

# *Chapter 1*

## *Introduction to Management Information System*

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# Learning Objectives

- Discuss the concept of information systems
- Explain different aspects of MIS
- Discuss about the function of MIS
- Describe the structure of MIS



## Concept of Information System (IS)

Information system (IS) is designed to support business operations for providing necessary information.

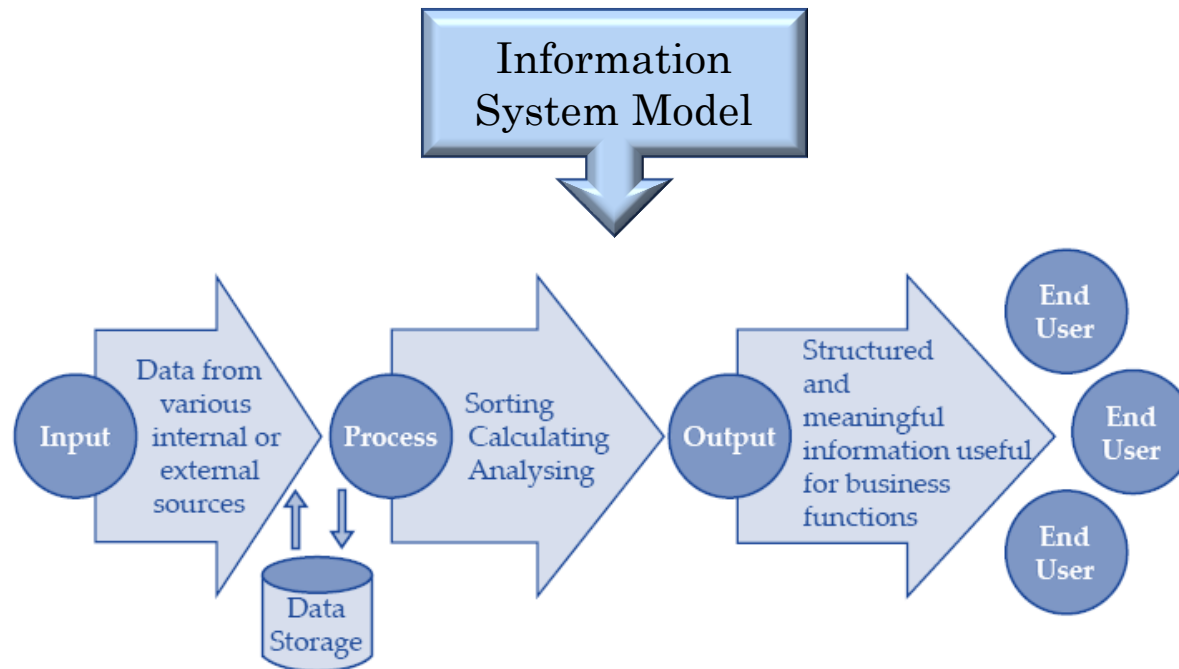
Information can be defined as a well-structured data with a specific meaning.

A system is an arrangement that takes input and provides output after completing the required process.

IS is defined as an arrangement that processes data and provides meaningful information through the application of various tools.



Information system is a set of interrelated components that collects, stores, processes, generates and disseminates information for effective business functioning.



# Management Information System (MIS)

Management Information System (MIS) provides information to the management, which helps in decision making and effective business management.

## *Definitions of MIS*

According to **Schwartz**, “MIS is the system of people, equipment, procedures, document and communication that collects, validates, operates on, transforms, stores, retrieves and presents data for use in planning, budgeting, accounting, controlling and other management processes.”

According to **Davis and Olson**, “MIS is an integrated user-machine system designed for providing information to support operational control, management control and decision making functions in an organisation. ISs make use of resources such as hardware, software, men, procedures as well as suppliers.”



## Structure of MIS



MIS refers to a set of interrelated components that collect, store, process, generate and disseminate information for effective business decision making.

