

Roles of Management Information System in Business and How it helps Managers in Decision making

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Abstract - The modern businesses survival force under-went complex factors to make them switch from their primary focus of only 'profit' to 'gaining competitive advantage' in different markets. Efficient & effective strategic resolution by securing that the righteous kind of information extent to righteous person in the equitable format at the lawful time regulating the market position of any business. Management information system is a briskly evolving IT dependent system that constantly generate information from raw data cultivated from various streams and combines individualized reports of different kinds which helps various levels of decision making in management strategies. MIS, positioned with rapidly growing technology encompassed with AI aims at maximized computerized business processes. This paper deliberates the key role of MIS in the prosperity and survival of modernized business and industry. The change of MIS from Traditional non-automatic version, Mainframe based to latest cloud computing-based MIS services are mentioned. It also discusses the framework and MIS components. Major focus of this paper will incline towards the role of MIS in business and industry. It starts with the research into the data requirements of business now-a-days and finally it also deliberates the general types, how it brings to various information requirements of a certain business. MIS is a subset of the overall planning and control activities covering the application of humans, technologies, and procedures of the organization. Due to controllable large generation of information in all the organization like never before, the need for increased effective, efficient and enhanced maximum productivity make the study on MIS more relevant than before.

Key Words: Management Information System (MIS), Decision Making, Business, Management, Organizations, Information.

1. INTRODUCTION

The question of why we need to have a look at records structures and information generation has developed into a moot issue. Information systems have become as integrated into each day business sports as accounting, finance, operations management, marketing, human resources management, or some other major business function. Information systems and technologies are vital components of successful agencies and organizations-a few could say they may be commercial enterprise imperatives. They as a

result constitute a vital discipline of observe in business administration and management, which is why maximum commercial enterprise majors include a course in facts structures. Since you likely intend to be a manager, entrepreneur, or commercial enterprise professional, it's far simply as essential to have a basic knowledge of statistics systems as it is to recognize any other functional location in enterprise. Information technology, such as Internet-based statistics structures, are playing important and increasing roles in enterprise. Information technology can assist a wide variety of companies improve the efficiency and effectiveness of their business processes, managerial decision making and workgroup collaboration, which strengthens their competitive positions in rapidly converting marketplaces. This benefit takes place regardless of whether or not the information technology is used to aid product development teams, customer service processes, e-commerce transactions, or any other enterprise activity. Information technology and structures are, pretty simply, a crucial aspect for enterprise fulfillment in today's dynamic international environment.[4]

MIS provides a precious time-saving gain to the workforce. Employees do no longer should collect facts manually for filing and analysis. Instead, that statistics may be entered quickly and easily into a computer program. As the quantity of raw information grows too large for personnel to analyze, enterprise analysts can build packages to get right of entry to the records and records in response to queries through management. With quick access to necessary information, managers can make more suitable decisions about ordered procedures, directions in the future and competitive developments, faster than before. The century we are living in is Information age and is evolving quickly with its working too. Managers have to integrate masses of data, change that data into information, generate conclusions about build information and take decisions leading to the accomplishments of business aims. For association, information is as crucial resource as money, manpower and machinery. It is vital for the survival of the initiatives.[2]

2. METHODOLOGY

2.1 MIS

Management Information System is a swiftly developing IT based system that uninterruptedly create information from raw data claimed from various sources and assembles individualized reports of different kinds which bolsters different levels of management in informed making of strategic decision. MIS, oriented with hastily evolving technology surrounded by AI aims at maximized automation of business procedures. The theory of MIS is a mixture of 'Management', 'Information' and 'Systems'. MIS is generally regarded as the part of overall internal control procedures in a business which considers the value of people, information, documentation and technology. MIS involves many systems that the organizations use to produce information and for the purpose of managerial. Originally it was the model that provides managers with information to take decisions which helped in strategizing. The word MIS initially was used to define the firm's overall computer system and networks. MIS is usually determined as a scientific approach and systematicity to compile external & internal information into integrated and effective business information. It can also be stated as an integrated technology to process, collect, store, classify and distribute information. MIS involves information about important people, model and environment within and surrounding organization.

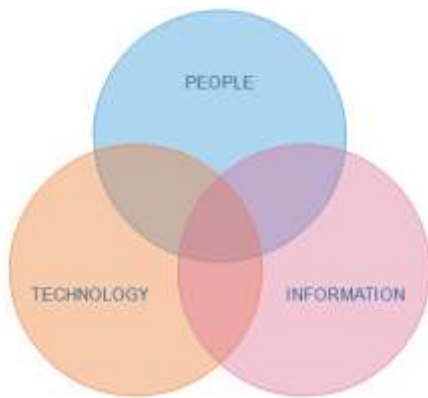


Fig 1: - Key Resources of MIS

Types of Information produced by MIS: -

MIS basically delivers companies with four main types of information. They are descriptive, diagnostic, predictive and prescriptive.

