

# MANAGEMENT INFORMATION SYSTEM

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By  
**MR. MUTHAPPAN M.  
ST. XAVIER'S COLLEGE, THUMBA,  
THIRUVANANTHAPURAM**

Module 1

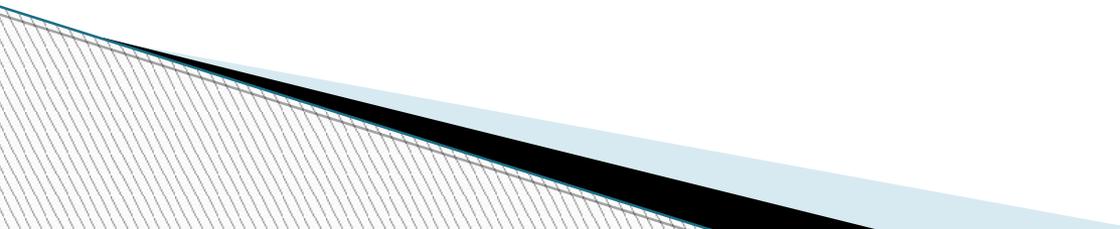
**Introduction**

**To**

**Management**

**Information**

**System**



# Management Information System

## M I S

“A **System** of providing **Information** to the **Management**”

- ✓ System
- ✓ Information
- ✓ Management

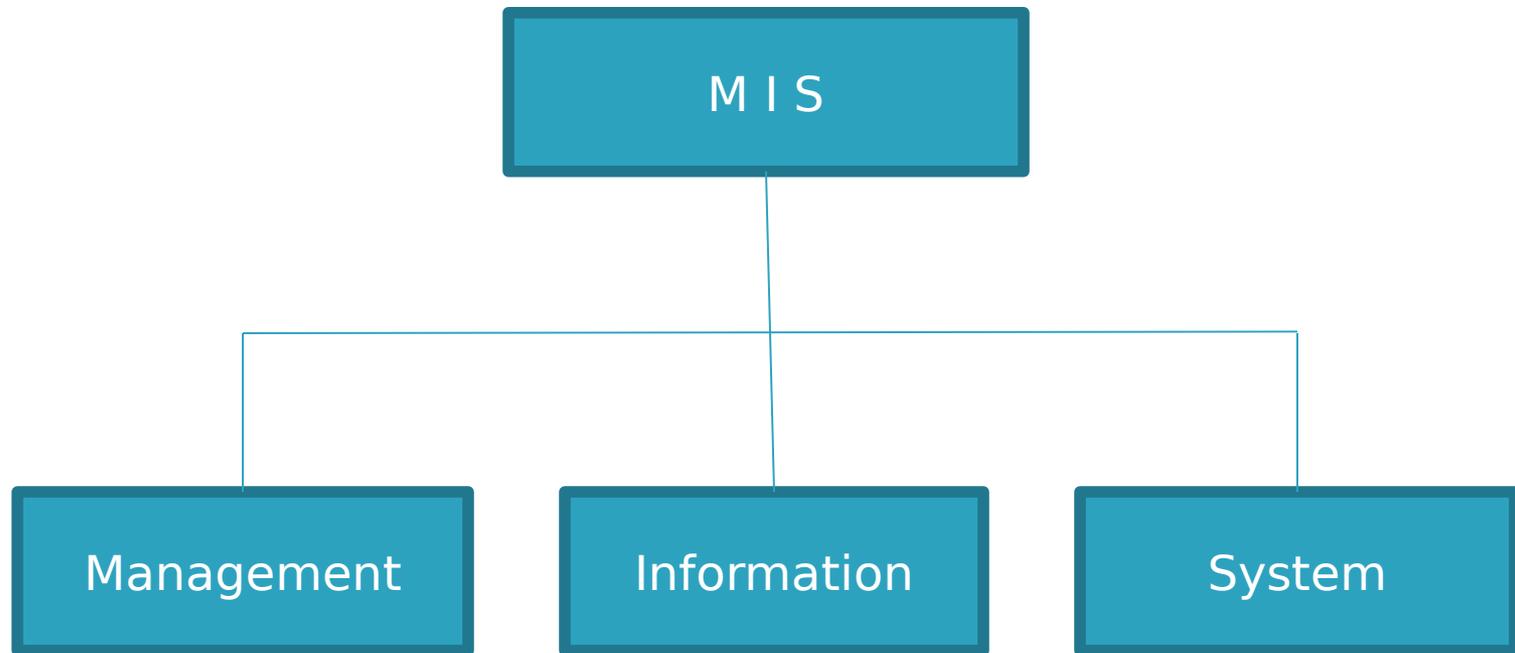
System - Integration

Information - Processed data

Management - Ultimate user

# M I S

## - Three components in MIS

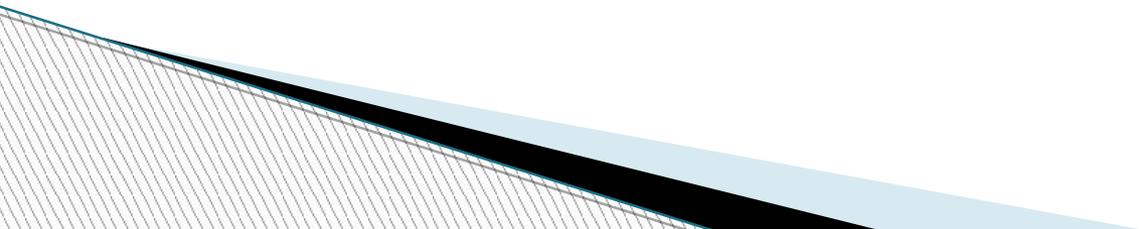


# Management

- ❖ Management is the art of getting things done through and with people.
- ❖ Management is the effective utilization of human and material resources to achieve the organizational objectives.

It is a process consisting of the five basic functions:

- ✓ Planning
- ✓ Organizing
- ✓ Staffing
- ✓ Directing
- ✓ Controlling



# Management



**Frederick Winslow Taylor (1856 – 1915)**

The person behind The Principle of Scientific of Management

The father of Scientific Management and Efficiency Movement

