

# MANAGEMENT INFORMATION SYSTEM

## WHAT IS MIS

- Management Information Systems (MIS), referred to as Information Management and Systems, is the discipline covering the application of people, technologies, and procedures collectively called information systems, to solving business problems.
- “MIS' is a planned system of collecting, storing and disseminating data in the form of information needed to carry out the functions of management.”

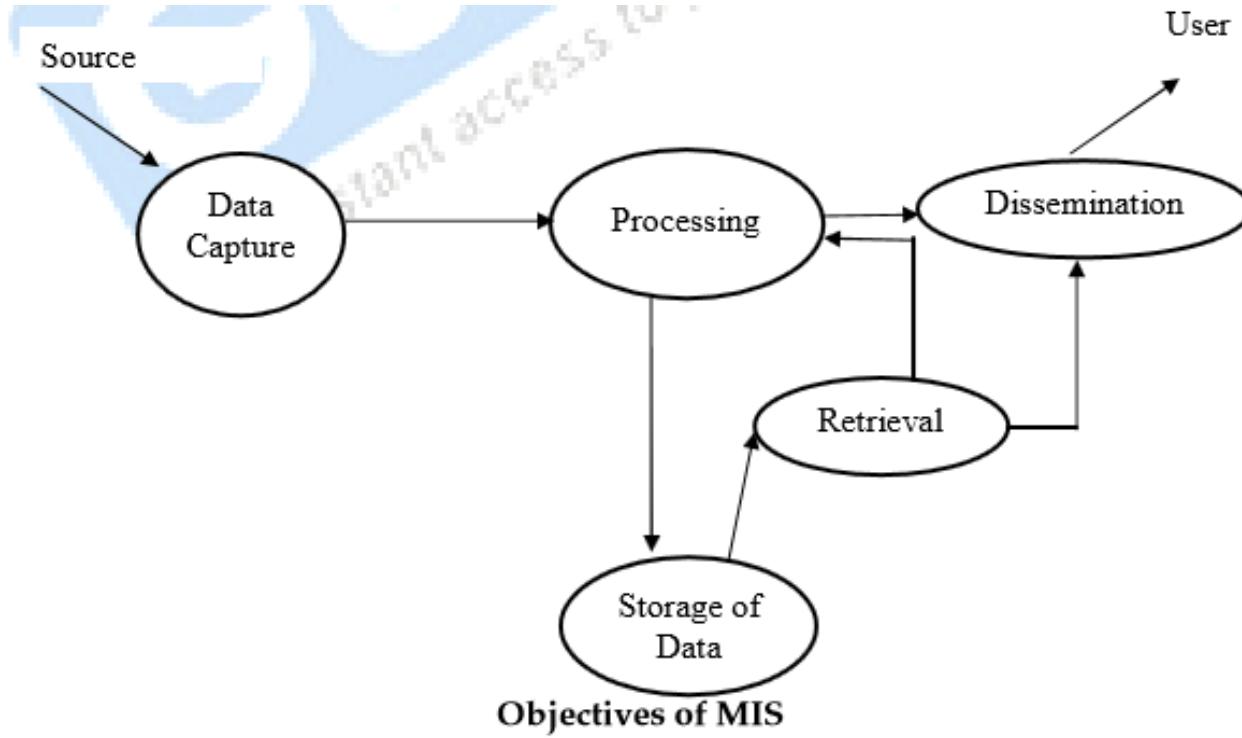


- **Management** : Management is art of getting things done through and with the people in formally organized groups. The basic functions performed by a manager in an organization are: Planning, controlling, staffing, organizing, and directing.
- **Information** : Information is considered as valuable component of an organization. Information is data that is processed and is presented in a form which assists decision maker.
- **System** : A system is defined as a set of elements which are joined together to achieve a common objective. The elements are interrelated and interdependent. Thus every system is said to be composed of subsystems. A system has one or multiple inputs, these inputs are processed through a transformation process to convert these input( s) to output.

# OBJECTIVES OF MIS :

- **Data Capturing** : MIS capture data from various internal and external sources of organization. Data capturing may be manual or through computer terminals.
- **Processing of Data** : The captured data is processed to convert into required information. Processing of data is done by such activities as calculating, sorting, classifying, and summarizing.
- **Storage of Information** : MIS stores the processed or unprocessed data for future use. If any information is not immediately required, it is saved as an organization record, for later use.

- **Retrieval of Information** : MIS retrieves information from its stores as and when required by various users.
- **Dissemination of Information** : Information, which is a finished product of MIS, is disseminated to the users in the organization. It is periodic or online through computer terminal.



