IS 301 DECISION SUPPORT SYSTEMS

DECISION SUPPORT SYSTEMS AND INTELLIGENT SYSTEMS,
Seventh Edition
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Chapter 3
Management Information Systems

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Management Information Systems

Learning Objectives

1. What is Management Information Systems (MIS)
2. **Capturing Data:** Capturing contextual (appropriate) data, or operational information contribute in decision making.
3. **Processing Data:** needed for planning, organizing, coordinating, .. So, it means making calculations, sorting data, classifying data
4. **Information Retrieval:** The system should be able to retrieve this information from the storage as and when required by various users.
5. **Information Propagation:** the finished product of the MIS should be circulated to its users periodically using the organizational network.

Introduction (MIS)

- For the manager is an implementation of the organizational systems and procedures.
- To a programmer it is files structures and file processing.

The three components of MIS :

- **System** suggests integration and holistic (complete) view,
- **Information** stands for processed data, and
- **Management** is the ultimate user, the decision makers.

Introduction (MIS)

Management

Management covers the planning, control, and administration of the operations of a concern.

- the top management handles planning;
- the middle management concentrates on controlling; and
- the lower management is concerned with actual administration.

Information

- means the processed data that helps the management in planning, controlling and operations.
- Data means all the facts arising out of the operations of the concern.

System

- A system is made up of inputs, processing, output and feedback or control.

Thus MIS means a system for processing data in order to give proper information to the management for performing its functions.

Characteristics of MIS

Definition

'MIS' is a planned system of collecting, storing, and disseminating data in the form of information needed to carry out the functions of management.

Characteristics of MIS

- It should be based on a long-term planning.
- It should provide a holistic view of the dynamics and the structure of the organization.
- It should work as a complete and comprehensive system
- It should be planned in a top-down way.
- It should be based on need of strategic of managers of an organization.
- It should take care of exceptional situations by reporting such situations.

Characteristics of MIS

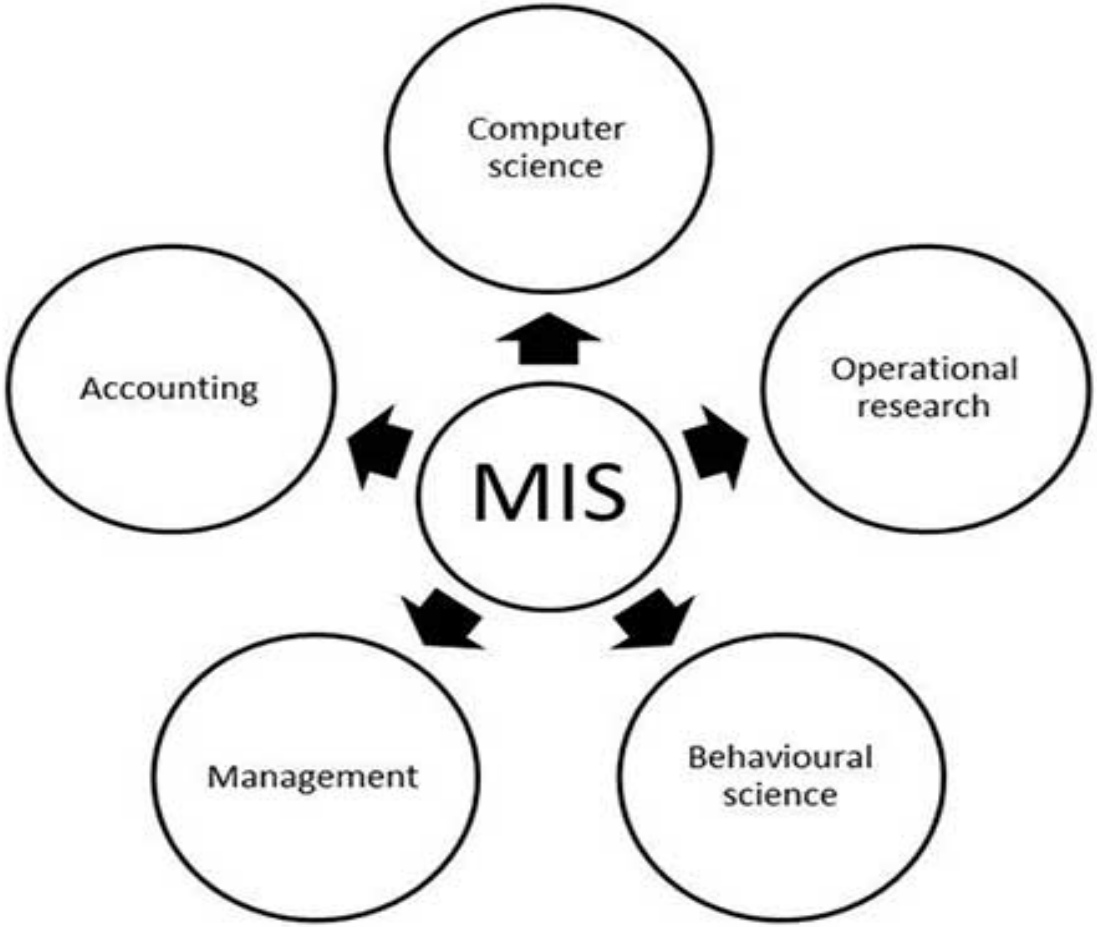
- It should be able to make forecasts and estimates, .. thus providing a competitive advantage.
- It should create linkage between all sub-systems to get right decision
- It should allow easy flow of information through various sub-systems, thus avoiding redundancy and duplicity of data.
- Although the MIS is an integrated, complete system, it should be made in such a flexible way that it could be easily split into smaller sub-systems as and when required.
- A central database is the backbone of a well-built MIS.