*"Management is the art of knowing what you want to do and then seeing that they do it in the best and the cheapest way."*

# Management



**Harold Koontz (1909-1984)**

The person behind the book Principles of Management  
(He co-authored with Cyril J. O' Donnel)

His known advice is "Manage-men-t"

*"Management is the art of getting things done through others and with formally organized groups."*

# Management



**Peter Ferdinand Drucker (1909 – 2005)**

The person behind the concept of MBO

The father of Modern Management

*“Management is a multipurpose organ that manages a business and manages Managers and manages Workers and work”.*

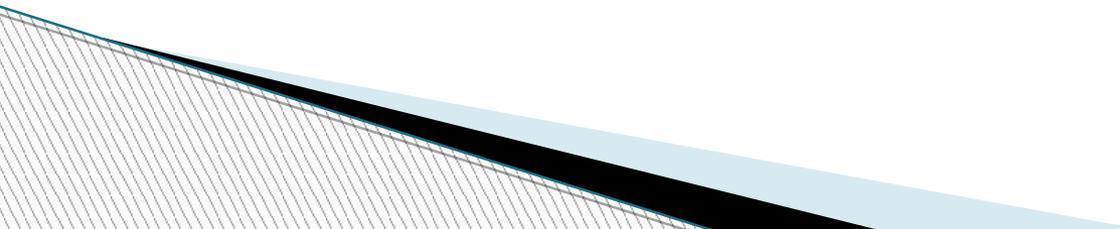
# Management

Management covers the functions of planning to controlling.

Top management – Planning

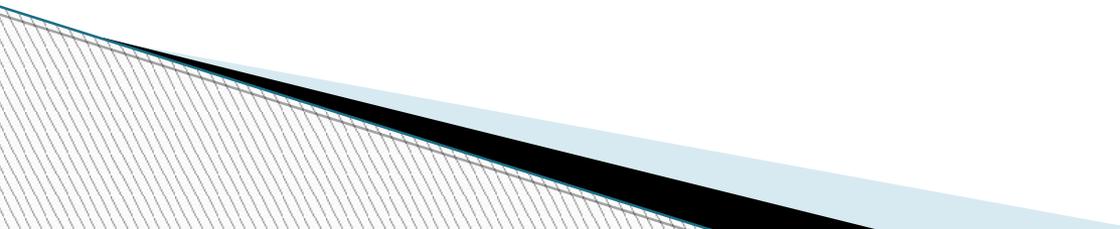
Middle management – Controlling

Lower Management – Actual operation

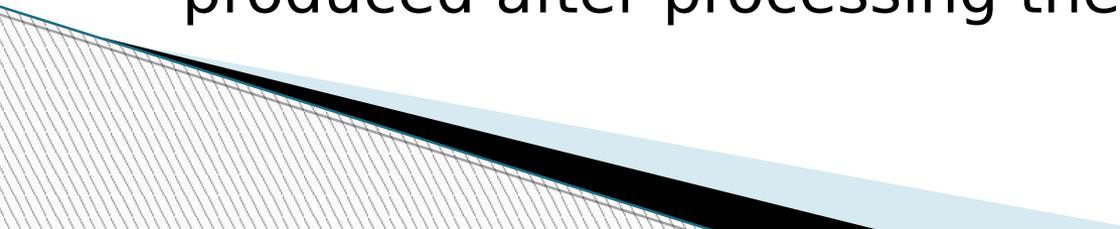


# Information

In performing each of the five functions of management, in each of the functional areas, at any of the three levels of management, information is required to take different decisions. Information is the basis of decision-making and in-fact the lifeblood of management.



