

Effectiveness of Management Information System in Present Scenario

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Abstract

A management information system (MIS) provides information that is needed to manage organizations efficiently and effectively [1]. Management information systems involve three primary resources: people, technology, and information or decision making.

Management information systems are distinct from other information systems in that they are used to analyze operational activities in the organization [2]. Academically, the term is commonly used to refer to the group of information management methods tied to the automation or support of human decision-making, e.g. decision support systems, expert systems, and executive information systems [2].

Thus, in this paper I would like to mention MIS not only indicates how things are going, but also why and where performance is failing to meet the plan. These reports include near-real-time performance of cost centers and projects with detail sufficient for individual accountability.

Keywords: Meaning of marketing information system; Importance; History; Terminology; Types; Advantages; Impact of marketing information system.

Introduction

Early business computers were used for simple operations such as tracking sales or payroll data, with little detail or structure. Over time, these computer applications became more complex, hardware storage capacities grew, and technologies improved for connecting previously isolated applications. As more and more data was stored and linked, managers sought greater detail as well as greater abstraction with the aim of creating entire management reports from the raw, stored data.

The term "MIS" arose to describe such applications providing managers with information about sales, inventories, and other data that would help in managing the

enterprise. Today, the term is used broadly in a number of contexts and includes (but is not limited to): decision support systems, resource and people management applications, enterprise resource planning (ERP), enterprise performance management (EPM), supply chain management (SCM), customer relationship management (CRM), project management and database retrieval applications.

A successful MIS supports a business' long range plans, providing reports based upon performance analysis in areas critical to those plans, with feedback loops that allow for titivation of every aspect of the enterprise, including recruitment and training regimens. MIS not only indicates how things are going, but also why and where performance is failing to meet the plan. These reports include near-real-time performance of cost centers and projects with detail sufficient for individual accountability.

Importance

Management information system is an integrated set of component or entities that

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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 management information system.

There are various driving factors of management information system for example:

Technological revolutions in all sectors make modern managers to need to have access to large amount of selective information for the complex tasks and decisions.

The lifespan of most product has continued getting shorter and shorter and therefore the challenge to the manager is to design product that will take a longer shelf life and in order to do this, the manager must be able to keep abreast of the factors that influences the organization product and services thus, management information system come in handy in supporting the process.

There are huge amount of information available to today's manager and this had therefore meant that managers are increasingly relying on management information system to access the exploding information. Management information services helps manager to access relevant, accurate, up-to-date information which is the more sure way of making accurate decisions. It also helps in automation and incorporation of research and management science techniques into the overall management information system for example probability theory.

The management information services are capable of taking advantage of the

computational ability of the company like processing, storage capacity among others.

Based on this relevancy, management information system should be installed and upgraded in various organizations since today's managers need them to access information for managerial decision making and also management functions.

History

Kenneth and Jane Laudon identify five eras of MIS evolution corresponding to five phases in the development of computing technology: 1) mainframe and minicomputer computing, 2) personal computers, 3) client/server networks, 4) enterprise computing, and 5) cloud computing [3].

The first (mainframe and minicomputer) era was ruled by IBM and their mainframe computers; these computers would often take up whole rooms and require teams to run them - IBM supplied the hardware and the software. As technology advanced these computers were able to handle greater capacities and therefore reduce their cost. Smaller, more affordable minicomputers allowed larger businesses to run their own computing centers in-house.

The second (personal computer) era began in 1965 as microprocessors started to compete with mainframes and minicomputers and accelerated the process of decentralizing computing power from large data centers to smaller offices.

In the late 1970s minicomputer technology gave way to personal computers and relatively low cost computers were becoming mass market commodities, allowing businesses to provide their employees access to computing power that ten years before would have cost tens of thousands of dollars. This proliferation of computers created a ready market for interconnecting networks and the popularization of the Internet.

As the complexity of the technology increased and the costs decreased, the need to share information within an enterprise also grew, giving rise to the third (client/server)

era in which computers on a common network were able to access shared information on a server. This allowed for large amounts of data to be accessed by thousands and even millions of people simultaneously.

The fourth (enterprise) era enabled by high speed networks, tied all aspects of the business enterprise together offering rich information access encompassing the complete management structure.

The fifth and latest (cloud computing) era of information systems employs networking technology to deliver applications as well as data storage independent of the configuration, location or nature of the hardware. This, along with high speed cellphone and wifi networks, led to new levels of mobility in which managers access the MIS remotely with laptops, tablet PC's, and smartphone's.

Terminology

The terms MIS, information system, ERP and, information technology management are often confused. Information systems and MIS are broader categories that include ERP. Information technology management concerns the operation and organization of information technology resources independent of their purpose.

Types

Most management information systems specialize in particular commercial and industrial sectors, aspects of the enterprise, or management substructure.

- Management information systems (MIS), per se, produce fixed, regularly scheduled reports based on data extracted and summarized from the firm's underlying transaction processing systems [4] to middle and operational level managers to identify and inform structured and semi-structured decision problems.
- Decision support systems (DSS) are computer program applications used by middle management to compile information from a wide range of sources to support problem solving and decision making.
- Executive information systems (EIS) is a reporting tool that provides quick access to summarized reports coming from all company levels and departments such as accounting, human resources and operations.
- Marketing information systems are MIS designed specifically for managing the marketing aspects of the business.
- Office automation systems (OAS) support communication and productivity in the enterprise by automating work flow and eliminating bottlenecks. OAS may be implemented at any and all levels of management.
- School management information systems (MIS) cover school administration, often including teaching and learning materials.

