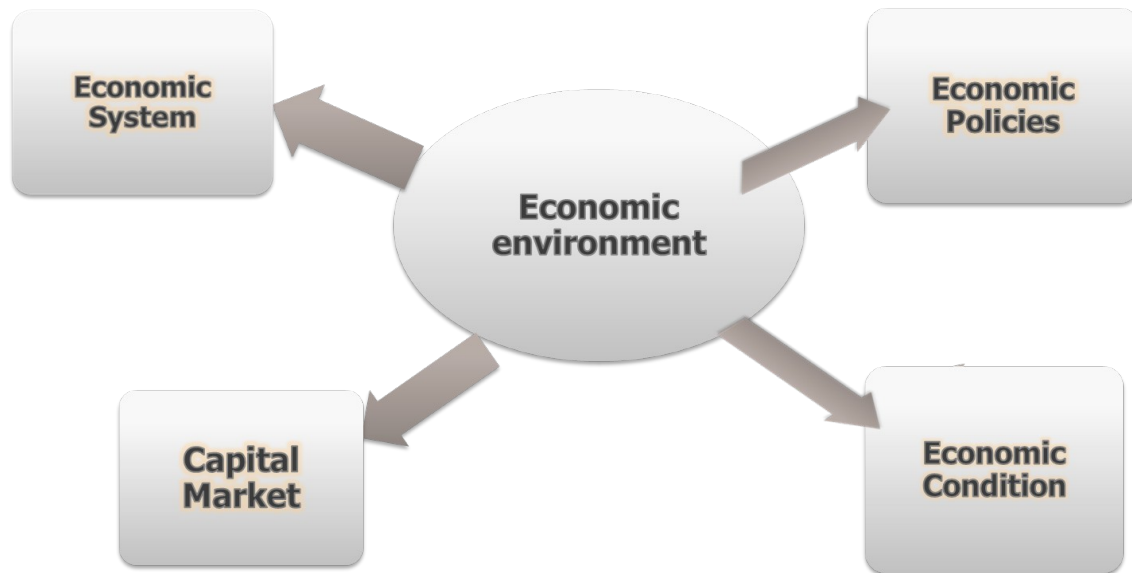
- Environmental factors: The natural environment includes geographical and ecological factors that influence the business operations. These factors include the availability of natural resources, weather and climatic condition, location aspect, topographical factors, etc. Changes in environment can impact on many industries including farming, tourism and insurance. With major climate changes occurring due to global warming and with greater environmental awareness this external factor is becoming a significant issue for firms to consider. The growing desire to protect the environment is having an impact on many industries such as the travel and transportation industries (for example, more taxes being placed on air travel and the success of hybrid cars) and the general move towards more environment friendly products and processes is affecting demand patterns and creating business opportunities.
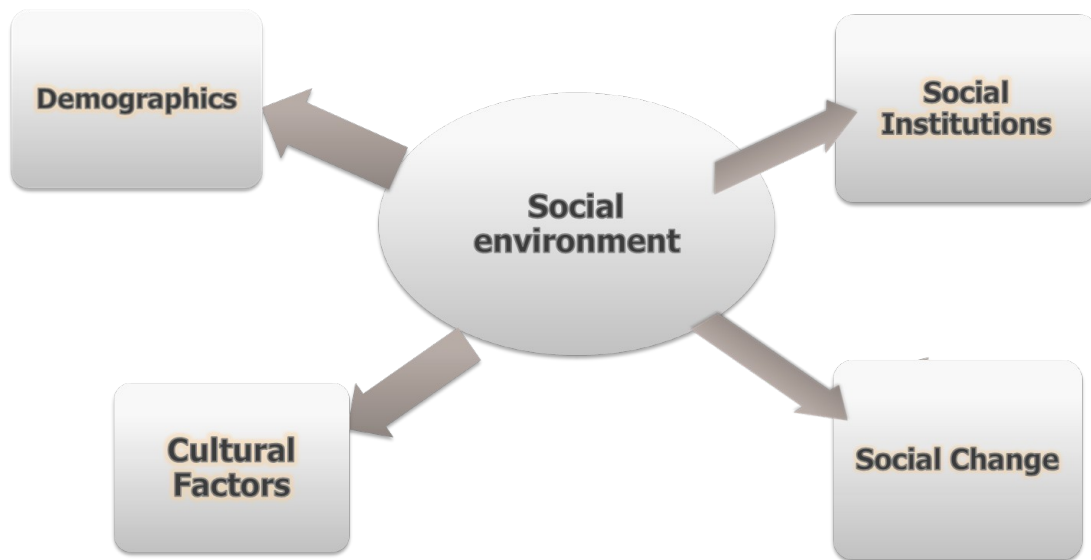
Components of Political Environment

Political System

Political Institution

Political environment

Politica l Parties

Political Philosophies

See slide for detail

Component of Economic Environment

Economic
System

Economic
Policies

Economic
environment

Capital
Market

Economic
Condition

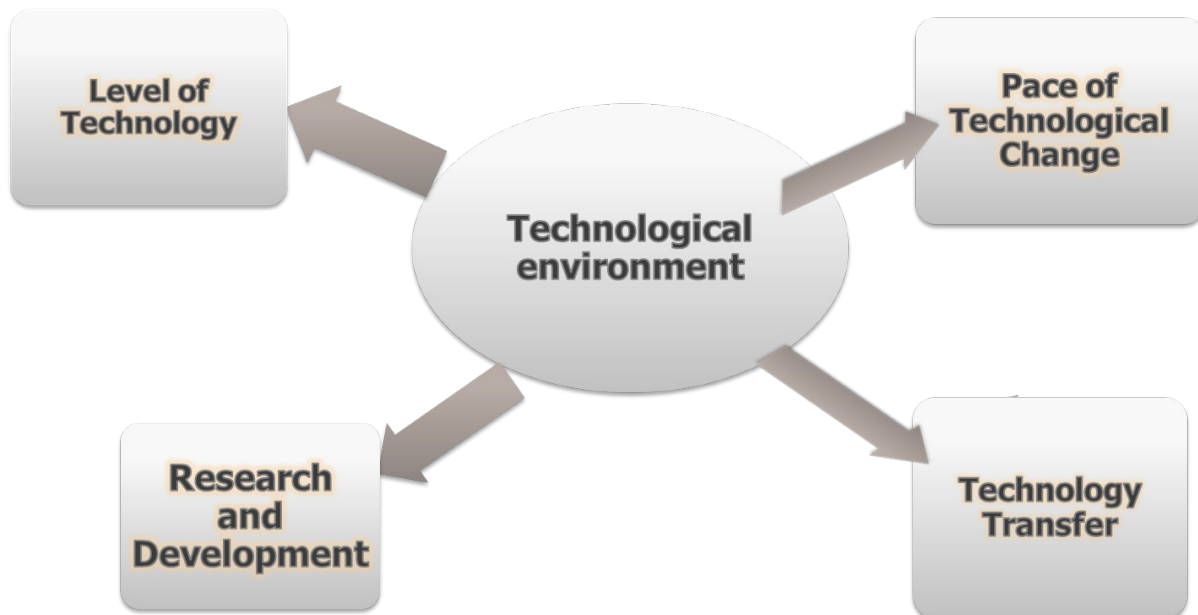## Component of Social-cultural Environment

Components of Technological Environment

Environmental context: Ethics and Social Responsibility

Ethics:

- Ethics is an individual personal belief about a behavior, action or decision is right or wrong.

- Ethical behavior differs form person to person.

- Ethical behavior conforms to generally accepted social norms.

- Unethical behavior does not conform to generally accepted social norms.

- Ethics is also different from legally responsible because a behavior might not be defined as illegal, yet be unethical.

Managerial ethics:

Standard of behavior that guide individual mangers in evaluating and knowing "right from wrong" in a specific situation. There are two broad areas associated with the concept of managerial ethics:

- Managerial mischief: includes "illegal, unethical, or questionable practices of individual managers or organizations, as well as the causes of such behaviors and remedies to eradicate them, and

- Moral mazes: the "moral mazes of management" include the numerous ethical problems that managers must deal with on a daily basis, such as potential conflicts of interest, wrongful use of resources, mismanagement of contracts and agreements, and misuse of power and influence.

Three areas of concern for managers under managerial ethics are:

- How an organization Treats its Employees

- How Employees treat the organization

- How employees and the organization treat other Economic Agents

Social Responsibility:

- Social responsibility of business look towards their stakeholders, towards the natural environment, and toward general social welfare

- Social responsibility of business refers to all such duties and obligations of business directed towards the welfare of society.

- These duties can be a part of the routine functions of carrying on business activity or they may be an additional function of carrying out welfare activity.

- Social responsibility implies that a businessman should not do anything harmful to the society in course of his business activities.

- Thus, the concept of social responsibility discourages businessmen from adopting unfair means like black-marketing, hoarding, adulteration, tax evasion and cheating customers etc. to earn profit.

- Instead, it encourages them to earn profit through judicious management of the business, by providing better working and living conditions to its employees, providing better products, after sales-service, etc. to its customers and simultaneously to control pollution and conserve natural resources.

Approaches to social Responsibility:

- Obstructionist: Are business that believes no responsibility towards society and may violate prevailing laws, they behave unethically and illegally. The firms do not do any thing to address social or environmental problems.

- Defensive: stay and abide with in law and commitment to ethical behavior, but makes no attempt to exercise social responsibility beyond what the law dictates. Looking forward for benefit outweighing the cost.

- Accommodative: organizational members behave legally and ethically (by balancing their interest). Makes attempt to support social responsibility and decision that seems reasonable for the society. Voluntary participate in social programs, if the program are worthy of its support.

- Proactive: Being both legal and responsible, Business should abide all legal matters and also take proactive action and support social causes .they believe in protecting and improving environment in which it survives viewing itself as a citizen of the very society.

Areas of social Responsibility:

Social responsibility of business look towards their stakeholders (Creditors, customers, local community, suppliers, employees, interest group, trade association, owners/ investors, courts, colleges and universities, foreign government, local government), towards the natural environment, and toward general social welfare

Organizational Stakeholders:

- Consumers: reasonable price, quality product, truthful advertising, fair treatment, healthy and safety of customer, fair prices, honor warranties, meet delivery commitments,

- Shareholders/ investors: dividends, disclosure of information, respect, follow proper accounting procedure, interest,

- Employees: fair wage, right to union, good working condition, different schemes and benefits packages, respect their dignity and make available of basic human needs, empowering employees, creating teams, carrier development, training opportunities

- Government and society: taxes, following laws, respect human rights, protect environment, help in reducing social and economic problem like unemployment, poverty, increase export,

- The natural environment: develop alternative methods of handling sewage, hazardous wastes, and ordinary garbage; contribute towards global warming, acid rain and depletion of ozone layer, recycling, reusing, Eco friendly environment, alternative transportation to and for work, energy saving environment.

- General social welfare: contribution: to charities, philanthropic organization, and non profit foundations and association, supporting: public radios, television, taking initiative in improving public health and education, and reducing: political, economic and social inequalities.

Emerging issues and challenges for management

Challenge for management comes from the environment factors, which are dynamic in nature. They are:

1) Changing Organizational Perspective

Traditional Organization	New Organization
• Stable (closed system)	Dynamic(Open system)
• Inflexible(rigid Structure and process)	Flexible
• Individual Oriented (Employee +Manager)	Team Oriented
• Permanent jobs	Temporary jobs
• Command Oriented	Involvement Oriented
• Rule Oriented	Customer Oriented
• Homogeneous workforce	Diverse workforce
• Hierarchical relationships	Lateral and network relationships
• Working in Office	Working any time any where
• Job focused	Skill focused
• Autocratic decision making	Participative decision making.

2) Corporate Governance: Importance grew with the deregulation of markets and the liberalization in international trade and investment. In focus to implement values of fairness, accountability, responsibility, and transparency into organization, adopting best practices and being accountable to all stake holders. (Ethics and social Responsibility

3) Work force diversity: Work force diversity requires more sensitive to the difference that each individual or group bring to the work setting. Employer

must deal with different values, needs, interest, and expectations of employees and must avoid any practices or action that can be interpreted as being sexist, racist, of offensive to any particular group and of course must not legally discriminate against any employee.

4) Empowerment: Employee empowerment is a strategy and philosophy that enables employees to make decisions about their jobs. Employee empowerment helps employees own their work and take responsibility for their results.

5) Technology and information:Technological environment include the methods, techniques and approaches adopted for production of goods and services and its distribution. Technology can reduce costs, improve quality and lead to innovation. (large, fast information and manager has to process it in much lesser time.)

6) Relationship Management: It focus on working together to achieve common goal. In order to achieve this, every individual need to address and respect the unique competencies of other or all stakeholders.

7) Workplace spirituality: Spirituality in the Workplace is about individuals and organizations seeing work as a spiritual path, as an opportunity to grow and to contribute to society in a meaningful way. It is about care, compassion and support of others; about integrity and people being true to themselves and others. It means individuals and organizations attempting to live their values more fully in the work they do.