# Information

- Information is considered to be an important asset for any organization in the modern competitive world.
  - Information is data that is processed and presented in a form which is meaningful to the recipient. It may contain an element of surprise, reduce uncertainty or provoke a manager to initiate an action.
  - In MIS a clear distinction is made between data and information. Data is like raw materials while the information is equivalent to the finished goods produced after processing the raw material.
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# Information

Davis & Olson have defined information as “data that has been processed into a form that is meaningful to the recipient and is of real or perceived value in current or perspective actions or decisions”.

## Generation of Information



# Information

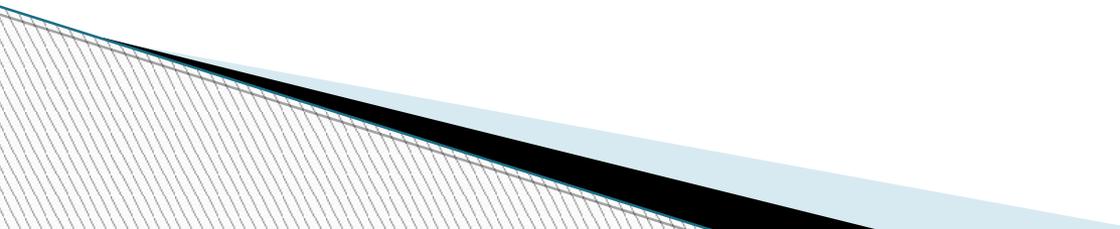
Processed data

It has a form

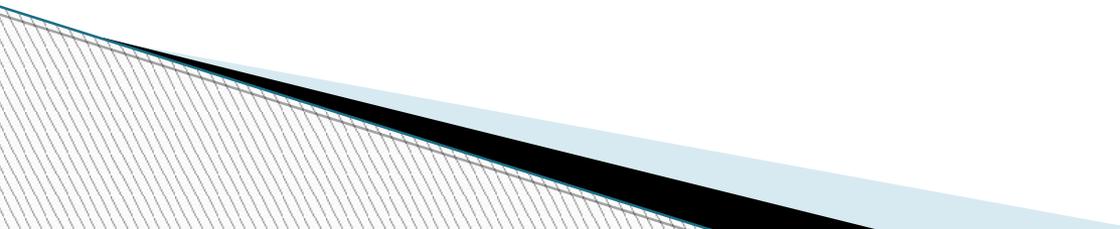
It is meaningful to the recipient

It has a value

It is useful in current or perspective  
decisions or actions



# System

- ❖ A system is a set of interrelated elements or components.
  - ❖ The elements or components are orderly arranged according to a design and each component has a definite function to perform in the system.
  - ❖ The elements or components forming a system are called subsystems. Each such subsystem can further be divided into lower level subsystems.
  - ❖ This process of dividing system into lower subsystems is called factoring of a system.
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# System

A system may be defined as “ a set of elements, joined together to achieve a common objective.”

In MIS, we are usually concerned with man-made systems involving input, processes and output as represented below:



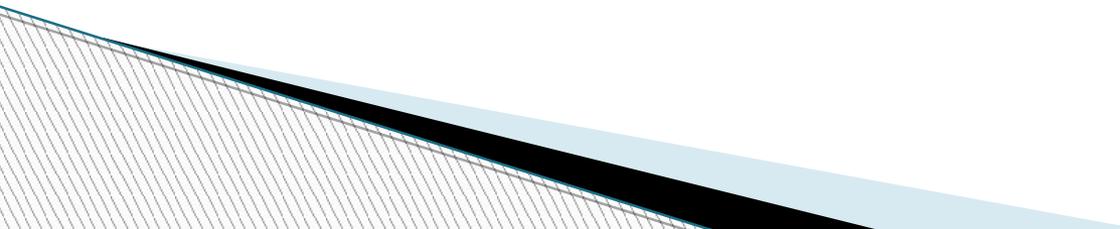
# System

A system is a collection of related elements. These elements are in the form of:

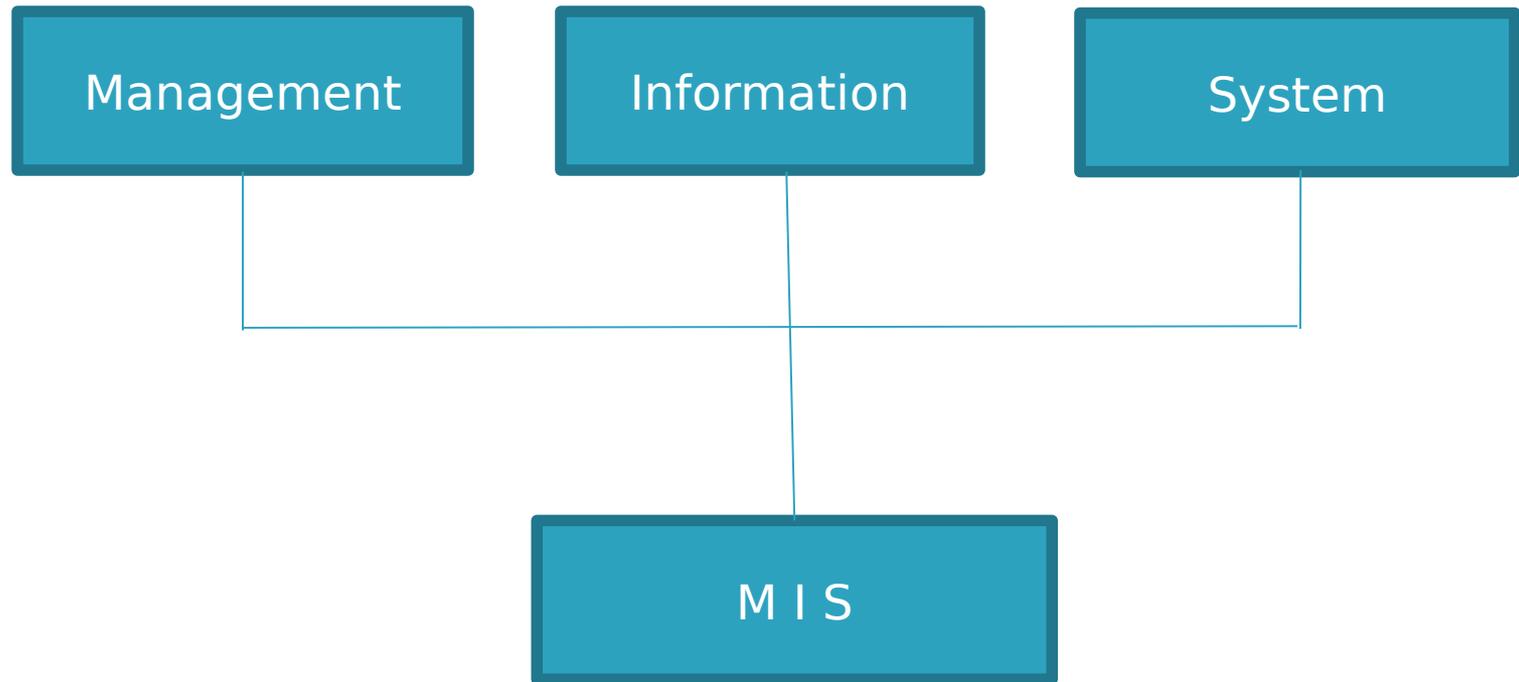
Input

Process

output



# M I S



# Management Information System

## M I S

MIS is a concept of the last decade or two. It has been understood and described in a number of ways. It is also known as the Information System, the Information and Decision System, the Computer- based information System.

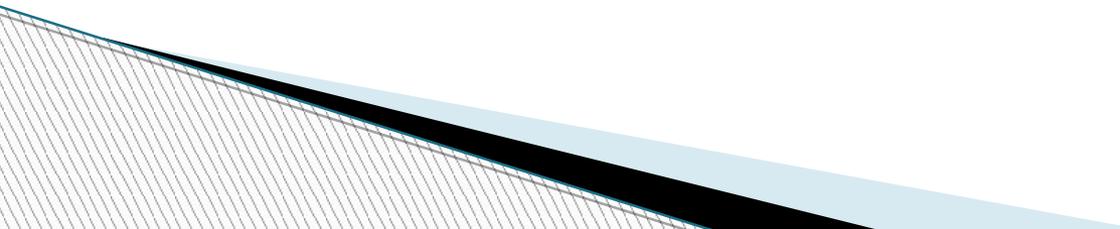
MIS is a system consisting of people, machines, procedures, databases, and data models, as its elements. The system gathers data from the internal and external sources of an organization; processes it and supplies MI to assist managers in the process of decision making.

# Management Information System

## M I S

- MIS is a system for processing data in order to give proper information to the management for performing its functions.
- MIS is basically concerned with processing data into information and is then communicated to the various departments in an organization for appropriate decision making.
- MIS is a system to support the decision making function in the organization.
- MIS uses computers and communication technology.