MIS collects data from various resources, processes it and transforms that data into meaningful and useful information.



## Nature and Scope of MIS

### Nature of MIS

#### System approach

It refers to the approach of input, process and output involved in business decision making.

#### Technology-based concept

This concept explains the utilisation of various technologies for data processing in the system.

#### Interdisciplinary concept

This encompasses all business disciplines such as accounting, computer science, operational research, statistics, behavioural science and management.

MIS provides useful information to managers for making various business decisions.

MIS helps in analysing and organising unstructured data collected from various resources.

Information technology has significantly broadened the scope of MIS.





## Characteristics of MIS



## Need for MIS

Need for MIS in the organisation are as follows:

Fulfil information requirements of the organisation in setting goals

Facilitates effective decision-making measures

Organises data from various resources

Ensures the efficiency of planning in the organisation

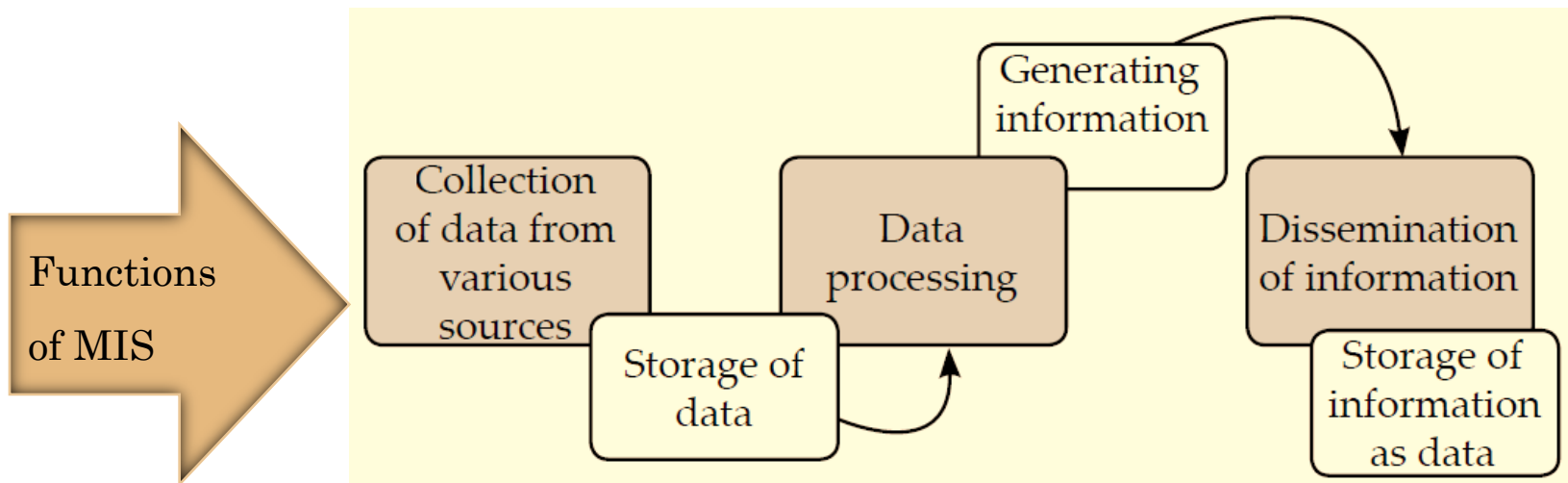
Provides an effective control on operational functions

Facilitates the flow of information among employees of different levels



## Functions of MIS

MIS serves the information needs of managers to make various management decisions.