8) Knowledge management: KM is the process through which organizations generate value from their intellectual and knowledge-based assets. Most often, generating value from such assets involves codifying what employees, partners and customers know, and sharing that information among employees, departments and even with other companies in an effort to devise best practices.

9) Globalization: Operating business in a borderless and global economy and how to compete for resource and markets, understand cultures, etc.

10) Change Management (giving priority to Innovation and Change):"Change is an alteration occurring the work environment that affect the ways in which employees must act. (Newstrom and Davis). OC is modification in relationship and behavior patterns of individuals and groups in organization, and organizational level for adaptation to dynamic environment.

11) Quality Assurance and productivity: Increasing the quality of product and productivity which are the basis for competition act as the major challenge the manger faces today.

12) Ethical and social responsibility: Ethics is an individual personal belief about a behavior, action or decision is right or wrong. Social responsibility of business refers to all such duties and obligations of business directed towards the welfare of society.

Planning and Decision Making

Planning:

- Planning is an intellectual process, of formulating goals, identifying activities to be undertaken to attain these goals, choosing the means to achieve the goals, and finally attain the goals.

- Planning is deciding in advance what to do, when to do, how to do and who is to do it. Planning bridges the gap between where we are to, where we want to go. It makes possible things to occur which would not otherwise occur.

- It is first managerial function that organization must address.

- It is proactive action to figure out future course of action to be followed.

- It is needed to bridge the gap existing between the present state and he desired future state.

- "planning is the process of determining objectives and assessing they way these objectives can best be achieved." This process determines where the organization should be going, why, and how.

- Planning may be broadly defined as a concept of executive action that embodies the skill of anticipating, influencing, and controlling the nature and direction of change. – McFarland

- It incorporates four elements:

    - Evaluating environmental forces and organizational resources

    - Establishing a set of organizational goals

    - Developing strategies and plan to achieve the stated goals.

    - Formulate a decision- making process.

Importance of planning:

- Provides Direction:

- Integrates management functions:

- Reduces uncertainties:

- Resource allocation:

- Basis for control/ standard for measurement:

- Basis for managing changes/ Adaptive responses:

- Minimizes impulsive and arbitrary decisions:

Characteristics of planning:

- Focus on Goal: planning basic objective is to attain goal. So, it defines all course of action to achieve the organizational goals.

- Primary Function: As it coordinates all other managerial function. It provide base of framework for other function of management.

- Pervasive Activity: All level of mangers carries planning function. However planning depends upon the level of management or on the nature and scope of work.

- Future oriented: it defines future course of action to meet uncertainty form environment. It provides blueprint for future operation.

- Continuous Activity: Planning is continuous never ending process because it is directly dependent upon environment, which is dynamic in nature.

- Intellectual Work: planning require more intelligence ability to analyze the information and derive a best course of action.

- Flexible: Plans should be adjustable to meet the contingencies from the environment. Plans must have capacity to flexible adjustment to meet the goals.

- Efficiency and Economy: planning helps to efficiently use the scarce resource, which bring economic beneficial situation for the organization.

- Actionable: It helps to determine such activities which can be immediately put into action when time form implementation comes and can be adjusted according to the changing environment.

The planning system:

- Since planning is a subsystem of the overall management system of the organization. It too includes the system concept of input, processing, and output. It too takes input for the environment, process the inputs and gives outputs to the organization to achieve its goals.

- Inputs: information, human, capital, financial

- Processing: information collection and analysis of internal and external environment, forecasting,

- Outputs: goals, strategies, policies, procedures, budget sheet.

Hierarchy of plans:

- Vision: They are the non specific but emotional motivational statement for entire organization.

- Mission: It is the purpose or the philosophy that will drive it over a long period of time.

- Goals: Are developed to achieve mission. It is the specific target where management wants to reach.

- Objectives: It is a specific statement to achieve the goals on the next few months or a year at the most. It must be smart, measurable, attainable, rewarding, and timed.

- Strategy: it is action the organization intends to use to achieve the objectives. It defines the activities and the allocation of resources for those activities.

- Programmes, budgets, and priorities: programmes are ranked according to their importance. And budgets give the fair idea about the amount of money to be invested in implementing the plan.

Methods of planning:

- Top –down planning: When all the goals and plans are formulated by the higher level management with very little involvement of the lower level staff.

- Bottom-up planning: Also called decentralize planning, active participation of the lower level mangers in defining the goals and plans.

- Composite planning: It is the combine approach both top- down and bottom-up planning methods.

- Team planning: a cross functional team of mangers having experience in various functional areas is selected by management to prepare a plan, the developed plan is submitted to top management for approval.

- Management by objectives (MBO): It is concerned with goal setting and planning for individual managers and their units or work groups. It communicates the mission, goals, and objectives to the organization to the lower level. The lower level work out their plans and targets in combine effort of its subordinates and finally sent to higher levels for consideration. MBO thus, focus employee participation in planning and control their work. It ultimately leads to increase in self-motivation and self-control to their work.

- The MBO process:

    - Starting MBO Program: superior and subordinate meet together.

    - Establishment of organizational goals and plans: realistic, challenging, comprehensive, clear.

    - Standard for measuring and evaluating the goals and objective are set.

    - Communicating organizational goals and plans while implementing them: meeting, coaching, counseling and supportive roe is required.

    - Periodic review:

    - Evaluation:

Levels and types of plans:

On basis of level:

- Strategic plans: It focuses on reaching strategic goals, so it is also called grand plan. It is developed at the corporate level and view total organization. The plan involves developing long-term strategies and goals. Their basic motive is to match internal strength and weakness with the change in the external environment.

- Tactical plans: It translates broad strategic goals and plans to specific goals and plans. These plan focus at the functional area, so middle level manger are responsible for developing tactical plan. It aim to achieve the important actions that a unit must take to fulfill is parts of the broad strategic plan.

- Operational plan: It focuses on specific process and procedures at the lower level of the organization, usually having short term motive. It is developed to translate the tactical objective to specific operational activities. They are routine task to carry out day to day activities.

On basis of time frame:

- Long Range plan: a plan with a planning horizon of five years or more.

- Intermediate plan: a plan with a planning horizon for one to five years.

- Short Range plan: a plan with a planning horizon for not more than one year.

- Rolling plan: a plan which runs for a period of time and is updated regularly for the same period

On the basis of use:

- Standing plans: STANDING PLANS are used over and over again because they focus on organizational situations that occur repeatedly. Standing plans are often policies, procedures and programs developed to ensure the internal operations of a given business are operating smoothly. Standing plans are developed once and then modified to suit the business' needs as required.

- STANDING PLANS focus on:

  - Policies, Procedures and Rules:

  - A POLICY is a standing plan that furnishes broad guidelines for taking action consistent with reaching organizational objectives.

  - A PROCEDURE is a standing plan that outlines a series of related actions that must be taken to accomplish a particular task. Procedures outline more specific actions than policies do. Organizations usually have many different sets of procedures covering the various tasks to be accomplished. Managers must be careful to apply the appropriate organizational procedures for the situations they face and apply them properly.

  - A RULE is a standing plan that designates specific required action. A rule indicates what an organization member should or should not do and allows no room for interpretation

- Single use plan: SINGLE USER PLANS are used only once, or at most, couple of times, because they focus on unique or rare situations within the organization. A single-use plan in a business environment focuses

to one-time project or event that has one specific goal or objective. The length of a single-use plan differs greatly depending on the project in question, as a single event plan may only last one day while a single project may last weeks or months. Single-use plans consist of budgets, programs and a description of the employees who will be contributing to the single-use plan in question.

- SINGLE USE PLANS focus on:

    - Programs & Budgets:

    - A PROGRAM is a single use plan to carry out a special project within an organization. The Project itself is not intended to remain in existence over the entire life of the organization. Rather, it exists to achieve some purpose, which if accomplished, will contribute to the organization's long term success.

    - A BUDGET is a single user financial plan that covers a specified length of time. It details how funds will be spent on labour, raw materials, capital goods, information systems, marketing and so on, as well as how the funds will be obtained.

Steps in planning process

1. Establish goals: What is to be done? What is to be accomplished?

2. Identify planning premises: They are assumption on which the planning is based. Information form environmental analysis is required to determine the anticipated future environment.

3. Deciding the planning period: In how much time frame the plan should be ready and implemented?

4. Identify alternatives: Every possible course of action is to be carefully studied and analyzed. Only most likely possibilities should be taken into consideration.

5. Test practicability of alternatives: In this phase the selected alternatives are tested on the basis of its strength and weakness, and which best addressed the coming environmental trends to achieve the organizational objective.

6. Select and announce the final plan: It is the final step to select the best alternative form the test and make is ready for putting into action.

7. Developing derivative plans: lower lever mangers must draw up the appropriate plans for their sub-units.

8. Put plans into action, implement plan: After selecting the alternative put plan into action.

9. Evaluate the action and whole planning process: If any deviation occurs while implementing, planning documents helps in rectifying the errors. Even whole process might be needed to review sometimes to adjust with large change in the environment.

Managerial decision making:

- According to Peter Drucker, "Whatever a manager does, he does through decision-making".

- Decision making is cornerstone of planning which is an act of making choices.

- Decision making can be regarded as the mental processes (cognitive process) resulting in the selection of a course of action among several alternative scenarios.

- Every decision making process produces a final choice. The output can be an action or an opinion of choice.

- It helps managers respond to opportunities and threats.

- The main purpose is to choose such strategy which directs the resource conversion process in such a way, as to optimize the attainment of the objective.

Nature of decision making:

- Decision making process:

- Identifying and diagnosing the problem:

- Generating alternative solutions:

- Evaluating alternatives:

- Making the choice:

- Implementing the decision:

- Evaluating the decisions:

Types of decision:

- Type by frequency: On the basis of frequency of occurrence, they are:
  - Programmed: Is Decision making on the issues related to the day to day running of organization. It is structured and repetitive type, and more common to lower level.
  - Non-programmed: Is decision making on the issues which are non-routine and new to the organization. It is more common to higher level.
- Type by nature: on the basis of different aspect of focus.
  - Operating: decision for day to day issues
  - Strategic: decision on new issues
  - Administrative: decision on issues arising for the balance between operating and strategic decisions.

Condition of decision making:

- The decision making condition can be viewed in three categories:

    - Condition of certainty: when manager has all the information of the environment, and can precisely predict the consequences of actions, it is called condition of certainty.

    - Condition of uncertainty: When manager don't have enough information about the environment, and cannot predict the consequences of actions, it is called condition of uncertainty.

    - Condition of risk: When the manager has difficult in predicting the outcomes of the alternatives with certainty, it is called condition of risk.

Group decision making:

- Advantage:

    - Builds team feeling.

    - More information, ideas, and concrete solutions.

    - Better communication, and share responsibility.

    - Builds interpersonal and leadership skill.

- Disadvantage:

    - Making decision takes time.

    - Group think occurs.

    - Create conflict.

- Techniques of group decision making:

    - Brainstorming: It's a method of idea generation to solve problem which are new to the organization.

    - Nominal group technique: it consist of two stages, firstly the individual work separately, and secondly, they work as an interacting group to evaluate and choose alternatives.

Organization and HRM

Robbins defines Organization as ' a consciously coordinated social unit, composed of two or more people, that functions as a relatively continuous basis to achieve common goals of set of goals.
Agrawal defines organization as ' a goal oriented open system composed of people, structure and technology.

From the above definitions, an organization has the following characteristics-

1. It is an open system.
2. It is a goal oriented.
3. It is a collection of people.
4. Organization consists of people.
5. Organization consists of technology, and
6. It has continuity.
7. Effective Sharing of Goals
8. Teamwork

Organization is an open system : An open system means open to environment. Organization exists and functions in environment. Environment compels the organization to acquire right type of people, technology and structure so that the goals to serve the environment can be attained. The organization is thus greatly influence the environment.

Usually the demands or wants of the people determines the strategies and goals of an organization. What are the needs in the market and how an organization can bring new and needy products to the market create an interaction between the organization and the environment. Without interaction, organization cannot fulfill required products or services to the users groups. This way, an organization is an open system, without which it cannot survive.

Organization is goal oriented : Without goal or set of goals, organization is useless. There is nothing for the organization to do. Therefore, the major characteristic of any organization is its goal. Type of people or technology is adopted so that the set goal can be achieved. The goal gives line of action; acquire required type of people and uses type of technology so that the goal is achieved in an anticipated time point. Without

goal, organization cannot be formed.

Organization is a collection of people : People are the main performers in anyorganization. In other world, all the elements of any organization are the same except the people. Even with the same age, qualification, experience and facilities, the output of the people may vary, simply because the needs and wants of all people are not the same. What makes them work by heart and head is the one that differentiate organizations from one to others.

Organization consists of technology : Technology is the means of doing works. There are various kinds of doing works. As an organization consists of more people, its performance procedure should be of a fixed type so that each individual in the organization can exercise them well. This is how technology initiates. Technology eases the work and shortens the time. Technology originates a certain policy necessary to keep organizational beliefs in doings of the various people at different structural level. This saves the integrity of the people in achieving goals.