## CHARACTERISTICS OF MIS :

- **1) System approach** : MIS is based on the System approach. It is a step by step approach to the study of system and its performance. Performance is made in the light of the objective which has been constituted for that purpose.
- **2) Management oriented** : Under MIS, necessary information is provided to each manager at the right time, in right form and a relevant one, which is required by the management by providing information in taking effective managerial decision.
- **3) Future oriented** : MIS is designed and developed keeping in view the future position of the business. Therefore, MIS should provide useful information on the basis of projections based on which future action can be taken.
- **4) Integrated** : MIS is designed in taking a comprehensive view or looking at the complete picture of the interlocking sub-systems that operate within the company. It considers all aspects of production, marketing, accounting, financing, management etc.



○ **5) Common-data followed :** MIS deals with the common data that are available in the business. Because, MIS provides data and information for taking effective managerial decision, which must select the real picture of the business.

**6) Long term planning :** MIS is prepared for long term planning of the business. So, the designer should avoid the outdated data and information in designing and developing time of MIS. The designer should consider the present situation and future trend of the business activities, when MIS is designed.

**7) Control database :** Another important characteristic of MIS is that it always based on centralised data and information. It is because of this fact that MIS is to supply data and information in such a way so that the management can take its important decision.



# ROLE OF MIS

- The role of the MIS in an organization can be compared to the role of heart in the body. The information is the blood and MIS is the heart. In the body the heart plays the role of supplying pure blood to all the elements of the body including the brain. The heart work faster and supplies more blood when needed. It regulates and controls the incoming impure blood, processed it and sends it to the destination in the quantity needed. It fulfills the needs of blood supply to human body in normal course and also in crisis.
- The MIS plays exactly the same role in the organization. The system ensures that an appropriate data is collected from the various sources, processed and send further to all the needy destinations. The system is expected to fulfill the information needs of an individual, a group of individuals, the management functionaries: the managers and top management.

# HERE ARE SOME OF THE IMPORTANT ROLES OF THE MIS:

- i. The MIS satisfies the diverse needs through variety of systems such as query system, analysis system, modeling system and decision support system.
- ii. The MIS helps in strategic planning, management control, operational control and transaction processing. The MIS helps in the clerical personal in the transaction processing and answers the queries on the data pertaining to the transaction, the status of a particular record and reference on a variety of documents.
- iii. The MIS helps the junior management personnel by providing the operational data for planning, scheduling and control , and helps them further in decision-making at the operation level to correct an out of control situation.
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- iv. The MIS helps the middle management in short term planning, target setting and controlling the business functions. It is supported by the use of the management tools of planning and control.
- v. The MIS helps the top level management in goal setting, strategic planning and evolving the business plans and their implementation.
- vi. The MIS plays the role of information generation, communication, problem identification and helps in the process of decision-making. The MIS, therefore, plays a vital role in the management, administration and operation of an organization.

# COMPONENTS OF MIS

- MIS is a system or process that consists of people, machines, procedures, data methods and database as the elements of the system. Here are the five important components of MIS

## **Hardware:**

- Hardware means the machinery part of the MIS. You cannot run or access an MIS without the necessary hardware like computers, printers, servers, and other machinery. The machinery is required to process the data and access it when needed. You can upload the information or prepare an online MIS which different users can access and study from their desktops with a password. A shared MIS is often available to various levels of management that are accessed via desktops or laptops and printers.

## **Software:**

- The software is required to prepare the MIS. Apart from the system software like Mac or Windows, you may also need to use other software like accounting, payroll or other kinds of software like CRM. The software runs on the hardware and is used to prepare the MIS as well as to access it. For special information systems, you will also need to have special software in place to run and read the MIS.

- **Data:**
- Data is a core component of any and every MIS. Different business organizations have different sources and types of data. Banks and other financial institutions record financial data whereas hospitals and other health agencies record health-related and other forms of personal data of the patients. In this way, the type and volume of data can vary depending upon the needs of the business organization and its products/services. Data is the fuel for an MIS and without it, the MIS has no purpose or simply speaking, is meaningless and irrelevant.

- **Procedures:**
- Procedures or processes are also a very important component of MIS whose purpose is to generate the most suitable reports. Users must be able to generate various kinds of reports based on their use. They must also be able to restructure it as per the changing needs as well as the shape and size of the organization. Using an MIS also needs well-defined processes developed by people.



- **People:**
- These are the end-users who benefit from the MIS and the reports it generates. They include the IT department professionals, managers and other people who might need to access the information in the MIS or have the right to.



# MERITS OF MIS

- Following are the merits of MIS

**I) Helps in formalution of planning :** With the help of MIS, the management can formulate correct planning because, preparation of planning requires various data and information, which can be systematicaly supplied by the process of MIS.

**II) Provides coordination :** Under this system of MIS, data and information are collected from each sub-system of the organisation, through unifying the concept of each Sub-System. So, the MIS can provide the facility of coordination.

**III) Systematic decentralisation :** MIS also provides systematic decentralisation in the organisation. Under the process of MIS, different middle and lower level officers and managers are authorised to supply their information. So, by implementing MIS, the authority can be distributed among various officers and managers of middle and lower levels without the loss of control. It also provides a system for monitoring performance. Likewise, the MIS can help in decentrslisation.