- **Descriptive Information:** It offers imperative information regarding the company's actions. It usually answers the 'What is?' situations. It normally involves sales reports, financial reports, manufacture reports, shipping, and receiving reports and customer service reports.
- **Diagnostic Information:** The diagnostic information created by the MIS relates 'What is wrong?' information to standardized accurate

information. For example, a shipment report specifies how many units of product "X" shipped (descriptive information) but the key performance indicator report indicates that shipments have fallen below mark levels (diagnostic information).

- **Predictive Information:** Its agreement is with 'What if?' scenario of analysis. It doesn't always foresee the future. Rather it generates all the information essential to foresee the future. Examples of predictive information include: What will sales look like next quarter?
- **Prescriptive Information:** As the name propose it answers the question of 'What should be done?'. It does give the company the information obligatory to make a decision based on the company's goals and strategic purposes.

2.2 History & Growth of MIS

The rapid Growth of MIS demonstrates the alteration in the information necessities of a business and the amplified difficulty to survive and grow in this unprecedented exceedingly competitive environment. MIS in its elementary conceptual form was applied long before the discovery of computer. It actually began, the moment people began to record transactions. Much sophisticated and evolved versions of MIS was established and manually followed by supply chain managers of early 20th century. Individuals had to handpick the data required from a collection of Mass Data and derive out essential information. MIS today is fundamental to the progress and survival of any business organization. Jane Prince Laudon, a well-known authority on the subject recognizes five Era of MIS based on the corresponding five phases in the advance of Information technology.

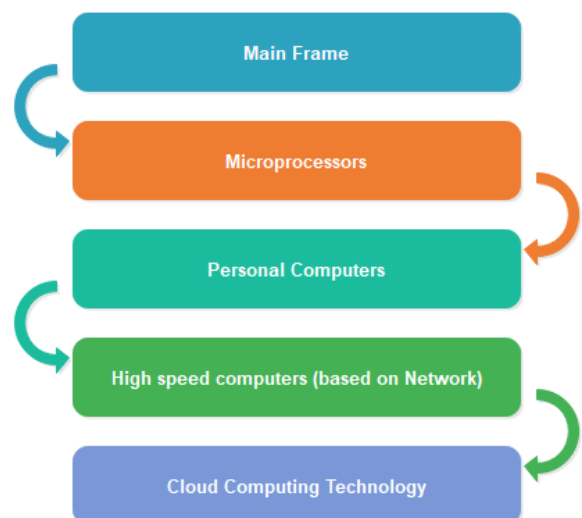


Fig 2: -Evolution of MIS

Progress of Mainframe & Minicomputers in the late 1950's and the successive introduction of MIS oriented hardware and

software support from IBM made the shift to digitalization of MIS. The Second Era (post 1965) after the development and the varied application of Microprocessor demonstrated the feasibility to decentralize the computing needs of the organization. It gives rise to in the wide spread introduction of MIS in business organizations across the globe. 1970's saw the development of cheaper Personal Computers and the notion of networking. This permitted business to provide its employees the capability to upsurge their productivity using computers and Data Distribution which resolved the problem of disagreeing nature and needs of the same data. This explosion of network enabled computers gave way to the development and application of Internet. The 4th Era saw the growth of High-Speed Intranet, LAN, Internet etc. Developments in networks united with multiplied microprocessor capability brought technology-based business integration along with rich information access. Current era of the development of MIS is based on Cloud Computing Technology which enabled networks to deliver data storage, software applications and enormous information base autonomous of the constraints of configuration, location & nature of hardware. The development of High-speed mobile data collections 4G and Wi-Fi networks provided new heights of mobility which enabled the remote access of MIS even through smartphones. It is not admissible if evolution of MIS based on Information is abandoned. Data transformed into information created the initial stage of Evolution. It was followed by individual orientation of reports which triggered an action, decision or an investigation. The need for selective reporting was met with the introduction of need based exclusion reporting and the concept of database. Thus, the evolution of MIS was a quick tech-oriented process which proved to be imperious today.

2.3 Components of MIS

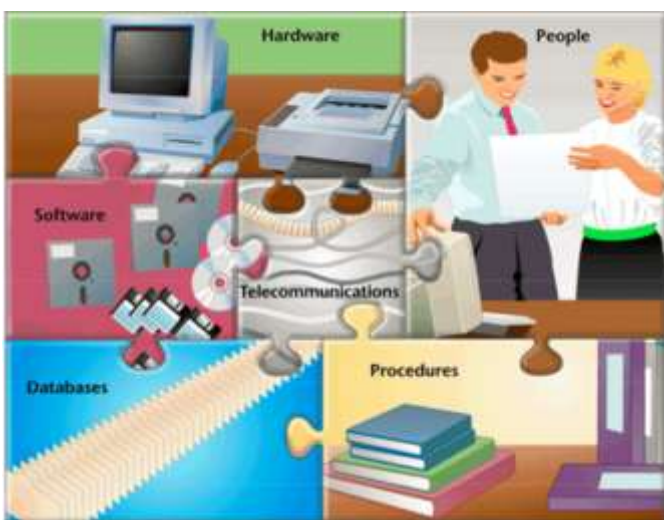


Fig 3: -Components of MIS

2.4 Roles of MIS in Business and Industries.

The Function of MIS in Business & Industry can be stated with the role of Heart in the human body. Heart is one of the most

substantial part of humans as the moment it stops Pumping blood the humans pass away. The blood represents information that flows throughout the organization meeting the diverse needs from the brain to the last living cell of the human body. This example well demonstrates the exigency of MIS in any organization.