Organization has continuity : As the organization involves people, and the people generate different needs, they can leave the organization or some may die too. This does not affect the organization to stop or decrease in size. Hence, it is said that every organization has its own continuity. A good manager can leave but other better man can take over the charge of the organization.

Effective Sharing of Goals
A healthy organization shares its business goals with employees at every level of the organization. Management shares goals with employees and gets them on board with the mission and vision of the organization. Employees and managers understand what is required to reach these shared goals and make every effort to achieve them.

Teamwork
Another characteristic is teamwork. Healthy companies know how to develop teams that collaborate to achieve common goals. Employees and managers readily offer their assistance to each other to meet corporate objectives.

Organizing:

It focuses how best to group organization activities and resources. Here 'best' depends upon manager ability to:

- Choose a variety of structural possibilities.

- Proper allocation of resources in the selected structural possibilities.

It is thus, the process of combining together all the organizational resources and establishing productive relation among them to achieve predetermined objectives by defining definite jobs and structure. It involves following series of activities (process), basic elements.

1. Identification of the specific activities or task to perform.

2. Grouping and coordinating of activities or task into jobs.

3. Allocation of the resources to the jobs.

4. Defining hierarchy of position.

5. Establishing authority and responsibility relations between jobs and positions.

6. Assigning of the jobs to formal groups.

7. Providing framework for evaluation and control.

Principles of organizing:

1. Clarity and unity of objectives: It clearly defines the objectives of each job and brings unity among them by focusing to achieve the common objectives of the organization.

2. Division of Work and Specialization: Works are divided into specific jobs which are handled by a particular person assigned for the job, resulting to specialization.

3. Unity of command: Organizing function should make assure that an employee should receive order and instruction only from one superior at a time, to reduce conflict and misunderstanding.

4. Scalar chain: States that there must be clear line of authority flowing from top to bottom. The responsibility and authority of every employee should be clearly defined in writing.

5. Span of control: It states number of employees directly reporting to the manger. The choice is to build tall organization having narrow span of control with large reporting level or flat organization having wide span of control with few reporting level.

6. Departmentation: the logical grouping of work is called departmentation. It can be done on the basis of product, function, territory or customer.

7. Decentralization: it is the process of handling the decision making power to the lower levels in the organization.

8. Authority and responsibility: It must be divided according to level and position in organization structure. There must be balance between them.

9. Simplicity: The organization structure must be simple, so that all the members can understand the relationship between the levels and system.

10.   Flexibility: The structure must be flexible to withstand the change brought by the environmental factors both internal and external.

11.   Separation of line and staff function: There should be clear demarcation between the line and the staff functions.

12.   Exception: It states that top level should focus on exceptional and creative issues than lover level and to ensure that what type of critical decision are to be taken by top level managers.

Importance of organizing:

1. Efficient and effective management:

2. Facilities specialization:

3. Avoids overlapping and duplication:

4. Optimum use of human resources:

5. Defines authority responsibility relationship:

6. Basis of coordination:

7. Establishes channels of communication:

8. Leads to growth and diversification

9. Productivity and job satisfaction:

Departmentalization:

- It is the process of grouping jobs according to some logical arrangement.

- It is the process of logical grouping of similar nature of functions into manageable units for the purpose of overall coordination of resources.

- It facilitates to maintain coordination, communication and control among all the mechanisms of the enterprise.

- It also helps in expansion by supervising and maintaining control over all functional units.

- Its importance or advantages are as follows:

- Creates specialization: It leads to job specialization. When works are divided into departments the employees' expertise and efficiency in a particular job increases.

- Helps to establish proper control: All the departments are made according to the plan. The entire departments have certain target to achieve which serves as the standard to reduce deviations.

- Division of responsibility: Department divides works into different units or jobs and entrusts responsibility accordingly. Manager is accountable to the work of the employees.

- Feeling of autonomy: The manager is given sufficient freedom to take decisions regarding the department activities.

- Helps in expansion: It provides organization with the basis for expansion of business into different areas where organization could do well through departmentation.

Types of departmentation:

- Departmentalization by functions: Formation of departments on the basis of function to be performed like production, finance, marketing, personnel etc.

- Departmentalization by Product or service: formation of department on the basis of single product or product line, e.g. product X, product Y, product Z etc.

- Departmentalization by customers: formation of departments on the basis of types of customers. e.g., industrial buyer and consumer product buyer.

- Departmentalization by territory: formation of department on the basis of territory or regional managers. E.g., eastern region, western region, central region etc.

- Departmentalization by process: formation of department s on the basis of groups of process e.g., spinning, weaving, dyeing, etc.

- Departmentalization by time: formation of departments on the basis of time shift e.g., day, morning and night.

Nature and type of organizational design:

Types of Organization Structure

- Line Structure

- Line-and-Staff Structure

- Functional Structure

- Committee Structure

- Matrix Structure

Line Structure

The line form of organization is simple. It is the oldest form of organization structure. It is also known as the scalar or military type of structure. In this structure, manager is given complete charge of the work assigned to him or her. They have to report only their superior. Manager issues instructions and orders only to those subordinates who directly report to him or her. In the line structure, authority flows from the top most executive to the subordinate at the lowest level in a more or less straight line. The essence of scalar principle is that in any organization, there must be a series of superior-subordinate relationships from the top to every position in the structure. Each person has one superior to whom he or she reports and looks for instructions.
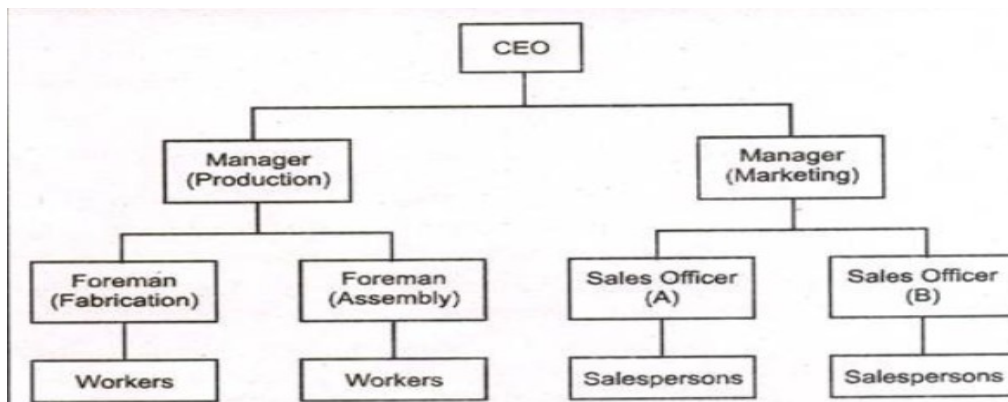
Advantages:

- Simplicity

- Quick decision-making

- Flexibility

- Unified control

Disadvantages:

- Rigidity

- Overburdened superiors

- Lack of specialization

Line-and-Staff structure

Smaller firms use line organization. However, line structure becomes ineffective as the organization grows in size and complexity. In bigger and complex organization organizations, only the expertise of line manager is not enough to fulfill the requirements of the job. Staff assistance is required for efficiency and economy of operations. Hence, some staff specialists are employed to assist the line managers. Simple line structure is converted into a line-and-staff organization. The line-and-staff organization is similar to a line organization in that each person reports to a single supervisor. In line-and-staff organization, there are also staff specialists who perform specialized services or act as management advisers in special areas. Line-and-staff is the most widely used form of organization structure.

Figure 1
Line-and-Staff Organization
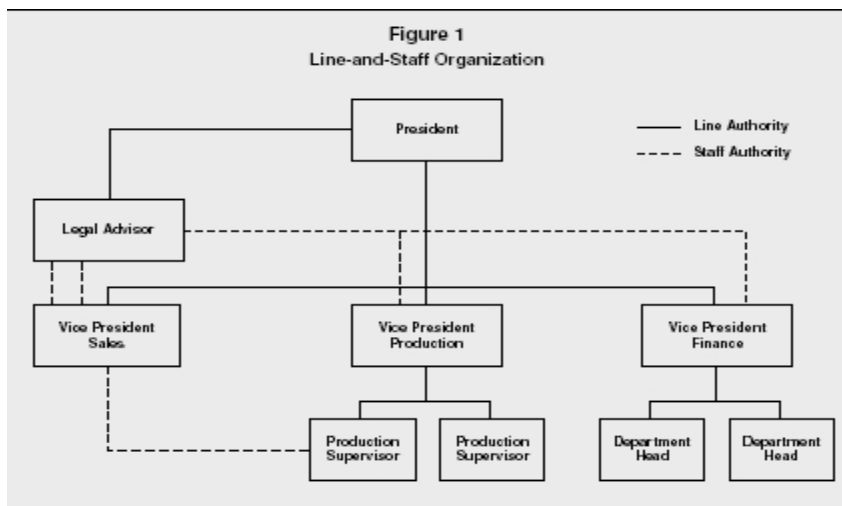
Advantages:

- ❖ Making use of specialization

- ❖ More operating efficiency

- ❖ Prospects of career development

Disadvantages:

- ❖ Confusion

❖ Conflict, rivalry, and jealousy

❖ Tendency to enlarge the domain

❖ Suspicion and mistrust

Functional Structure

- Functional structure developed by F.W. Taylor. He coined the term "functional foremanship" to provide for specialized skills at the supervisory level. In functional organization, the whole task of an organization is divided according to the type of work involved. In functional organization, the function to be performed becomes the focus rather than the power and authority, as in the line organization. The functional structure permits the manager in-charge (specialist) to enforce his or her directives within a limited and clearly defined scope of his or her authority. In functional organization the functional specialist does not provide direct instruction or suggestion to another functional specialist. They interact with each other through the general manager.
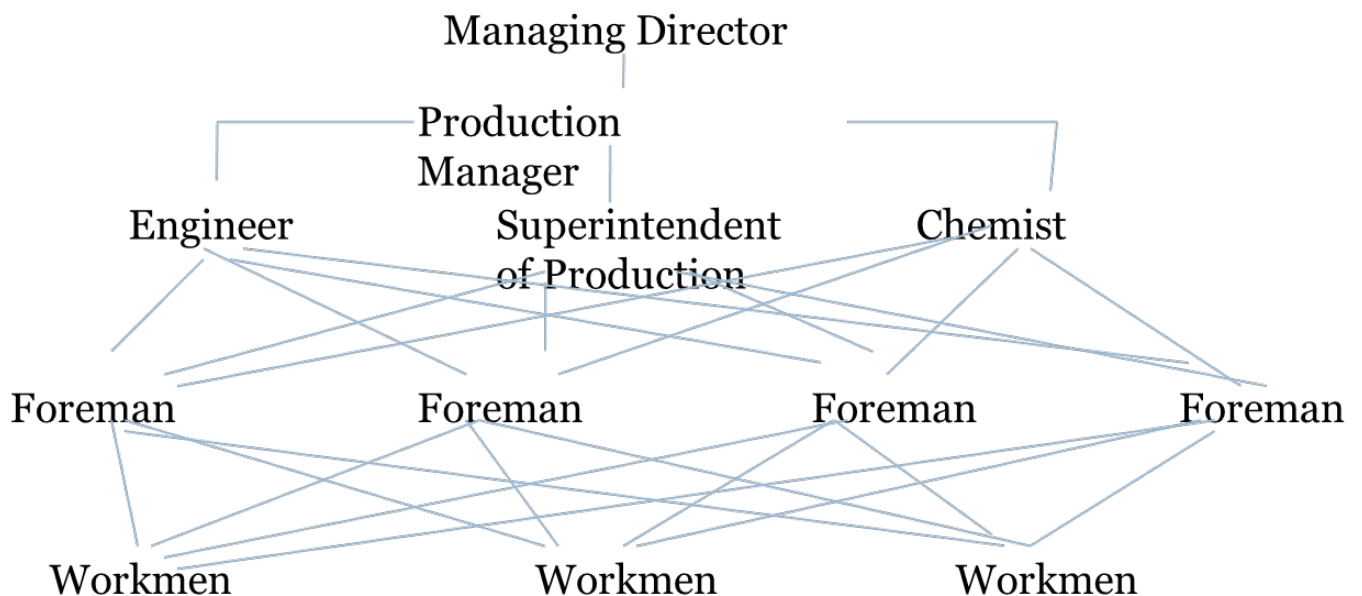
- The advantages are:

  - Benefits of specialization

  - Increase efficiency:

- Healthy competition among experts:

- Relief to executives:

- Mass production:

- Facilitates growth and expansion:

- The disadvantages are:

  - Multiple command system.

  - Lack of coordination.

  - High administrative cost.

  - Delay in decision making.

  - Spoils human relations.

 - Narrow outlook of specialists.

  - Shifting responsibility

Matrix Structure

Matrix management is a type of organizational management in which people with similar skills are pooled for work assignments. For example, all engineers may be in one engineering department and report to an engineering manager, but these same engineers may be assigned to different projects and report to a different engineering manager or a project manager while working on that project. Therefore, each engineer may have to work under several managers to get their job done. A matrix organization structure introduces, or at least recognizes, the real life complexity of our business environment. However, a matrix organization structure also introduces a higher level of internal complexity and some additional people management challenges, so there must be significant advantages to a matrix organization structure that outweigh the matrix people management challenges.