## Adopting MIS in Organisations

Adoption of IS in organisations		
Timeframe	Major Adoptions	Skills Required to be Acquired or Developed
1970s	<ul style="list-style-type: none"> <li>• Main focus was to automate existing processes</li> <li>• Use of Mainframe computers</li> <li>• Centralisation of computers and data</li> <li>• Systems tie up with a few business functions: payroll, inventory, billing</li> </ul>	Programming in COBOL
1980s	<ul style="list-style-type: none"> <li>• Main focus was on automating existing processes</li> <li>• Installation of PCs and LANs</li> <li>• Set up of separate computer systems for separate departments</li> <li>• End-user computing with word processors and spreadsheets making individual departments less dependent on the IT department</li> </ul>	PC support, basic Networking
1990s	<ul style="list-style-type: none"> <li>• Main focus was on central control and corporate learning</li> <li>• Adopting Wide Area Networks (WANs) as corporate standards</li> <li>• System integration and data integration efforts by senior management</li> <li>• Reduction in stand-alone systems</li> </ul>	Network support, systems integration, database administration
2000s	<ul style="list-style-type: none"> <li>• Main focus is on efficiencies and speedy business processes in inventory, manufacturing, distribution</li> <li>• Expansion of Wide Area Networks to the Internet</li> <li>• Introduction of global enterprises and business associates for more efficient supply chain and distribution practices.</li> <li>• Senior management looks for data sharing across systems.</li> </ul>	Global network support, systems integration



## MIS and Small Business

MIS can help small businesses in performing their core operations efficiently by generating accurate and relevant reports.

These core operations are as follows:

Finance and  
accounting

Human resource  
management

Customer  
relationship  
management

Inventory  
management

Production

Purchasing and  
merchandising

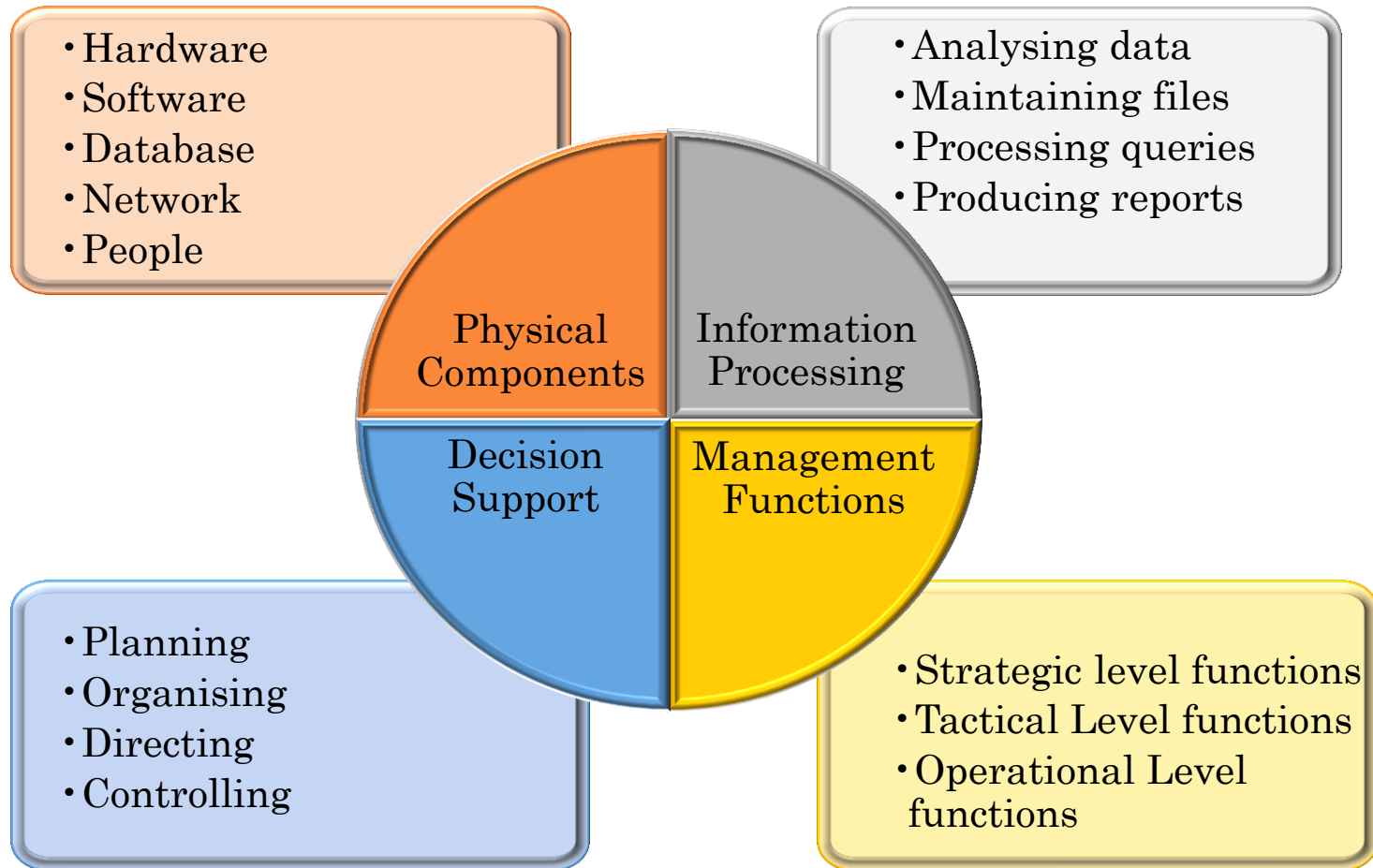
Orders and  
delivery

E-commerce

Reports created for these core operations help in developing business, aiding extraction of meaningful information from the business data and thus enhancing the business decision-making process.



## Structure of MIS



## Physical Components

The MIS components that can be physically examined fall under this category. These includes:

Hardware

Software

Database

Network

People



## Information Components

The information processing component of MIS includes the following elements:

### Data analysis

It refers to activities such as calculating, sorting, classifying and comparing data.

### Management of files

It involves creating and maintaining records of data and information obtained in previous processes in folders or files for future reference.

### Processing of queries

It involves extracting data and analysing it for required operations to produce information for the query.

### Report generation

It involves preparing reports manually or in an electronic form for the reference of managers.





## Management Functions

### MIS Structure at Different Levels of Management

Strategic-Level  
Functions

Top-Level  
Management

Unstructured  
Decision

Tactical-Level Functions

Middle-Level  
Management

Semi Structured /  
Structured Decision

Operational-Level  
Functions

Lower-Level  
Management

Structured Decision



## Decision Support

A decision can be of two types, namely structured and unstructured.

### Structured Decisions

Structured decisions are dependent on previous decisions and are operational in nature.

### Unstructured Decisions

Unstructured decisions are those that do not relate to any previous decisions and are administrative in nature.

Apart from these two categories, there can be semi-structured decisions, which are taken by middle management but are indirectly related to the top management.

### Examples of Management Decisions

Unstructured Decisions (Planning)	Semi-structured Decisions (Organising)	Structured Decisions (Directing and Controlling)
<ul style="list-style-type: none"> <li>Financial planning</li> <li>Portfolio management</li> <li>Ratio analysis</li> </ul>	<ul style="list-style-type: none"> <li>Financial forecasting</li> <li>Financial budgeting</li> </ul>	<ul style="list-style-type: none"> <li>Cash management</li> <li>Purchase decisions</li> </ul>



## MIS Reports and its Types

MIS reports are an essential tool required by the management to assess the performance of an organisation in order to allow faster decision making.

MIS reports can be classified under four major heads which are as follows:

### Scheduled reports

These reports are produced periodically i.e., daily, weekly, fortnightly etc. or on any particular schedule.

### Key indicator reports

These reports are primarily available at the beginning of the day and summarise the previous day's critical activities.

### Demand reports

These reports are generally given at the request of any key person or the manager.

### Exception reports

These reports are produced automatically when arises a situation that seems unusual or any situation that requires an action of management.



*Thank You*