Characteristics of Computerized MIS

- It should be able to process data accurately and with high speed.
- It should be able to collect, organize, manipulate, and update large amount of raw data coming from various internal and external sources.
- It should provide real time information without any delay.
- It should support various output formats and follow latest rules and regulations in practice.
- It should provide organized and relevant information for all levels.
- It should aim at extreme flexibility in data storage and retrieval.

Nature and Scope of MIS

- The following diagram shows the nature and scope of MIS:



MIS - Enterprise Resource Planning (ERP)

ERP is an integrated, real-time, cross-functional enterprise application, ... It supports all core business processes such as sales order processing, inventory management and control, production and distribution planning, and finance.

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- ERP is an integrated, real-time, cross-functional enterprise application, an enterprise-wide transaction framework that supports all the internal business processes of a company.
- It supports all core business processes such as sales order processing, inventory management and control, production and distribution planning, and finance.
- Competitive advantage
- Use of latest technologies

Why of ERP

ERP is very helpful in the following areas:

- Business integration and automated data update
- Linkage between all core business processes and easy flow of integration
- Flexibility in business operations and more agility (quickly) to the company
- Better analysis and planning capabilities
- Critical decision-making

Scope of ERP

Finance: Financial accounting, managerial accounting, treasury management, asset management, budget control, costing, and enterprise control.

Logistics: Production planning, material management, plant maintenance, project management, events management, etc.

Human resource: Personnel management, training and development..

Supply Chain: Inventory control, purchase and order control, supplier scheduling, planning, etc.

Work flow: Integrate the entire organization with the flexible assignment of tasks and responsibility to locations, position, jobs, etc.

Advantages of ERP

- Reduced quality costs
- Quick decision-making
- Forecasting and optimization
- Better transparency

Disadvantage of ERP

- Expense and time in implementation
- Difficulty in integration with other system
- Risk of implementation failure
- Difficulty in implementation change
- Risk in using one vendor
- Use of latest technologies

MIS - Customer Relationship Management (CRM)

- CRM is an enterprise application module that manages a company's interactions with current and future customers by organizing and coordinating, sales and marketing, and providing better customer services along with technical support.

Why CRM?

- To keep track of all present and future customers.
- To identify and target the best customers.
- To let the customers know about the existing as well as the new products and services.
- To provide real-time and personalized services based on the needs and habits of the existing customers.
- To provide superior service and consistent customer experience.
- To implement a feedback system.

Advantages of CRM

- Provides better customer service and increases customer revenues.
- Discovers new customers.
- Cross-sells and up-sells products more effectively.
- Helps sales staff to close deals faster.
- Makes call centers more efficient.
- Simplifies marketing and sales processes.

Disadvantages of CRM

- Some times record loss is a major problem.
- Overhead costs.
- Giving training to employees is an issue in small organizations.