  ✓ Conditions for Matrix:

    1. Share resources across the organization

2. Two or more critical outputs required: products and technical knowledge

3. Environment is complex and uncertain

✓ Allows organization to meet dual demands

✓ Largest weakness is that employees have two bosses and conflicting demands
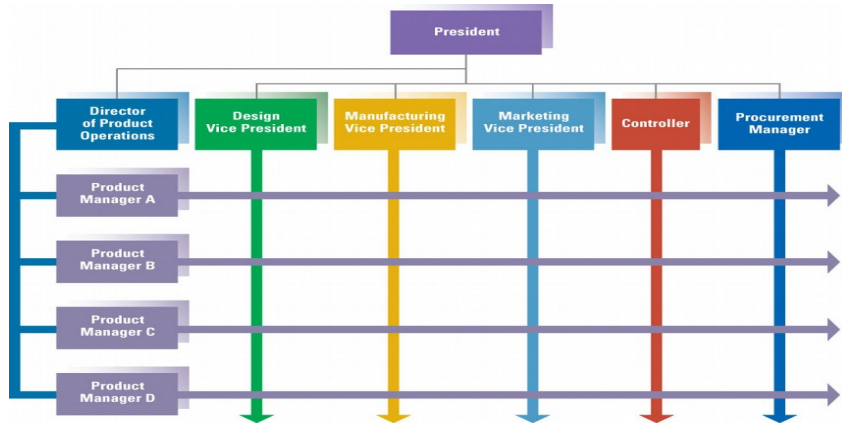
Advantages:

- Individuals can be chosen according to the needs of the project.

- The use of a project team that is dynamic and able to view problems in a different way as specialists have been brought together in a new environment.

- Project managers are directly responsible for completing the project within a specific deadline and budget.

Disadvantages:

- A conflict of loyalty between line managers and project managers over the allocation of resources.

- Projects can be difficult to monitor if teams have a lot of independence.

- Costs can be increased if more managers (i.e. project managers) are created through the use of project teams.

Span of Control

In a classical type of organizational structure, which is the most common form, the effectiveness and efficiency of operations is determined by the number of people under the direct supervision of a manager. For most effective operations, it is necessary to have optimum number of subordinates to supervise. As discussed above, the informal groups have a significant impact on the span of management. If the supervisor has cordial relations with his subordinates and the subordinates are dedicated to their work for professional as well as social reasons, then more subordinates can be assigned to each supervisor and less managerial time will be needed to deal with the subordinates.

Span of control is also known as "span of management", refers to the number of people's manager directly manages. In a wider span of control, a manager has many subordinates who report to him. In a narrow span of control, a manager has fewer subordinates under him. Obviously, the number of subordinates that can effectively be managed for supervision and delegation of authority would be finite and depend upon a number of factors.
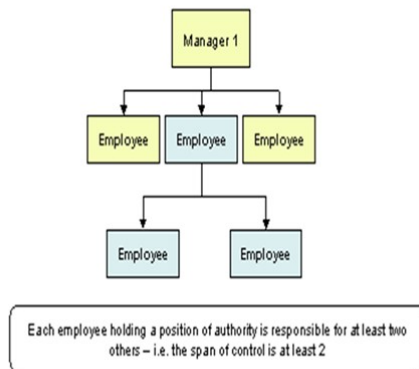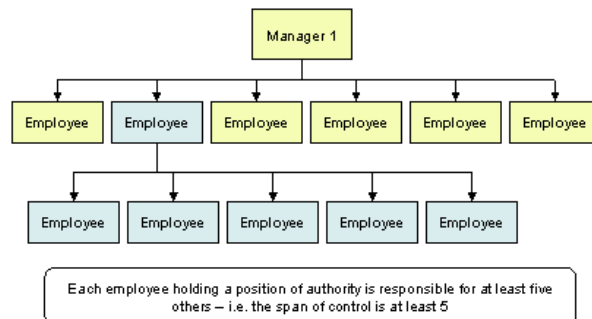
Centralization Vs Decentralization

- Centralization is said to be a process where the concentration of decision making is in a few hands. All the important decision and actions at the lower level, all subjects and actions at the lower level are subject to the approval of top management. According to Allen, "Centralization" is the systematic and consistent reservation of authority at central points in the organization.

The implication of centralization can be :-

- Reservation of decision making power at top level.

- Reservation of operating authority with the middle level managers.

- Reservation of operation at lower level at the directions of the top level.

Decentralization is a systematic delegation of authority at all levels of management and in all of the organization. In a decentralization concern, authority in retained by the top management for taking major decisions and framing policies concerning the whole concern. Rest of the authority may be delegated to the middle level and lower level of management.

The degree of centralization and decentralization will depend upon the amount of authority delegated to the lowest level. According to Allen, "Decentralization refers to the systematic effort to delegate to the lowest level of authority except that which can be controlled and exercised at central points.

Decentralization is not the same as delegation. In fact, decentralization is all extension of delegation. Decentralization pattern is wider is scope and the authorities are diffused to the lowest most level of management. Delegation of authority is a complete process and takes place from one person to another. While decentralization is complete only when fullest possible delegation has taken place. For example, the general manager of a company is responsible for receiving the leave application for the whole of the concern. The general manager delegates this work to the personnel manager who is now responsible for receiving the leave applicants.

In this situation delegation of authority has taken place. On the other hand, on the request of the personnel manager, if the general manager delegates this power to all the departmental heads at all level, in this situation decentralization has taken place. There is a saying that "Everything that increasing the role of subordinates is decentralization and that decreases the role is centralization". Decentralization is wider in scope and the subordinate's responsibility increase in this case. On the other hand, in delegation the managers remain answerable even for the acts of subordinates to their superiors.

Implications of Decentralization

- There are fewer burdens on the Chief Executive as in the case of centralization.

- In decentralization, the subordinates get a chance to decide and act independently which develops skills and capabilities. This way the organization is able to process reserve of talents in it.

- In decentralization, diversification and horizontal can be easily implanted.

- In decentralization, concern diversification of activities can place effectively since there is more scope for creating new departments. Therefore, diversification growth is of a degree.

- In decentralization structure, operations can be coordinated at divisional level which is not possible in the centralization set up.

- In the case of decentralization structure, there is greater motivation and morale of the employees since they get more independence to act and decide.

- In a decentralization structure, co-ordination to some extent is difficult to maintain as there are lot many department divisions and authority is delegated to maximum possible extent, i.e., to the bottom most level delegation reaches. Centralization and decentralization are the categories by which the pattern of authority relationships became clear. The degree of centralization and de-centralization can be affected by many factors like nature of operation, volume of profits, number of departments, size of a concern, etc. The larger the size of a concern, a decentralization set up is suitable in it.

Emerging concept in organizing and design

1. Re-engineering process: it is concerned with radical design of business processes to improve in critical area such as const, quality, service and speed. In this process we constructively destruct the old process.

2. Team work: the team concept breaks the departmental barriers and decentralizes the decision making to the level of the work team. This environment enhances performances, reduces stress, and promotes the climate of creativity and innovation in the organization.

3. Network organization structure: the main objective network structure is to eliminate the departments and to perform specialized works through outside experts. It is also known as virtual organization structure, where the main task of management is to focus on strategies and to maintain coordination among experts for uniform progress.

4. Downsizing organization: It is process or restructuring the organizational design by reducing unnecessary levels, jobs, units, and employees. Right size is the purpose of downsizing. It focuses on minimizing the vertical size and maximizes the horizontal size. The main purpose is to reduce the cost of operation.

5. Boundary-less organization: this organization have no barriers in information flow. There is no rigid structure and eliminates all chain of command, have limitless span of control, and replace departments with empowered teams. Usually they are functional experts who form an alliance within an organization to fulfill their contractual obligations.

Human Resource Management

Human Resource Management includes all activities used to attract & retain employees and to ensure they perform at a high level in meeting organizational goals.
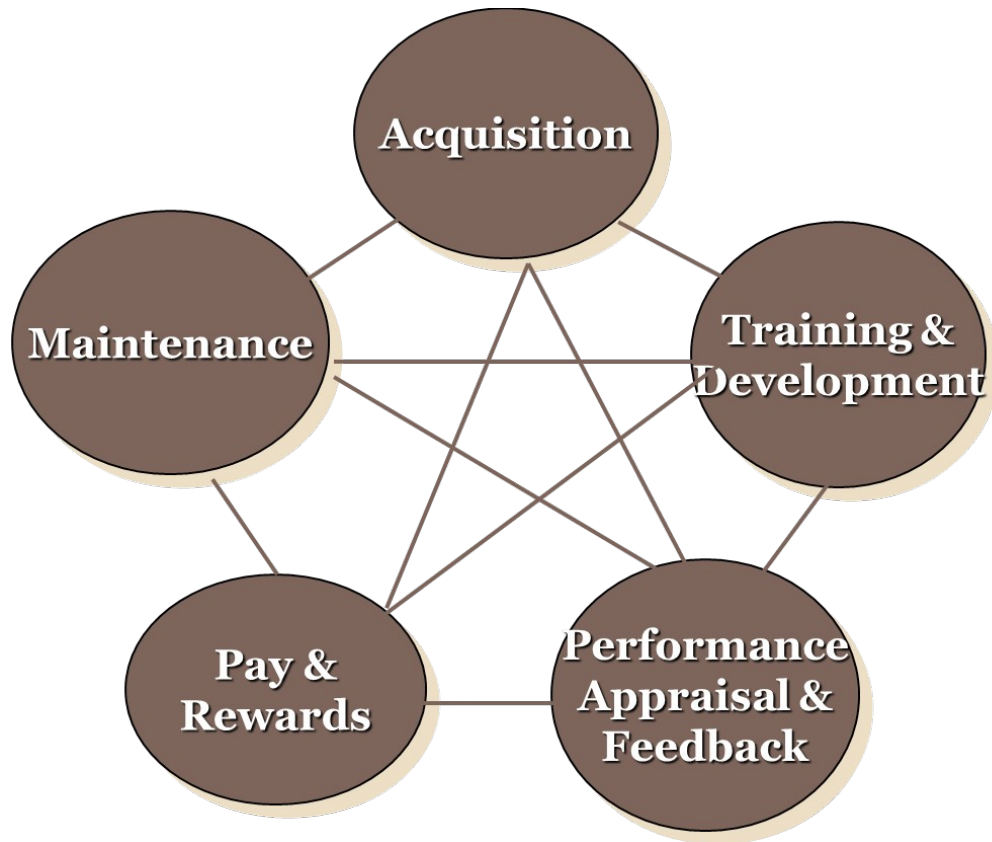
Component should be consistent with the others, organization structure, and strategy.

- **Acquisition:** develop a pool of qualified applicants.

    - Selection: determine relative qualifications & potential for a job.

- **Training & Development:** ongoing process to develop worker's abilities and skills.

- **Performance appraisal & feedback:** provides information about how to train, motivate, and reward workers.

- Managers can evaluate and then give feedback to enhance worker performance.

Motivation/Pay and Benefits: high performing employees should be rewarded with raises, bonuses.

- Increased pay provides additional incentive.

- Benefits, such as health insurance, reward membership in firm.

Maintenance: It ensures retaining productive employees in the organization for a long time.

- Better working environment, focus on health, safety and comfort of employees

If management moves to a decentralized structure, HRM should be adjusted as well.

Motivation, Leadership and Conflict

Motivation

- Motivation is a term that refers to a process that elicits, controls, and sustains certain behaviors.

- Motivation is defined as the process that initiates, guides and maintains goal-oriented behaviors. Motivation is what causes us to act, whether it is getting a glass of water to reduce thirst or reading a book to gain knowledge

- The process that accounts for an individual's intensity, direction, and persistence of effort toward attaining a goal.

- The key elements in motivation are:

- Intensity: How hard a person tries.

- Direction: toward beneficial goal.

- Persistence: how long a person tries.(Persistence is the ability to maintain action regardless of your feelings. You press on even when you feel like quitting.)

- Dynamic force which sets a person into motion"

- "An inner state that energizes, activates and directs or channels behavior towards goals"

Feature of motivation

- Component of directing: Motivating is an important component of directing functions of management. It is the responsibility of the managers to motive their subordinated to get all things done. Psychological aspect: Motivation is a psychological aspect of management. It is the internal feeling which arises from the need and desires of a person. Motivation generates from within an individual. It starts and keeps individual at work

- Goals directed: Motivation generates goals-directed behavior. Feeling of need by the persons causes him/her to behave in such a way that he/she tries to satisfy himself. Human needs influence behavior to achieve desired goals.

- Continuous process: Motivation is a continuous process. Where a particular need is satisfaction, a new need is seen. It is the result of an interaction between human needs and the incentives offer to satisfy them.