# MIS Definitions

- ▶ The MIS is defined as an integrated system of man and machine for providing the information to support the operations, the management and the decision making function in the organization.
  - ▶ The MIS is defined as a system based on the database of the organization evolved for the purpose of providing information to the people in the organization.
  - ▶ The MIS is defined as a system which provides information support for decision making in the organization.
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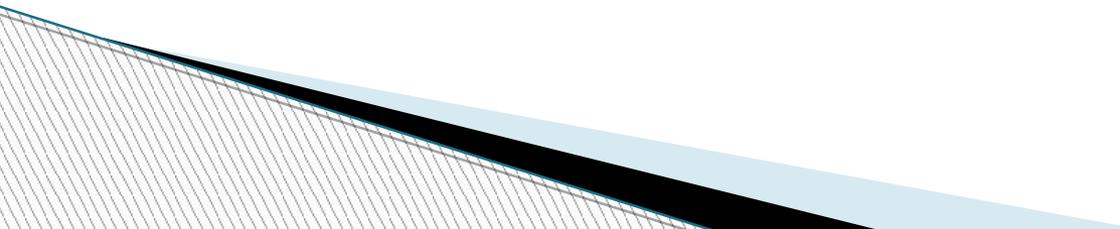
# WHAT IS MIS?

- To provide **R**ight Information
  - To the **R**ight person
    - At the **R**ight place
      - At the **R**ight time
        - In the **R**ight form
          - At the **R**ight cost