2.4.1 Roles of MIS in an Organization

The huge Functions MIS have on the existence and evolution of a business organization are extrapolated below:

- ✓ Gives managers reaction about the performance of the organization.
- ✓ Need based, personal oriented managerial information are linked in the form of timely based or on-demand reports.
- ✓ Information primarily prepared and trimmed to accomplish strategic and efficient managerial decision making.; This helps to take fact-based decisions.
- ✓ MIS provides timely, accurate information which helps in well-versed decision making.
- ✓ Stream of information is based on systems approach. Thus, information integrating the miscellaneous activities of different departments within the organization is supplied.
- ✓ Flexibility in information system is an important characteristic of a rapid evolving modern MIS. It helps the organization to integrate future information requirements.
- ✓ It helps in better regulate and administrate of the organization at different levels.
- ✓ Enables improved Communication within the organization.
- ✓ Efficiency in Operations and Management of the Organization is ensured with the use of MIS.
- ✓ MIS produces diverse types and forms of reports from the same set of information or data. This enables MIS to provide the various information requirement within the organization.
- ✓ MIS enables easy, secure and rapid sharing of data within the organization.
- ✓ Balancing Conflicting data requirements through the use of MIS because the same data can be retrieved in more than one site even remotely from outside the organization parameters.
- ✓ MIS helps in upholding standards for data, process and managerial activities.
- ✓ MIS helps to predict the future circumstances of business by analyzing the periodical reports of various kinds of data.

2.4.2 Roles of MIS in different levels of Management

In accumulation to the general role MIS plays in an organization, it plays specific, varied and vital roles to different levels of management in an organization.

➤ Operational Managers

MIS helps Clerical personnel or Operational level information users in process, management control and

transaction processing etc. Also, they answer the queries on data relating to status of records and references on a variety of documents.

➤ **Junior Management**

MIS delivers operational data and information. It is based on this data planning, forecast and controlling is carried out. This further helps in upholding efficiency in operational decision making. This also aids in decision analysis at the operational level to correct an out of control situation.

➤ **Middle Management**

The info provided by MIS assistances the middle level management in short term planning, target setting and controlling the business purpose.

➤ **Top Level Management**

The strategically analyzed reports provides the Top-level management with targeted sophisticated information which helps them in Goal Setting, Strategic Preparation, Evolving Business Plan and their executions.

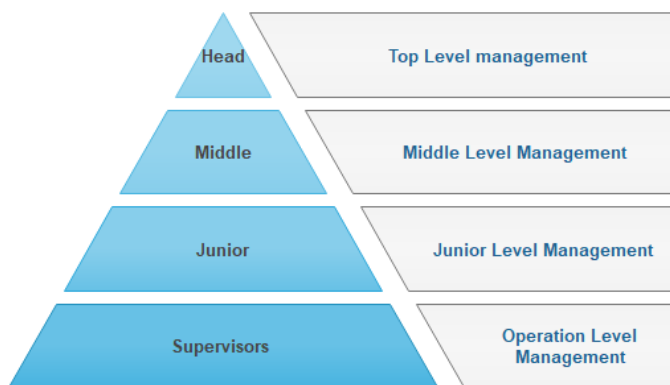


Fig 4: - MIS at different level

2.4.3 Roles of MIS in Human Resource Management

MIS accomplishes the following roles in Human Resource Management of an Organization

- Training & Emerging the skills Human Resources.
- Automating repetitive, simplified duties forwards the efforts of the employees to other significant areas.
- Increasing the throughput of employees using resources of MIS.
- Lessens Cost.

2.5 Decision Making through MIS



Fig 5: - MIS and decision-making process

- Undirected viewing—this includes a general experience to information. MIS is providing management with precise and timely information necessary to simplify the decision-making process and enable the organizations planning, control, and operational roles to be carried out effectively. So, in this way MIS increase competitiveness of the firm by reducing cost and refining processing speed. Almost all business organizations. The search could be that the viewer has no explicit purpose in mind.
- Conditioned viewing—the focused exposure does not involve active search to a more or less clearly identified area or kind of information.
- Informal search—this is a comparatively limited and unstructured effort to obtain specific information for a specific purpose. The information wanted is actively sought.
- Formal search—this is a thoughtful effort, usually following a pre-established plan, procedure or methodology to secure exact information relating to a specific issue.

3. CONCLUSION

As administrations grow, MIS allows information to move between functional areas and subdivisions instantly, reducing the need for direct communications among employees, thus culminating the responsiveness of the organization. Business has both optimistic and adverse impact because of this dynamic nature of our situation. MIS permits the business to stay prepared, forecast these variations and capitalize the chances as and when they arise. A rapidly evolving MIS is thus imperative for the survival and evolution of a business organization.

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BIOGRAPHIES



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