- **V) Help in control system :** To be an effective control system, it should be based on relevant data and information. On the other hand, relevant data and information can be provided regularly in a systematic manner by the MIS. So, MIS can help in taking proper control.

**V) Increase Speed in Operation :** In order to increase the speed of operation of a business, data and information should be supplied at the right time at the right place. Because, without data and information no operation can be done in a proper way.

By supplying necessary data and information, MIS can increase the speed of the operation of a business.



- **VI) Reduce duplication of efforts :** Under the Process of MIS, various data and information are stored in a scientific manner. So, the managers can take the help of these data and information before and at the time of performing their activities. Thereby, the MIS can prevent unnecessary duplication of efforts likely to be done by the managers. Generally, duplication of effort happens owing to the lack of sufficient data provided timely to the managers.

## DISADVANTAGES

1. Highly sensitive requires constant monitoring
2. Budgeting of MIS extremely difficult
3. Quality of outputs governed by quality of inputs
4. Lack of flexibility to update itself
5. Effectiveness decreases due to frequent changes in top management
6. Takes into account only qualitative factors and ignores non-qualitative factors like morale of workers attitude of workers etc.

- **1. Expensive:**
- Installing a management information system can be expensive for a company. Information technology while cheaper today than previous years can represent a significant expense, especially for larger organizations. These systems may also require ongoing support or upgrade fees, which can represent future fixed cash outflows. Companies must create a budget to pay for these items to ensure the information system stays current with business technology.

- **2. Maintenance:**
- Companies may need to hire maintenance individuals to help keep an electronic information system running smoothly. Individuals often need experience in computer science functions and other business topics. Business technology can change frequently, creating an environment where companies must have trained individuals who can properly maintain computers, websites, servers and other equipment in use by the management information system.

- **3. Ineffective:**
- Management information systems have the potential to become ineffective in a company's operations. As with all computer systems, the management information system is only as good as the programmer. Gathering unimportant or non-essential information can delay business decisions because managers must request additional input. Spending too much time reprogramming or correcting issues can also increase the time spent in the decision-making process.

- **4. Unemployment:**
- While information technology may have streamlined the business process it has also created job redundancies, downsizing and outsourcing. This means that a lot of lower and middle-level jobs have been done away with causing more people to become unemployed.
  
- **5. Privacy:**
- Though information technology may have made communication quicker, easier and more convenient, it has also bought along privacy issues. From cell phone signal interceptions to email hacking, people are now worried about their once private information becoming public knowledge.



- **6. Lack of Job Security:**
- Industry experts believe that the internet has made job security a big issue as since technology keeps on changing with each day. This means that one has to be in a constant learning mode if he or she wishes for their job to be secure.
  
- **7. Dominant Culture:**
- While information technology may have made the world a global village, it has also contributed to one culture dominating another weaker one. For example, it is now argued that the US influences how most young teenagers all over the world now act, dress and behave. Languages too have become overshadowed with English becoming the primary mode of communication for business and everything else.



# IMPACT OF THE MANAGEMENT INFORMATION SYSTEM

- MIS plays a very important role in the organization; it creates an impact on the organization's functions, performance and productivity.
- The impact of MIS on the functions is in its management with a good MIS supports the management of marketing, finance, production and personnel becomes more efficient.
- The tracking and monitoring of the functional targets becomes easy. The functional managers are informed about the progress, achievements and shortfalls in the activity and the targets.
- The manager is kept alert by providing certain information indicating and probable trends in the various aspects of business. This helps in forecasting and long-term perspective planning.
- The manager's attention is bought to a situation which is expected in nature, inducing him to take an action or a decision in the matter. Disciplined information reporting system creates structure database and a knowledge base for all the people in the organization.
- The information is available in such a form that it can be used straight away by blending and analysis, saving the manager's valuable time.

- The MIS creates another impact in the organization which relates to the understanding of the business itself. The MIS begins with the definition of data, entity and its attributes. It uses a dictionary of data, entity and attributes, respectively, designed for information generation in the organization. Since all the information systems use the dictionary, there is common understanding of terms and terminology in the organization bringing clarity in the communication and a similar understanding of an event in the organization.
- The MIS calls for a systematization of the business operations for an effective system design. This leads to streaming of the operations which complicates the system design.
- It improves the administration of the business by bringing a discipline in its operations as everybody is required to follow and use systems and procedures. This process brings a high degree of professionalism in the business operations.

- The goals and objectives of the MIS are the products of business goals and objectives. It helps indirectly to pull the entire organization in one direction towards the corporate goals and objectives by providing the relevant information to the organization.
- A well designed system with a focus on the manager makes an impact on the managerial efficiency.
- The fund of information motivates an enlightened manager to use a variety of tools of the management. It helps him to resort to such exercises as experimentation and modeling.
- The use of computers enables him to use the tools and techniques which are impossible to use manually. The ready-made packages make this task simple.
- The impact is on the managerial ability to perform. It improves decision-making ability considerably high.