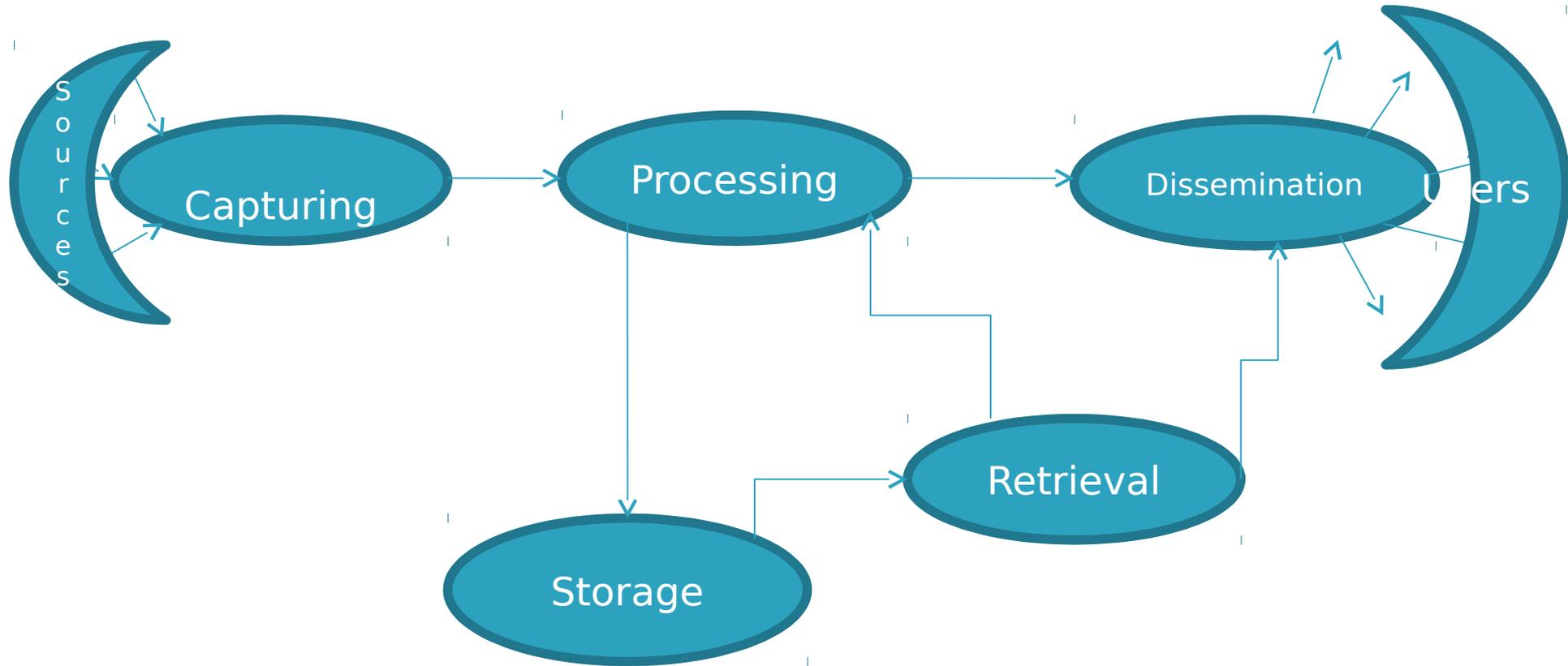
# Characteristics of MIS

- ▶ System Approach
  - ▶ Management Oriented
  - ▶ Need Based
  - ▶ Future Oriented
  - ▶ Integrated System
  - ▶ Common Data Flows
  - ▶ Long Term Planning
  - ▶ Sub-System Concept
  - ▶ Central Database
  - ▶ Business Driven
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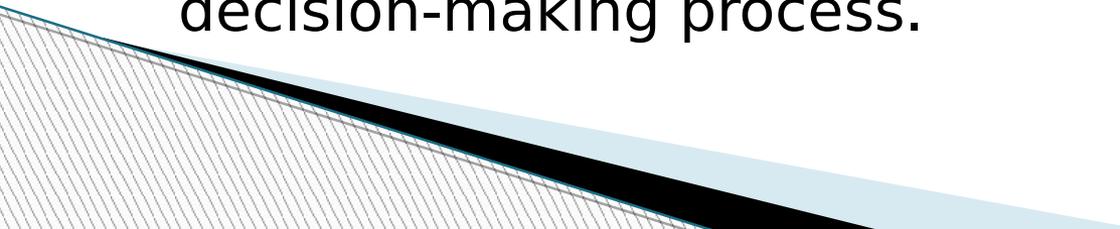
# Functions of MIS

- ▶ Data Capturing
  - ▶ Processing of Data
  - ▶ Storage of Information
  - ▶ Retrieval of Information
  - ▶ Dissemination of Management Information
- 

# FUNCTIONS OF MIS



# Management Information System Concept

- ▶ The MIS concept is an image which is associated with man, machine and methods for collecting data from the internal and external sources and processing these data for providing information to facilitate the decision-making process of the business.
  - ▶ MIS is not new, only the computerization is new , before computers MIS techniques existed to supply managers with the information that would permit them to plan and control business operations.
  - ▶ The computer has added on more dimensions such as speed, accuracy and increased volume of data that permit the consideration of more alternatives in decision-making process.
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# Management Information System Concept

- ▶ Management information system is an integrated set of component or entities that interact to achieve a particular function, objective or goal. Therefore it is a computer based system that provides information for decisions making on planning, organizing and controlling the operation of the sub-system of the firm and provides a synergistic organization in the process.
- ▶ The component of an information system includes: a hardware which is used for input/output process and storage of data, software used to process data and also to instruct the hand-ware component, data bases which is the location in the system where all the organization data will be automated and procedures which is a set of documents that explain the structure of that MIS.

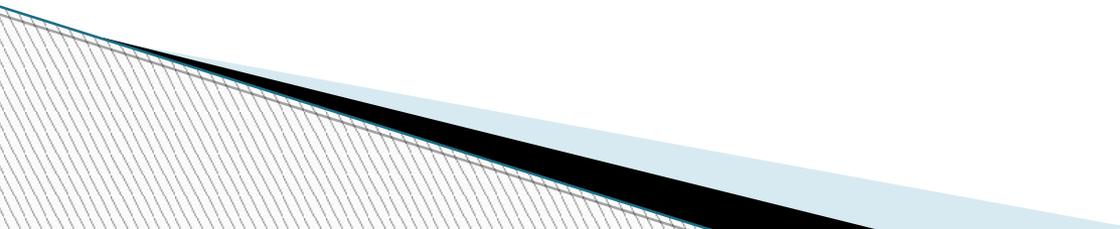
# Growth of M I S - Evolution

- The concept of the MIS has evolved over a period of time comprising many different facets of the organizational functions.
- The initial concept of MIS was to process data and present it in the form of reports. **EDP**
- This concept was further modified when a distinction was made between data and information. **IRS**
- This was further modified that there should be a system to present information in a right form. **DSS**
- This demanded selective approach and exception reporting was evolved in MIS. **ERS**

# Growth of M I S - Evolution

- The exception reporting (fixation of the norms) was changed as a need based exception reporting, either an individual or a group of individuals when the environment changes.
- This gave rise to the concept of MIS based on the DATABASE.
- Over a period of time, the concept of the end user computing using multiple databases emerged - EIS
- This concept brought a fundamental change in MIS.
- The concept of MIS in today's world is a system which handles the databases, provides com-putting facilities to the end user and gives a variety of decision making tools to the user of the system.