Advantages

The following are some of the benefits that can be attained for different types of management information systems [5].

- Companies are able to highlight their strengths and weaknesses due to the presence of revenue reports, employees' performance record etc. The identification of these aspects can help the company improve their business processes and operations.
- Giving an overall picture of the company and acting as a communication and planning tool.
- The availability of the customer data and feedback can help the company to align their business processes according to the needs of the customers. The effective management of customer data can help the company to perform direct marketing and promotion activities.
- Information is considered to be an important asset for any company in the

modern competitive world. The consumer buying trends and behaviors' can be predicted by the analysis of sales and revenue reports from each operating region of the company.

Enterprise applications

- Enterprise systems, also known as enterprise resource planning (ERP) systems provide an organization with integrated software modules and a unified database which enable efficient planning, managing, and controlling of all core business processes across multiple locations. Modules of ERP systems may include finance, accounting, marketing, human resources, production, inventory management and distribution.
- Supply chain management (SCM) systems enable more efficient management of the supply chain by integrating the links in a supply chain. This may include suppliers, manufacturers, wholesalers, retailers and final customers.
- Customer relationship management (CRM) systems help businesses manage relationships with potential and current customers and business partners across marketing, sales, and service.
- Knowledge management system (KMS) helps organizations facilitate the collection, recording, organization, retrieval, and dissemination of knowledge. This may include documents, accounting records, and unrecorded procedures, practices and skills.

Developing Information Systems

"The actions that are taken to create an information system that solves an organizational problem are called system development" [6]. These include system analysis, system design, programming/implementation, testing, conversion, production and finally maintenance. These actions usually take place in that specified

order but some may need to repeat or be accomplished concurrently.

Conversion is the process of changing or converting the old system into the new. This can be done in four ways:

- Direct cutover: The new system replaces the old at an appointed time.
- Pilot study: Introducing the new system to a small portion of the operation to see how it fares. If good then the new system expands to the rest of the company.
- Phased approach: New system is introduced in stages.

Impact of Management Information System

- Since the 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 support, the management of marketing, finance, production and personnel become 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 probable trends in the various aspects of business. This helps in forecasting and long-term perspective planning. The manager's attention is brought to a situation which is exceptional in nature, inducing him to take an action or a decision in the matter.
- A disciplined information reporting system creates a structured data 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 or by blending 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 a data entity and its attributes. It uses a dictionary

if data, entity and attributes, respectively, designed for information generation in the organization.

- Since all the information system use the dictionary, there is common understanding of terms and terminology in the organization bringing clarity in the communication and a similar understanding an even of the organization.
- The MIS calls for a systemization of the business operation for an affective system design.
- A well designed system with a focus on the manger makes an impact on the managerial efficiency. The fund of information motivates an enlightened manger 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 techniques which are impossible to use manually. The ready-made packages make this task simpler. The impact is on the managerial ability to perform. It improves the decision making ability considerably.
- Since the MIS works on the basic systems such as transaction processing and databases, the drudgery of the clerical work is transferred to the computerized system relieving the human mind for better work. It will be observed that a lot of manpower is engaged in this activity in the organization.
- It you study the individual's time utilization and its application; you will find that seventy per cent of the time is spent in recording, searching, processing and communication. This is a large overhead in the organization. The MIS has a direct impact on this overhead. It creates an information- based work culture in the organization.

Conclusion

Thus, a successful MIS supports a business' long range plans, providing reports based upon performance analysis in areas critical to those plans, with feedback loops that allow for titivation of every aspect of the enterprise, including recruitment and training regimens. MIS not only indicates how things are going, but also why and where performance is failing to meet the plan. These reports include near-real-time performance of cost centers and projects with detail sufficient for individual accountability.

In order to get a better grip on the activity of information processing, it is necessary to have a formal system which should take care of the following points:

- Handling of a voluminous data.
- Confirmation of the validity of data and transaction.
- Complex processing of data and multidimensional analysis.
- Quick search and retrieval.
- Mass storage.
- Communication of the information system to the user on time.
- Fulfilling the changing needs of the information.

The management information system uses computers and communication technology to deal with these points of supreme importance. Through the MIS, the information can be used as a strategic weapon to counter the threats to business, make business more competitive, and bring about the organizational transformation through integration. A good MIS also makes an organization seamless by removing all the communication barriers.

References

1. <http://www.occ.gov/publications/publications-by-type/comptrollers-handbook/mis.pdf>
2. O'Brien J. Management Information Systems – Managing Information Technology in the Internet worked Enterprise. Boston: Irwin McGraw-Hill; 1999. ISBN 0-07-112373-3.
3. Laudon Kenneth C, Laudon Jane P. Management Information Systems: Managing the Digital Firm (11 ed.). *Prentice Hall/CourseSmart*. 2009; 164.
4. Transaction processing systems (TPS) collect and record the routine transactions of an organization. Examples of such systems are sales order entry, hotel reservations, payroll, employee record keeping, and shipping.
5. Pant S, Hsu C. (1995). Strategic Information Systems Planning: A Review, Information Resources Management Association International Conference, May 21–24, Atlanta.
6. Laudon K, & Laudon J. Management information systems: Managing the digital firm. (11th ed.). Upper Saddle River, NJ: Pearson Prentice Hall; 2010.

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