- Positive or negative: Motivation may b positive or negative. Positive motivation means inspiring people to work better by providing rewards and incentives. Negative motivation means forcing people to work by punishing them.

- Complex and Dynamic process: Motivation is a complex and dynamic process. Individuals differ in their needs and wants. Different individuals work to fulfill their own needs. They satisfy their need in different ways. Moreover, human need change from time to time. Influence Behavior: motivation focus to influence the behavior of the employee to meet the standard level of behavior to be shown at the work place.

- Concentrates on whole individual: Motivation puts effort to change the behavior not only at work place, but person as a whole.

- Pervasive function: Motivation is carried out by all mangers and in all types of concerns where business activities are carried out. Every manager provides guidance and inspiration to his subordinates.

Importance of motivation

- Increased Productivity: When employees are motivated from inside or from outer sources they show passion for their work and give better performance. When they are given a target to achieve they give their best efforts to reach their targets and complete the given task on or before time. Though they are not promised any monetary compensation on the completion of their targets they are themselves motivated to do their task because they know that the management

trust's their ability to perform and they want to prove it by completing the given task. This attitude of the employees leads to increased productivity which is very beneficial for the company.

- Improved employee morale: Continuous motivation of employees boosts their morale and they work and perform better. A happy team with a high morale are ready to face any challenge in their job without any issue. They are ready for the most difficult task given to them as there are happy from within and have a high esteem of themselves because of this the company or organization experience less employee conflicts and less absenteeism.

- More loyal staff: A highly motivated employee groups are loyal towards their organization. When they are motivated on a regular basis they know that their employers care for them and want them so they are more loyal to the organization. Employing new staff and training them is very expensive task for any organization so a loyal workforce will reduce this expenditure and the company can concentrate on other important issues. A company with good and loyal workforce will gain good reputation in the market and people would want to associate more with the company.

- Better Creativity: When an employee is highly motivated they feel free to express their views and ideas since they are passionate about their jobs. They know that they are an important part of the organization and want to contribute more towards the betterment of the organization, this makes them more creative. For increasing the creativity amongst the employees, managers have to design a leadership style in such a way that is encourages employees to provide more suggestions, new ideas and new cost effective ways of delivering better performance.

- Individual growth and improvement: A motivated employee is ready to take up more tasks for the company and tries to complete it with best efforts. For this they study and train themselves more, this makes them more experience in their field. By taking and accomplishing more tasks they increase their individual growth and improve their knowledge. They are more likely to be recognized within the organization and also outside the organization. Their chances of appraisal and promotion are also increased.

- Leads to achievement of organizational goals: Motivation helps to achieved organizational goals by, proper utilization of resources, maintaining a co-operative work environment, directing employees in a purposive manner. Goals can be achieved if co-ordination and co-operation takes place simultaneously which can be effectively done through motivation.

- Builds friendly relationship: Motivation is an important factor which brings employees satisfaction. This can be done by keeping into mind and framing an incentive plan for the benefit of the employees. This could initiate by; Monetary and non-monetary incentives, Promotion opportunities for employees, Disincentives for inefficient employees.

- Leads to stability of work force: Stability of workforce is very important from the point of view of reputation and goodwill of a concern. The employees can remain loyal to the enterprise only when they have a feeling of participation in the management. The skills and efficiency of employees will always be of advantage to employees as well as employees. This will lead to a good public image in the market which will attract competent and qualified people into a concern.

Motivational process

- Needs

- Drives

- Incentives

Theories in motivation

- Hierarchy of Needs Theory by Abraham Maslow

- Two-Factor Theory (Frederick Herzberg) (Motivation Hygiene Theory).

  See the slide

Techniques for improving employee motivation

1. Financial incentives: Monetary benefit offered to encourage behavior or actions of employees. A financial incentive motivates actions which otherwise might not occur without the monetary benefit. It is a monetary reward provided for performance above targeted objectives. The scientific / Theory X approach, in particular, argues that workers respond to financial rewards. Getting employee pay right is a crucial task for a business.

2. Participation: the act of sharing in the activities of a group. Sharing of ideas and information motivates employees to look for more creative ideas.

3. Delegation of authority: Delegation of authority is assigning work to subordinates and giving them necessary authority to do the assigned work effectively. Delegation means assigning of certain responsibilities along with the necessary authority by a superior to his subordinate managers

4. Job security: It can be enhance with formal training and development programs.

5. Job enlargement: Job enlargement involves adding extra, similar, tasks to a job. In job enlargement, the job itself remains essentially unchanged. However, by widening the range of tasks that need to be performed, hopefully the employee will experience less repetition and monotony.

6. With job enlargement, the employee rarely needs to acquire new skills to carry out the additional task.

7. A possible negative effect is that job enlargement can be viewed by employees as a requirement to carry out more work for the same pay!

8. Job Enrichment: Job enrichment attempts to give employees greater responsibility by increasing the range and complexity of tasks they are asked to do and giving them the necessary authority.

9. Job Rotation: Job rotation involves the movement of employees through a range of jobs in order to increase interest and motivation. .

10. Reinforcement: Reinforcement refers to the consequences of desired behavior. Reinforcement may be either positive or negative, depending on its application.

11. Quality of work life: Extent to which employees can enhance their personal lives through their work environment and job related experiences.

12. Team work and empowering: Empowerment involves giving people greater control over their working lives. Organizing the labour force into teams with a high degree of autonomy can achieve this.

Reward system to motivate performance

Extrinsic and Intrinsic reward:

1. Extrinsic rewards are money and grades, coercion and threat of punishment. It results to extrinsic motivation. Competition is in general extrinsic because it encourages the performer to win and beat others, not to enjoy the intrinsic rewards of the activity.

2. Intrinsic rewards are: Opportunity for achievement, giving of challenging responsibility, Opportunity for advancement, Opportunity for growth in stature and peer recognition. It leads into intrinsic motivation. Intrinsic reward is driven by an interest or enjoyment in the task itself, and exists within the individual rather than relying on any external pressure. Intrinsically motivated employees are more likely to engage in the task willingly as well as work to improve their skills, which will increase their capabilities.

Financial and Non-financial Reward

1. Financial reward or Compensation is a systematic approach to providing monetary value to employees in exchange for work performed. Compensation may achieve several purposes assisting in recruitment, job performance, and job satisfaction

2. Non-financial rewards will help you provide your employees with a sense of achievement and recognition for their high performance, encouraging them to perform even further in the future.

Leadership

According to Prof. Warren Bennis " Leadership is a function of knowing yourself, having a vision that is well communicated, building trust among colleagues, and taking effective action to realize your own leadership potential."

Leadership is a process whereby an individual influences a group of individuals to achieve a common goal.

"Leadership is the ability to get a person to do what you want him to do, when you want it done, in a way you want it done, because he wants to do it." (Dwight D. Eisenhower in Galloway 1990, 87).

Style of leadership:

1. Autocratic Leadership: Autocratic leadership, also known as authoritarian leadership, is a leadership style characterized by individual control over all decisions and little input from group members. Autocratic leaders typically make choices based on their own ideas and judgments and rarely accept advice from followers. Autocratic leadership involves absolute, authoritarian control over a group.

- Characteristics of Autocratic Leadership

  - Little or no input from group members

  - Leaders make the decisions

  - Group leaders dictate all the work methods and processes

  - Group members are rarely trusted with decisions or important tasks

Autocratic leadership can be beneficial in some instances, such as when decisions need to be made quickly without consulting with a large group of people. Some projects require strong leadership in order to get things accomplished quickly and efficiently. It can also be used to motivate 'Theory X' people.

2. Democratic Leadership: Democratic leadership, also known as participative leadership, is a type of leadership style in which members of the group take a more participative role in the decision-making process. Researchers have found that this learning style is usually one of the most effective and leaders to higher productivity, better contributions from group members and increased group morale.

- Characteristics of Democratic Leadership

  - Group members are encouraged to share ideas and opinions, even though the leader retains the final say over decisions.

  - Members of the group feel more engaged in the process.

  - Creativity is encouraged and rewarded.

  - Because group members are encouraged to share their thoughts, democratic leadership can leader to better ideas and more creative solutions to problems. Group members also feel more involved and committed to projects, making them more likely to care about the end results. Research on leadership styles has also show that democratic leadership leads to higher productivity among group members.

3. Laissez-fair or Free Rein Leadership: Laissez-faire leadership, also known as delegative leadership, is a type of leadership style in which leaders are hands-off and allow group members to make the decisions. Researchers have found that this is generally the leadership style that leads to the lowest productivity among group members.

- Characteristics of Laissez-Faire Leadership

  - Very little guidance from leaders

  - Complete freedom for followers to make decisions

- Leaders provide the tools and resources needed

- Group members are expected to solve problems on their own

- Benefits of Laissez-Faire Leadership

Laissez-faire leadership can be effective in situations where group members are highly skilled, motivated and capable of working on their own. While the conventional term for this style is 'laissez-faire' and implies a completely hands-off approach, many leaders still remain open and available to group members for consultation and feedback.

4. Paternalistic style: A type of fatherly managerial style typically employed by dominant males where their organizational power is used to control and protect subordinate staff that are expected to be loyal and obedient. A manager with a paternalistic leadership style might be appropriate for a business with a more formal and hierarchical structure where creative thinking is not required of staff.

- Characteristics

  - Paternalistic managers give more attention to the social needs and views of their workers.

  - Managers are interested in how happy workers feel and in many ways they act as a father figure.

  - They consult employees over issues and listen to their feedback or opinions.

  - The manager will however make the actual decisions (in the best interests of the workers) as they believe the staff still need direction and in this way it is still somewhat of an autocratic approach.

  - The style is closely linked with Mayo's Human Relation view of motivation and also the social needs of Maslow.

The Managerial Grid:

One concept based largely on the behavioral approach to leadership effectiveness was the Managerial (or Leadership) Grid, developed by Robert Blake and Jane Mouton. The grid combines "concern for production" with "concern for people" and presents five alternative behavioral styles of leadership. An individual who emphasized neither production nor people was practicing "impoverished management" according to the grid. If a person emphasized concern for people and placed little emphasis on production, he was terms a "country-club" manager.

Conversely, a person who emphasized a concern for production but paid little attention to the concerns of subordinates was a "task" manager. A person who tried to balance concern for production and concern for people was termed a "middle-of-the-road" manager.

Finally, an individual who was able to simultaneously exhibit a high concern for production and a high concern for people was practicing "team management." According to the prescriptions of the grid, team management was the best leadership approach. The Managerial Grid became a major consulting tool and was the basis for a considerable amount of leadership training in the corporate world.

The five different leadership styles found in the managerial grid are presented below:
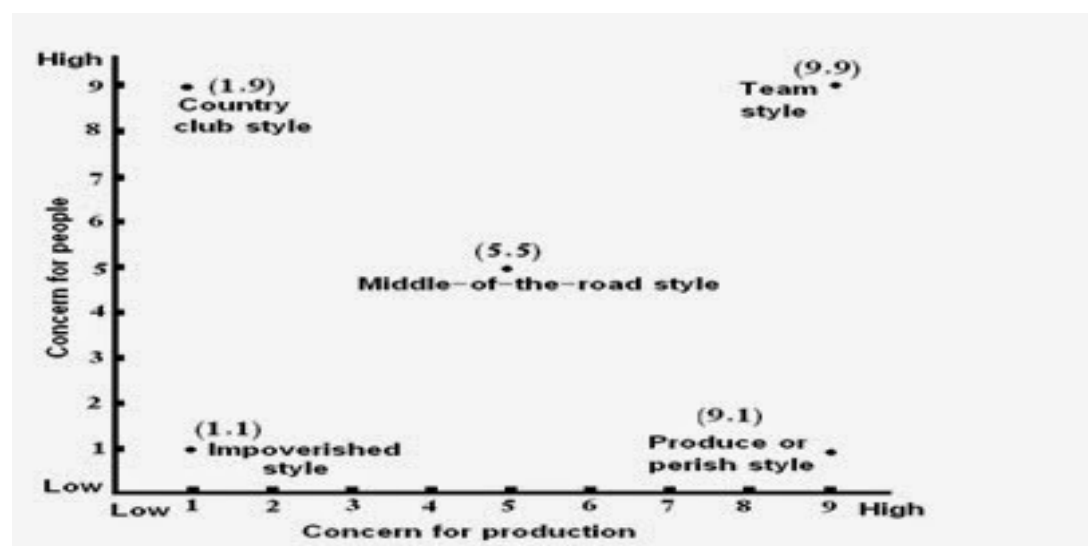
1. **Country Club Leadership** - High Concern for People/Low Concern for Production

   - A country club leader is mostly concerned about the needs and feelings of his/her employees or team members. This leader probably supposes that members of the organization will work hard if the feel happy and secure. However, production may suffer under this leadership style, and the effectiveness of the organization may suffer due to a lack of direct supervision and control.

2. **Task Leadership** - High Concern for Production/Low Concern for People

   - A task leader is very concerned about production effectiveness, and probably sees workers as means to achieve great results. This leader also sees workforce needs as secondary to the need of a productive and efficient workplace. He/She might have very strict and autocratic work rules, and perhaps views punishment as the best motivational force.