# Growth of M I S - Evolution

- These include the theories, principles and concepts from the Management Science, Psychology and Human Behavior, making the MIS more effective and useful.
  - The concept, therefore, is a blend of principles, theories and practices of the **Management**, **Information** and **System** giving rise to single product known as Management Information System (MIS).
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# Growth of MIS - Factors

- ▶ Growth of management theory and techniques
  - ▶ Growth of management accounting and its applications in business
  - ▶ Changes in the production and distribution methods and consequent changes in organizational structure
  - ▶ Development of management science (OR)
  - ▶ Introduction of computer into business data processing and the developments in information technology
  - ▶ Growth of the Internet and Popularity of WWW
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# Growth of MIS - Factors

- ▶ Management Theory
  - Management Accounting
    - ▢ Organizational Structure
      - ▢ Management Science
        - ▢ Information Technology
          - Internet and www

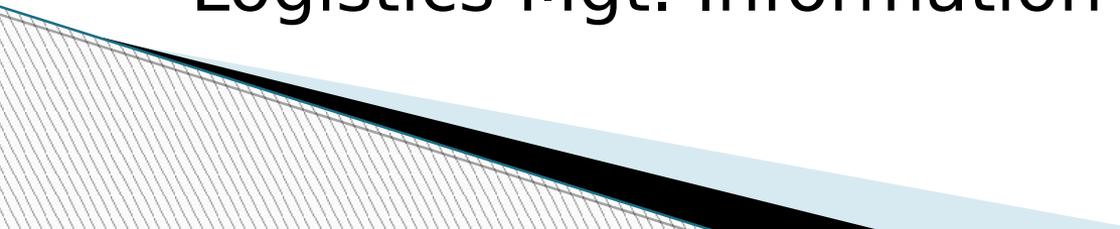
# Subsystems of MIS

The MIS is a federation of many subsystems.  
The subsystems can be seen as:

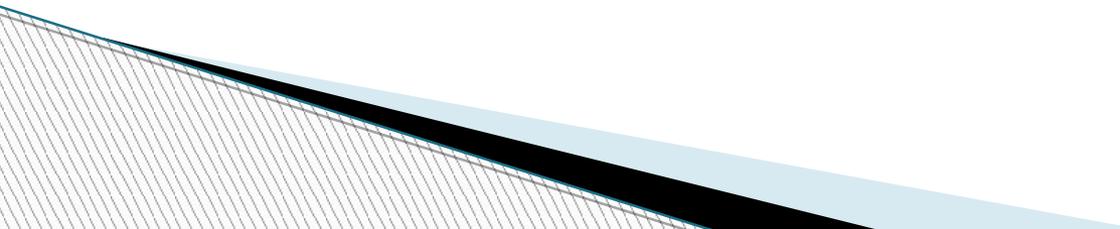
- Organizational function subsystems
- Basic (Management) activity subsystems

# Organizational Function Subsystems

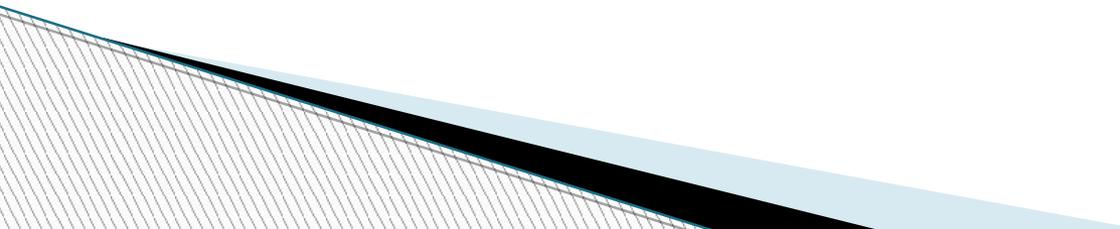
There are various organizational function subsystems which may be classified into the following categories:

- Production Mgt. Information Sub-system
  - Marketing Mgt. Information Sub-system
  - Financial Mgt. Information Sub-system
  - Personnel or HRD Mgt. Information Sub-system
  - R & D Mgt. Information Sub-system
  - Logistics Mgt. Information Sub-system
- 

# Basic (Management) Activity Subsystems

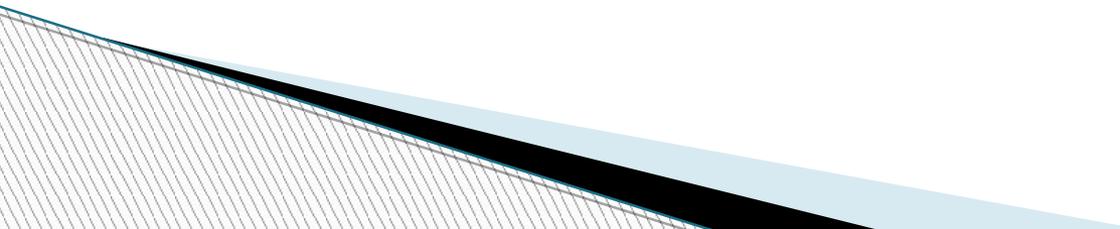
- ▶ Transaction Processing Sub-system (TPS)
  - ▶ Process Control Sub-system (PCS)
  - ▶ Office Automation Sub-system (OAS)
  - ▶ Information Reporting Sub-system (IRS)
  - ▶ Decision Support Sub-system (DSS)
  - ▶ Knowledge Based Sub-system (KBS)
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# Significance and Need for MIS