3. **Impoverished Leadership** - Low Concern for Production/ Low Concern for People

   - This leader is very ineffective. The leader has neither a high regard for creating efficient systems or rules to structure work processes, nor for creating a motivated or satisfied work environment. The result of this leadership style could be a highly disorganized workplace with low satisfaction and motivation.

4. **Middle of the Road Leadership** - Medium Concern for Production/Medium Concern for People

   - This style tries to balance the two competing concerns. It tries to compromise different needs, and may seem as a great solution. However, when compromising, leaders risk that neither the concern for people nor the concern for production is fully met.

This may lead to average performance, where top results may not be achieved. Workers may end up moderately motivated and satisfied, and production may only become moderately effective.

5. **Team Leadership** - High Concern for Production/High Concern for People

   - According to the Blake Mouton model, this is the best and most effective leadership style. These leaders both stress the importance of workforce needs and production needs. This leader manages to engulf workers into the importance of production efficiency, and manages to motivate employees. This creates an atmosphere of team spirit, where each team member is highly motivated and satisfied, which commits the worker to work hard and increase productivity.

Organizational conflict:

Conflict is disagreement between parties. Two or more individuals, groups or organization.

A conflict is a situation where one party perceives that other party has negatively affected its interests.

Conflict is a disagreement through which the parties involved perceive a threat to their needs, interests or concerns.

Types of Conflict
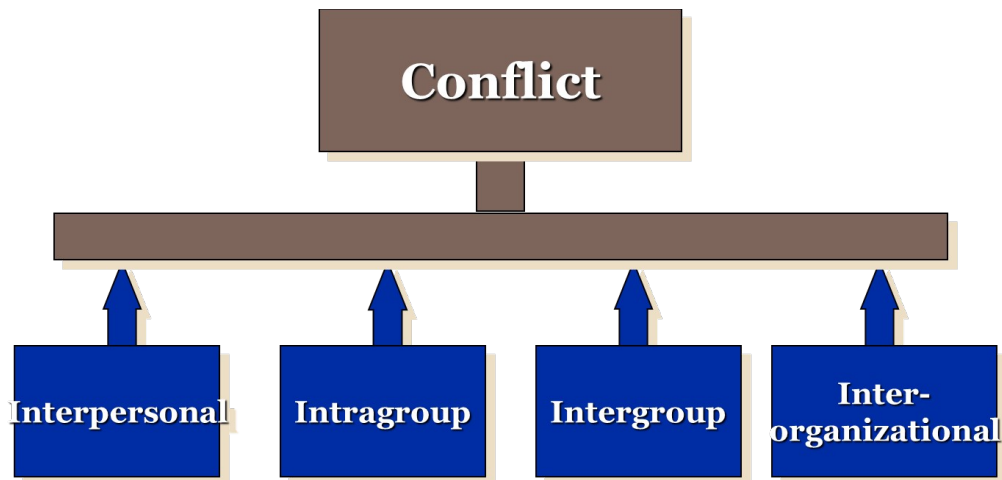
Interpersonal Conflict

Conflict between individuals due to differences in their goals or values.

Intragroup Conflict

Conflict within a group or team.

Intergroup Conflict

Conflict between two or more teams, groups or departments.

Managers play a key role in resolution of this conflict

Interorganizational Conflict

Conflict that arises across organizations.

Sources of Conflict

☐ **Different Goals and Time Horizons**

- Different groups have differing goals and focus.

☐ **Overlapping Authority**

- Two or more managers claim authority for the same activities which leads to conflict between the managers and workers.

☐ **Scarce Resources**

- Managers can come into conflict over the allocation of scare resources.

☐ **Status Inconsistencies**

- Some individuals and groups have a higher organizational status than others, leading to conflict with lower status groups.

☐ **Task Interdependencies**

- One member of a group or a group fails to finish a task that another member or group depends on, causing the waiting worker or group to fall behind.

☐ **Different Evaluation or Reward Systems**

- A group is rewarded for achieving a goal, but another interdependent group is rewarded for achieving a goal that conflicts with the first group.

Conflict Resolution

Conflict resolution, otherwise known as **reconciliation**, is conceptualized as the methods and processes involved in facilitating the peaceful ending of conflict

CONFLICT RESOLUTION STRATEGY	TYPE OF STRATEGY	APPROPRIATE SITUATIONS
Ignoring the conflict	Avoidance	• When the issue is little value • When the issue is bringing problems
Imposing a solution	Avoidance	• When quick, decisive action is needed • When unpopular decisions need to be made and consensus among the groups appears very unlikely

CONFLICT RESOLUTION STRATEGY	TYPE OF STRATEGY	APPROPRIATE SITUATIONS
Smoothing	Diffusion	• let people cool down and regain perspective • When the conflict is over non-work issues
Appealing to superordinate goals	Diffusion	• When there is a mutually important goal that neither group can achieve without cooperation of the other • When the survival or success of the overall organization is in jeopardy

CONFLICT RESOLUTION STRATEGY	TYPE OF STRATEGY	APPROPRIATE SITUATIONS
Bargaining	Containment	When the two parties are of relatively equal power When there are several acceptable, alternative solutions that both parties would be willing to consider
Structuring the interaction	Containment	when previous attempts to openly discuss conflict issues to conflict escalation rather than to problem solution When a respected third party is available, to provide some structure and could serve as a mediator

CONFLICT RESOLUTION STRATEGY	TYPE OF STRATEGY	APPROPRIATE SITUATIONS
Solving	Confrontation	Mutually satisfactory solution is found through face to face meeting When the organization can benefit from merging the differing perspectives ,and insights of the groups in making key decisions
Redesigning the organization	Confrontation	When the sources of conflict comes from the coordination of work When the work can be easily divided into clear project responsibilities (self-contained work groups), or when activities require a lot of interdepartmental coordination over time (lateral relations)

Communication and Controlling

Concept

- Communication is the activity of conveying information. Communication has been derived from the Latin word "communis", meaning to share.

- Communication is the exchange and flow of information and ideas from one person to another; it involves a sender transmitting an idea, information, or feeling to a receiver.

- Communication is the process in which two or more parties exchange information and share meaning.

- The five vital components of communication are: sender of message, the message itself, receiver of the message, transmission channel, and reception of the message.

- Communication process requires a vast repertoire of skills in intrapersonal and interpersonal processing, listening, observing, speaking, questioning, analyzing, and evaluating.

- "Communication is the process by which a person, group, or organization (the sender) transmits information (the message) to another person, group, or organization (the receiver)" (in an understandable way and followed by feedback) (Greenberg and Baron)

- "Communication is both the transference and understanding of meaning." (Robbins)

- Research indicates that: Poor communication is probably the most frequently cited source of interpersonal conflict.

- Individual spend 70 percent of their waking hours communicating.

- One of the most inhibiting forces to successful group performance is a lack of effective communication.

Nature /characteristics of communication

1. Minimum two persons: At least two person is required to make communication complete.

2. Two way process: It is a process of sender sending the message and receiver sending feedback.

3. Pervasive function: It is used in all level in organization.

4. Complete and rational process: It helps us to understand what the sender means and what receiver wants to say to the sender.

5. Continuous function: It is carried as long as the organization exists.

6. Oral or written: it may in form of oral or written

7. Formal or informal: it can be formal (based on organization structure) or informal (based on relationship)

8. Basis of action and coordination: it serves as basis for letting the actions or strategy clear to the employee and maintains coordination between strategies or actions.

Purpose/ Importance of communication:

1. Communication promotes motivation: by informing and clarifying the employees about the task to be done, the manner they are performing the task, and how to improve their performance if it is not up to the mark.

2. Communication is a source of information: to the organizational members for decision-making process as it helps identifying and assessing alternative course of actions.

3. Communication also plays a crucial role in altering individual's attitudes: , i.e., a well informed individual will have better attitude than a less-informed individual. Organizational magazines, journals, meetings and various other forms of oral and written communication help in determining employee's attitudes.

4. Communication also helps in socializing: In today's life the only presence of another individual fosters communication. It is also said that one cannot survive without communication.

5. Communication also assists in controlling process: It helps controlling organizational member's behavior in various ways.

6. Provide feedback to management: Providing regular, on-going opportunities for employees to provide feedback to management

Process of Communication

Sender: Communicator who has some ideas, opinions, information to transmit.

Encoding: the translation of information through language, sins, picture, or symbols.

Message: the encoded idea or information.

Medium: It is the pathway for transmission of message i.e. Face to face, telephone, mails, letters, etc.

Receiver: Person receiving the message.

Decoding: the understanding of the message

Feedback: the response of the receiver after receiving and understanding the message.

Noise: the disturbance that occurs during the transmission of the message.
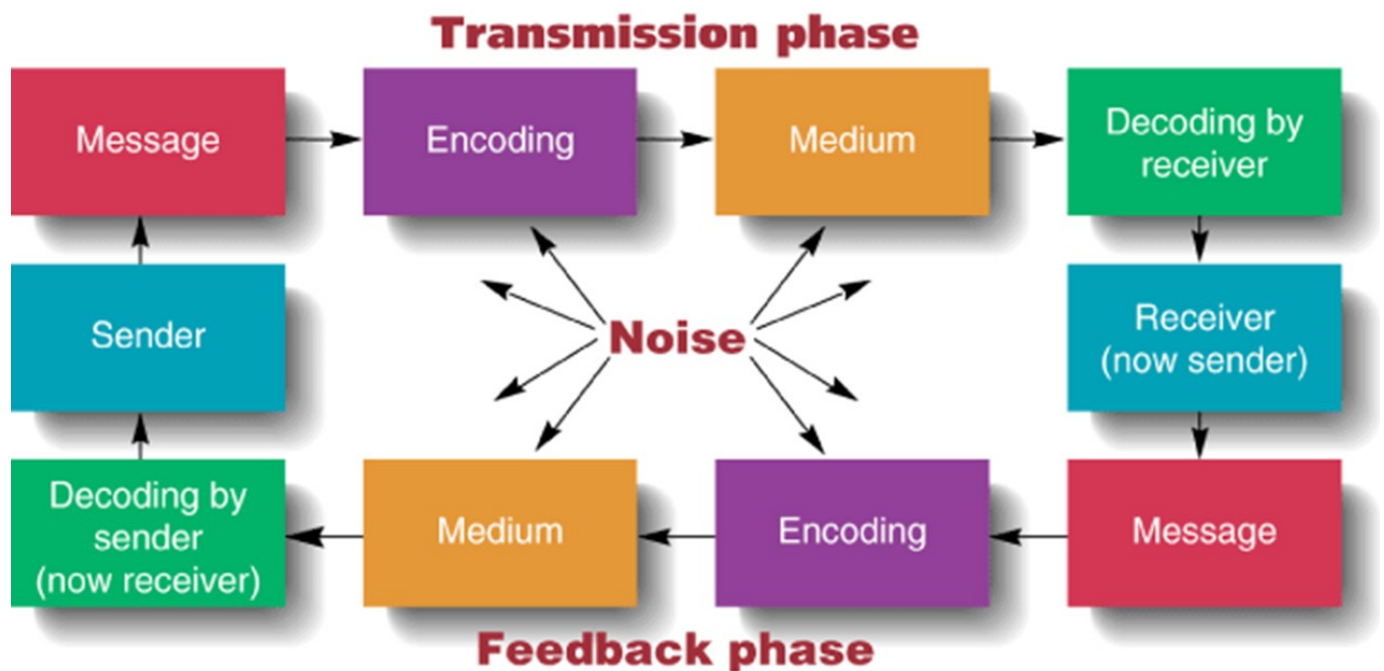
__Types of communication__

1. Formal Communication: Communication through officially designated channels of message flow between organization positions. Usually found in organizational charts, policy manuals, or hierarchical structures.

   - Downward communication: Communication that flows from upper to lower (such as manager to employer or superior to subordinate).Types of messages: job instructions, job rationales, procedures and practices information, feedback, and indoctrination. Pro- efficient (fast) Con- managerial control

   - Upward Communication: Transmission of messages from lower to higher levels of the organization (such as communication initiated by subordinates with their superiors).Types of messages: performance on the job, job related problems, fellow employees and their problems, subordinates perceptions of org policies and practices, tasks and procedures. Pro: promotes morale among all employees Con: not enough superiors encourage subordinate

   - Sideward Communication: Flow of messages across functional areas at a given level of an organization (this permits people at the same level to communicate directly).Type of messages: facilitates problem solving, info sharing across different work groups, task coordination between departments and project teams. Pro: Effective Con: Not efficient (time consuming)

2. Informal Communication: Episodes of interaction that do not reflect officially designated channels of communication. The 'grapevine' emerges from social and personal interests of the employees rather than formal requirements of the organization. Informal communications is inherent and even a necessary aspect of organization life. Pro: Creates a relaxed, comfortable climate Con: Should not become a substitute for an ineffective, formal system.

3. Interpersonal communication: Another facet of communication in the organization is the process of face-to-face or interpersonal communication, between individuals. Such communication may take several forms. Messages may be verbal (that is, expressed in words), or they may not involve words at all but consist of gestures, facial expressions, and certain postures ("body language").

- Oral communication: It is process of face to face conversations, group decisions, telephone call etc. There is immediate feedback and take little time to complete the process. It is mostly used effective form of interpersonal communication.

- Written communication: This form of communication uses formal written materials to communicate. This type of message can be recorded for verification and evidence. It is more time and resource consuming.

- Nonverbal Communication: Nonverbal communication is usually understood as the process of communication through sending and receiving wordless (mostly visual) messages between people. Messages can be communicated through gestures and touch, by body language or posture, by facial expression and eye contact. Nonverbal messages could also be communicated through material exponential; meaning, objects or artifacts (such as clothing, hairstyles or architecture). Speech contains nonverbal elements known as paralanguage, including voice quality, rate, pitch, volume, and speaking style, as well prosodic features such as rhythm, intonation, and stress. Likewise, written texts have nonverbal elements such as handwriting style, spatial arrangement of words, or the physical layout of a page. Nonverbal messages may even stem from silence.

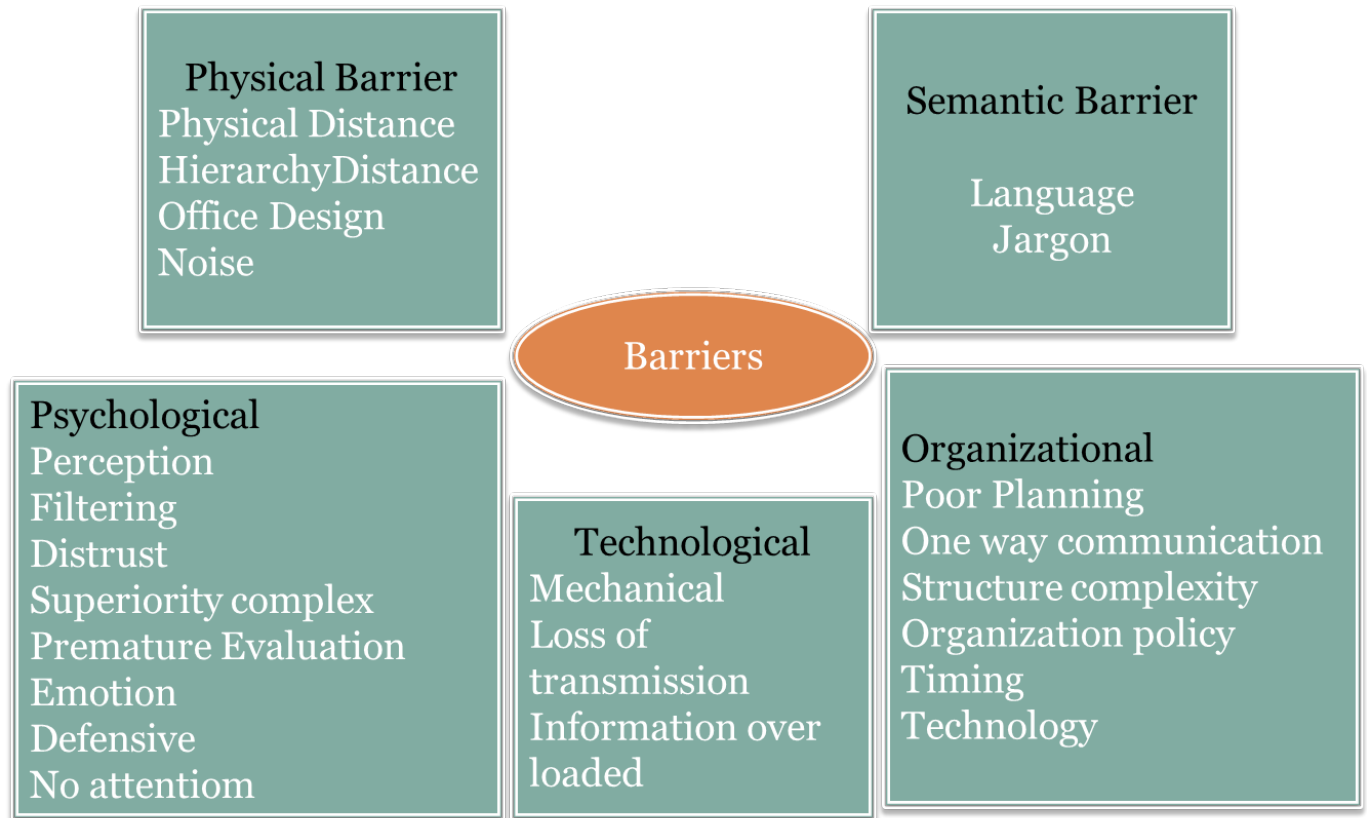## There are many different types of nonverbal communication

1. Facial expressions: The human face is extremely expressive, able to express countless emotions without saying a word. And unlike

some forms of nonverbal communication, facial expressions are universal. The facial expressions for happiness, sadness, anger, surprise, fear, and disgust are the same across cultures.
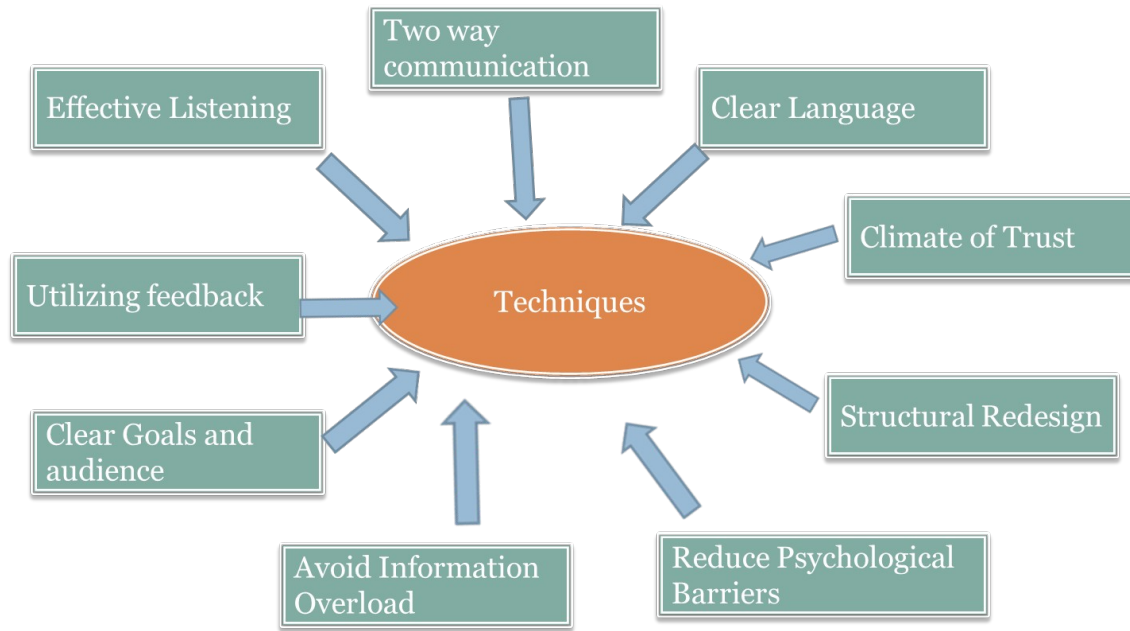
2. Body movements and posture: Consider how your perceptions of people are affected by the way they sit, walk, stand up, or hold their head. The way you move and carry yourself communicates a wealth of information to the world. This type of nonverbal communication includes your posture, bearing, stance, and subtle movements.

3. Gestures: Gestures are woven into the fabric of our daily lives. We wave, point, beckon, and use our hands when we're arguing or speaking animatedly—expressing ourselves with gestures often without thinking. However, the meaning of gestures can be very different across cultures and regions, so it's important to be careful to avoid misinterpretation.

4. Eye contact: Since the visual sense is dominant for most people, eye contact is an especially important type of nonverbal communication. The way you look at someone can communicate many things, including interest, affection, hostility, or attraction. Eye contact is also important in maintaining the flow of conversation and for gauging the other person's response.

5. Touch: We communicate a great deal through touch. Think about the messages given by the following: a firm handshake, a timid tap on the shoulder, a warm bear hug, a reassuring pat on the back, a patronizing pat on the head, or a controlling grip on your arm.

6. Space: Have you ever felt uncomfortable during a conversation because the other person was standing too close and invading your space? We all have a need for physical space, although that need differs depending on the culture, the situation, and the closeness of the relationship. You can use physical space to communicate many different nonverbal messages, including signals of intimacy, aggression, dominance, or affection.

7. Voice: It's not just what you say, it's how you say it. When we speak, other people "read" our voices in addition to listening to our words. Things they pay attention to include your timing and

pace, how loud you speak, your tone and inflection, and sound that convey understanding, such as "ahh" and "uh-huh." Think about how tone of voice, for example, can indicate sarcasm, anger, affection, or confidence.

Barriers to Effective Communication

Physical Barrier
Physical Distance
HierarchyDistance
Office Design
Noise

Semantic Barrier

Language
Jargon

Barriers

Psychological
Perception
Filtering
Distrust
Superiority complex
Premature Evaluation
Emotion
Defensive
No attentiom

Technological
Mechanical
Loss of transmission
Information over loaded

Organizational
Poor Planning
One way communication
Structure complexity
Organization policy
Timing
Technology

Techniques for Improving Communication

Controlling

Concept

- Controlling function helps to check the errors and to take the corrective action so that deviation from standards are minimized and stated goals of the organization are achieved in desired manner.

- According to modern concepts, control is a foreseeing action whereas earlier concept of control was used only when errors were detected. Control in management means setting standards, measuring actual performance and taking corrective action. Thus, control comprises these three main activities.

- Control is checking current performance against pre-determined standards contained in the plans, with a view to ensure adequate progress and satisfactory performance.

- Controlling is the measurement and correction of performance in order to make sure that enterprise objectives and the plans devised to attain them are accomplished.

Elements of effective control/requirements for effective control .They are as follows:

1. Suitability: Suitable according to need of the organization.

2. Simplicity: the control system should be simple to operate and understand.

3. Objectivity: Every control system should focus to the objectives and goals of the organizations

4. Economical: the system must be in the financial capabilities of the organization

5. Comprehensive: It must cover all the functional areas of the organization.

6. Capable to communicate: the system should provide regular information and feedback to the management.

7. Suggestive: It must be able to suggest in cases of deviations.

8. Flexibility: It must be able to adjust with the dynamic circumstance to the internal and external environment.

9. Responsibility- based: the system must be responsible to full its duties in stipulated time and accuracy.

10.   Strategic: the system must be clear on strategies on how to determine the error, how to measure and how to give feedback.

11.   Forward looking: The effective control system should focus on future by quickly identifying the problem.

Nature / characteristics of control

1. Control is a continuous process

2. Control is a management process

3. Control is embedded in each level of organizational hierarchy(pervasive)

4. Control is forward looking

5. Control is closely linked with planning

6. Control is a tool for achieving organizational activities

7. control is an end process

Purpose of control:

The six major purposes of controls are as follows:

1. Controls make plans effective. Managers need to measure progress, offer feedback, and direct their teams if they want to succeed.

2. Controls make sure that organizational activities are consistent. Policies and procedures help ensure that efforts are integrated.

3. Controls make organizations effective. Organizations need controls in place if they want to achieve and accomplish their objectives.

4. Controls make organizations efficient. Efficiency probably depends more on controls than any other management function.

5. Controls provide feedback on project status. Not only do they measure progress, but controls also provide feedback to participants as well. Feedback influences behavior and is an essential ingredient in the control process.

6. Controls aid in decision making. The ultimate purpose of controls is to help managers make better decisions. Controls make managers aware of problems and give them information that is necessary for decision making.