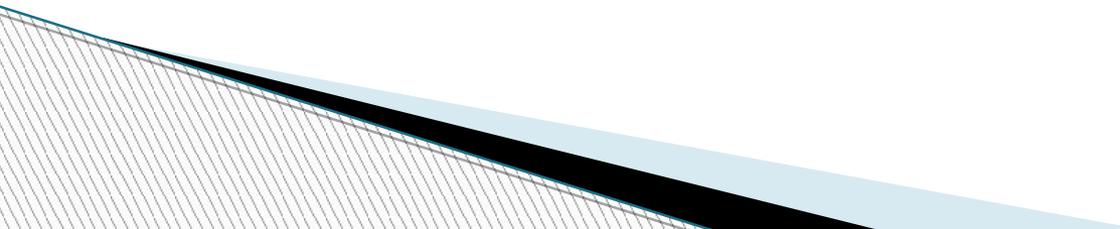
- Managers play a key role in any organization.
  - They are responsible for taking decisions appropriate to the need of the market condition.
  - Information systems have become the main tool used by managers in decision making.
  - Managers perceive information as the driving force to achieve success in any business.
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# Significance and Need for MIS

Hence, there is a need for MIS as:

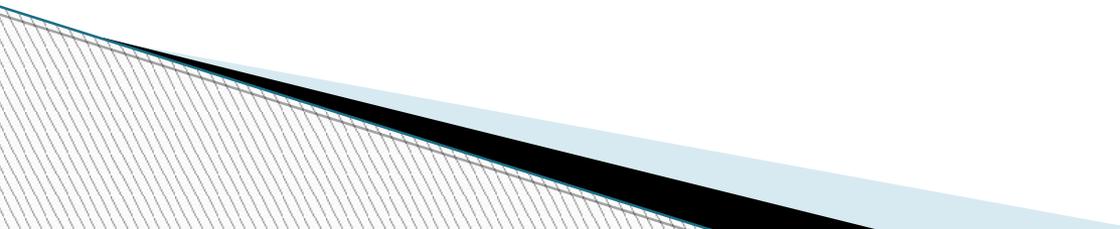
- ❖ Support of its business process and operations
  - ❖ Support of decision making by managers
  - ❖ Support of its strategies for competitive advantage-Gaining a strategic advantage
- 

# Objectives of MIS

- To support business process and operations of the organization
  - To support decision making functions of its employees and managers of the organization
  - To support strategies of the organizations for competitive advantage - Gaining strategic advantage
- 

# Role of MIS

According to James O'brien MIS performs three major roles such as:

- Support business operations
  - Support managerial decisions
  - Gaining strategic competitive advantage
- 

# Role of MIS

The systems which support business operations include:

- ✓ TPS
- ✓ PCS
- ✓ OAS.

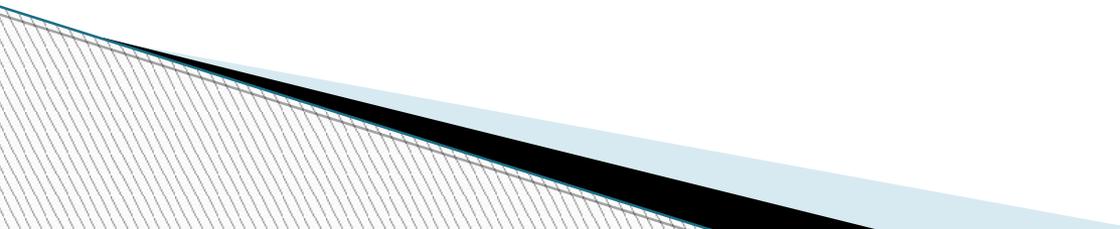
The systems which support managerial decisions include:

- ✓ IRS (MIS)
- ✓ DSS

The system which support to gain strategic advantage include:

- ✓ ESS (EIS)
- ✓ KBS.

# Operating Elements of MIS

- ▶ Input
  - ▶ Storage
  - ▶ Processing
  - ▶ Output
- 

# Levels of Management

In an organization there is a managerial hierarchy or management levels which may be simply classified as:

- ❖ Top Level Management
  - ❖ Middle Level Management
  - ❖ Operative or Lower Level Management
- 