Benefits of control:

1. Improving the quality of goods and services.

2. Standardizing process

3. Efficiently utilizing organizational resources

4. Improving employee accountability

Types of control:

www.csitportal.com
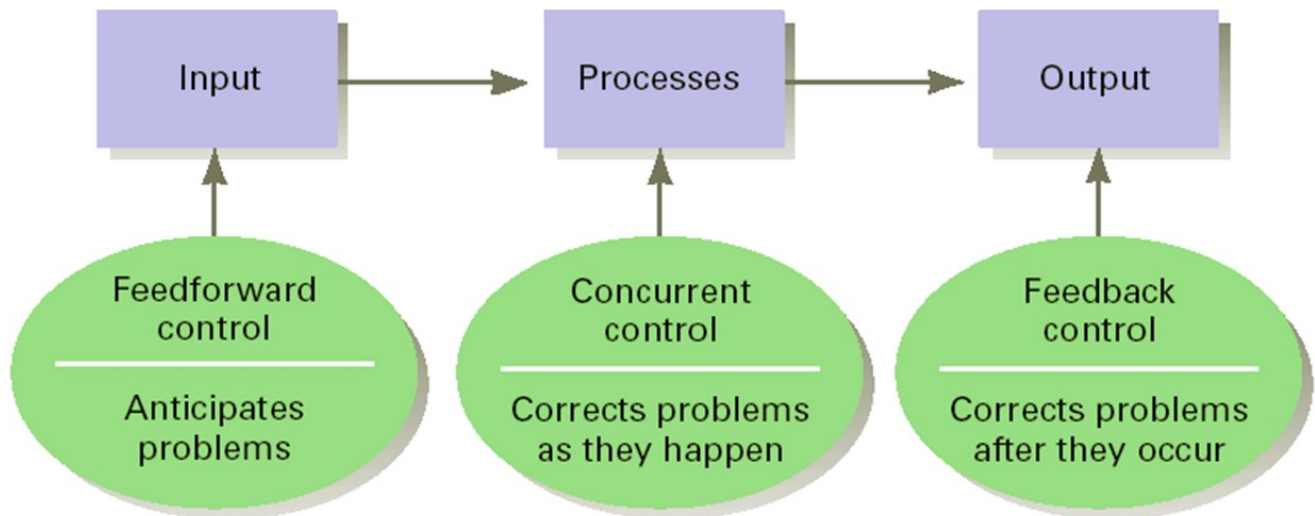
1. Pre –control system/ Feed forward controls: sometimes called preliminary or preventive controls, attempt to identify and prevent deviations in the standards before they occur. Per- control controls focus on human, material, and financial resources within the organization. These controls are evident in the selection and hiring of new employees. For example, organizations attempt to improve the likelihood that employees will perform up to standards by identifying the necessary job skills and by using tests and other screening devices to hire people with those skills.

Pre-control focuses on the regulation of inputs to ensure that they meet the standards necessary for the transformation process.

- Pre-control controls are desirable because they allow management to prevent problems rather than having to cure them later. Unfortunately, these controls require timely and accurate information that is often difficult to develop. Pre-control control also is sometimes called preliminary control, Feed forward, preventive control, or steering control.

2. Concurrent controls: monitor ongoing employee activity to ensure consistency with quality standards. These controls rely on performance standards, rules, and regulations for guiding employee tasks and behaviors. Their purpose is to ensure that work activities produce the desired results. As an example, many manufacturing operations include devices that measure whether the items being produced meet quality standards. Employees monitor the measurements; if they see

that standards are not being met in some area, they make a correction themselves or let a manager know that a problem is occurring.

- Concurrent control takes place while an activity is in progress. It involves the regulation of ongoing activities that are part of transformation process to ensure that they conform to organizational standards. Concurrent control is designed to ensure that employee work activities produce the correct results.

- Since concurrent control involves regulating ongoing tasks, it requires a thorough understanding of the specific tasks involved and their relationship to the desired and product. Concurrent control sometimes is called screening or yes-no control, because it often involves checkpoints at which determinations are made about whether to continue progress, take corrective action, or stop work altogether on products or services.

3. Post-control/Feedback controls: Involve reviewing information to determine whether performance meets established standards. For example, suppose that an organization establishes a goal of increasing its profit by 12 percent next year. To ensure that this goal is reached, the organization must monitor its profit on a monthly basis. After three months, if profit has increased by 3 percent, management might assume that plans are going according to schedule.

- This type of control focuses on the outputs of the organization after transformation is complete. Sometimes called post action or output control, fulfills a number of important functions. For one thing, it often is used when Feed forward and concurrent controls are not feasible or are too costly.

- Sometimes, feedback is the only viable type of control available. Moreover, feedback has two advantages over Feed forward and concurrent control. First, feedback provides managers with meaningful information on how effective its planning effort was. If feedback indicates little variance between standard and actual performance, this is evidence that planning was generally on target.

- If the deviation is great, a manager can use this information when formulating new plans to make them more effective. Second, feedback control can enhance employees' motivation.

The major drawback of this type of control is that, the time the manager has the information and if there is significant problem the damage is already done. But for many activities, feedback control fulfils number of important functions.

The control process

The control process involves carefully collecting information about a system, process, person, or group of people in order to make necessary decisions about each. Managers set up control systems that consist of four key steps:

1. Establish standards to measure performance: - Standards are the plans or the targets which have to be achieved in the course of business function. They can also be called as the criterions for judging the performance. Standards generally are classified into two-

   - Measurable or tangible - Those standards which can be measured and expressed are called as measurable standards. They can be in form of cost, output, expenditure, time, profit, etc.

   - Non-measurable or intangible- There are standards which cannot be measured monetarily. For example- performance of a manager, deviation of workers, their attitudes towards a concern. These are called as intangible standards.

   - Controlling becomes easy through establishment of these standards because controlling is exercised on the basis of these standards. Managers define goals for organizational departments in specific, operational terms that include standards of performance to compare with organizational activities.

2. Measure actual performance: Finding out deviations becomes easy through measuring the actual performance. Performance levels are sometimes easy to measure and sometimes difficult. Measurement of tangible standards is easy as it can be expressed in units, cost, money terms, etc. Quantitative measurement becomes difficult when performance of manager has to be measured.

   - Most organizations prepare formal reports of performance measurements that manager's review regularly. These measurements should be related to the standards set in the first

step of the control process. For example, if sales growth is a target, the organization should have a means of gathering and reporting sales data.

3. Compare performance with the standards: This step compares actual activities to performance standards. When managers read computer reports or walk through their plants, they identify whether actual performance meets, exceed, or fall short of standards or deviated from standard. Deviation can be defined as the gap between actual performance and the planned targets. The manager has to find out two things here- extent of deviation and cause of deviation. Extent of deviation means that the manager has to find out whether the deviation is positive or negative or whether the actual performance is in conformity with the planned performance. The managers have to exercise control by exception. He has to find out those deviations which are critical and important for business. Minor deviations have to be ignored.

4. Take corrective actions: Once the causes and extent of deviations are known, the manager has to detect those errors and take remedial measures for it. There are two alternatives here-

   - Taking corrective measures for deviations which have occurred; and

   - After taking the corrective measures, if the actual performance is not in conformity with plans, the manager can revise the targets. It is here the controlling process comes to an end.

Follow up is an important step because it is only through taking corrective measures, a manager can exercise controlling.

When performance deviates from standards, managers must determine what changes, if any, are necessary and how to apply them. In the productivity and quality-centered environment, workers and managers are often empowered to evaluate their own work. After the evaluator determines the cause or causes of deviation, he or she can take the fourth step—corrective action. The most effective course may be prescribed by policies or may be best left up to employees' judgment and initiative.

These steps must be repeated periodically until the organizational goal is achieved

Management Information System (MIS)

Management information system, or MIS, broadly refers to a computer-based system that provides managers with the tools to organize evaluate and efficiently manage departments within an organization. In order to provide past, present and prediction information, a management information system can include software that helps in decision making, data resources such as databases, the hardware resources of a system, decision support systems(DSS), people management and project management applications, and any computerized processes that enable the department to run efficiently.

- A management information system organizes past, present and projected data from both internal and external sources and process it into usable information.

  - ❑ Manager can identify alternatives quickly

  - ❑ Evaluate the alternatives by using spreadsheet program, pose a series of "what-if" questions

  - ❑ Finally select the best alternatives

Unit 5
Computer Animation

Introduction

Although we tend to think of **animation** as implying object motions, the term computer animation generally refers to any time sequence of visual changes in a scene. In addition to changing object position with translations or rotations, a computer-generated animation could display time variations in object size, color, transparency, or surface texture.

Some typical applications of computer-generated animation are entertainment (motion pictures and cartoons), advertising, scientific and engineering studies, and training and education. Advertising animations often transition one object shape into another: for example, transforming a can of motor oil into an automobile engine.

Computer animations can also be generated by changing camera parameters, such as position, orientation, and focal length. And we can produce computer animations by charging lighting effects or other parameters and procedures associated with illumination and rendering.

Design of animation sequences

In general, an animation sequence is designed with the following steps:
1. Storyboard layout
2. Object definitions
3. Key-frame specifications
4. Generation of in-between frames

This standard approach for animated cartoons is applied to other animation applications as well, although there are many special applications that do not follow this sequence. Real-time computer animations produced by flight simulators, for instance, display motion sequences in response to settings on the aircraft controls. For frame-by-frame animation, each frame of the scene is separately generated and stored. Later, the frames can be recorded on film or they can be consecutively displayed in "real-time playback" mode.

1. **Storyboard** is an outline of the action. It defines the motion sequence as a set of basic events that are to take place. Depending on the type of animation to be produced, the storyboard could consist of a set of rough sketches or it could be a list of the basic ideas for the motion.
2. An **object definition** is given for each participant in the action. Objects can be defined in terms of basic shapes, such as polygons or splines. In addition, the associated movements for each object are specified along with the shape.
3. A **key frame** is a detailed drawing of the scene at a certain time in the animation sequence. Within each key frame, each object is positioned according to the time for that frame. Some key frames are chosen at extreme positions in the action; others are spaced so that the time interval between key frames is not too great. More key frames are specified for intricate motions than for simple, slowly varying motions.
4. **In-betweens** are the intermediate frames between the key frames. The number of in-betweens needed is determined by the media to be used to display the animation. Film requires 24 frames per second, and graphics terminals are refreshed at the rate of 30 to 60 frames per second.

Typically, time intervals for the motion are set up so that there are from three to five in-betweens for each pair of key frames. Depending on the speed specified for the motion, some key frames can be duplicated. For a 1-minute film sequence with no duplication, we would need 1440 frames. With five in-betweens for each pair of key frames, we would need 288 key frames. If the motion is not too complicated, we could space the key frames a little farther apart.

There are several other tasks that may be required, depending on the application. They include motion verification, editing, and production and synchronization of a soundtrack. Many of the functions needed to produce general animations are now computer-generated.

Virtual Reality

Virtual Reality

- "Virtual reality" originally denoted a fully immersive system
- It has since been used to describe non-orthodox systems lacking wired gloves etc.
- The most immersive experiences I have seen:
  - 3D IMAX (non-VR), Real-D movies (non-VR), CAVE (VR)
  - All of them are very impressive if well done
- In practice, it is very difficult to create a fully convincing virtual reality experience
  - Technical limitations on processing power and image resolution
  - Input/output-devices far from perfect
 - Perfectionism usually not even needed

VR definition

- A simulation in which computer graphics is used to create a realistic-looking world
- Can be a completely synthetic environment without any real counterpart
- Virtual Reality is a high-end user - computer interface that involves real-time simulation and interaction through multiple sensory channels
  - Sensory information may include visual, auditory, haptic, tactile, smell, taste…
  - Visual is dominating

Virtual Reality Triangle
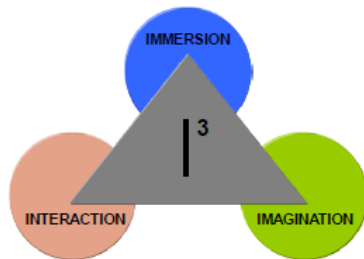
The Three I's of Virtual Reality

- **Immersion**
  - The feeling of presence, being there
  - The amount and quality of stimuli and sensations
  - Real time: very little latency accepted
    - around 50 ms is a threshold of visual noticability, but varies for all senses

- **Interaction**
  - Not just passive watching
  - Moving in the virtual world
  - Doing all kind of things there

- **Imagination**
  - The applications
  - The ideas
  - The virtual worlds

Properties of VR

- Synthetically generated environment
  - Computers, 3D, real-time
- Sensory feedback
  - I/O devices
- Interaction, moving
  - In time
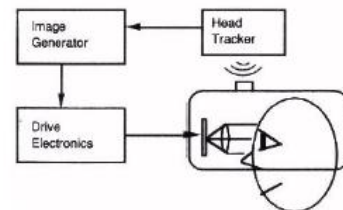 - In space
  - In scale
- Immersion
  - Being there

The Basic Components of VR

- Computing
- Displays (visual, audio, haptics, etc)
- Tracking
- Input

The VR System Architecture

VR Input Devices

- The ways to transfer information from the user to the computer
- Mouse, keyboard
- Trackball, joystick, mouse, ...
- Position tracking
- Orientation tracking
- Datagloves
- Exoskeleton (external hardware on hands etc.)
- Data suit
- Motion capture (tracking of body)
- Eye tracking
- Videoanalysis
- Brainwaves (EEG), EMG, EOG
- ...

VR Output Devices

- Transfering data from the computer to the senses of the user
- Fooling of ALL(?) senses?
  - Displays
    - Monitors, projectors, HMDs, etc.
  - Localized audio
    - Loudspeakers, headphones
  - Tactile & haptic
    - Force feedback
  - Smell, balance, etc.

Requirements for the System

- Real time, >25 frames/s
  - So the environment is smooth
- Latency < 50 ms
  - Processing power
  - Input devices
- Big data size
  - Enough memory & hard disk space
- 3D speed, as much polygon/s as possible
  - PC: new and powerful graphics cards
  - If not enough power in GPU, fps drops or details drop
- CPU processing power for other calculations & simulations
- Fast networking
- VR may be expensive, or low-cost...