

Management Information System for Effective and Efficient Decision Making: A Case Study

6.1 ABSTRACT

Decision making is an integral part of the functioning of any organization. To facilitate Decision making in this ever-competitive world it is imperative that managers have the right information at the right time to bridge the gap between need and expectation. To facilitate better flow of information adequate Management Information Systems (MIS) is the need of the hour. Thus it is important to have an understanding of the MIS followed in an organization by all levels of management in order to take effective decisions.

A management information system collects and processes data (information) and provides it to managers at all levels who use it for decision making, planning, program implementation, and control. The MIS has many roles to perform like the decision support role, the performance monitoring role and the functional support role. To get a realistic and holistic view of the MIS, MIS of MCC Limited (Name disguised) was taken as a case study. To get a more detailed understanding of a particular function of the company, the needs were studied, uses and benefits of MIS with respect to the Material Department of the company. Inventory Management was of prime focus in the study.

MCC Limited is one of the first Indian companies to realize the potential and importance of information technology and adopt automation and IT. The organization started computerizing its systems as early as 1968. The organization has traveled a long way from the days in 1968 when it was using simple Key punching machines. Significant improvements have been made in the application systems and infrastructure. From Batch processing to on-line systems, from IBM1401 to the latest UNIX and Windows 2003 based machines it has made timely transitions determined by available technologies and business requirements. The MIS has greatly facilitated and synchronized the information flow in the organization and the management feels that it has played a role in the growth and increased performance of the company.

6.2 INTRODUCTION

Management Information Systems (MIS) is a system consisting of people, machines, procedures, data bases and data models, as its components. The system gathers data from Internal and External sources of an organization; processes it and supplies Management Information to assist managers in the process in decision making. Thus it is safe to conclude that an information system is "a system consisting of the network of all communication channels used within an

organization".

There are many potential benefits of MIS investments Investing in information systems can pay off for a company in many ways.

1. It can support a core competency.
2. Enhance distribution channel management.
3. Builds brand equity.
4. IT investment can boost production processes
5. Information systems allow company flexibility in its output level.

An information system comprises of all the components that collect, manipulate, and disseminate data or information. It usually includes hardware, software, people, and communications systems such as telephone lines, and the data itself. The activities involved include inputting data, processing of data into information, storage of data and information, and the production of outputs such as management reports.

6.3 OBJECTIVE OF THE STUDY

The objective of this project is to study the MIS implementation of MCC Ltd. and with the help of this domain, to get an insight into the needs of MIS in business setups on a big scale, various functions performed by the MIS, benefits derived out of such a system and the risks involved. The study focus was analyzing the business needs of the organization, key challenges or desired functional requirements of the MIS, the IT solution that is currently implemented and the outcome of such a system. MCC Ltd. requires MIS to map internal processes and interaction with the external environment to the technology and ensure the solution delivers real benefits to the business.

SCOPE OF THE STUDY

The scope of the study was to understand the reasons behind the need of MIS in MCC. The study would develop knowledge of what information is needed on a regular basis for decision making purposes and how it is sought and used by MCC with the help of MIS .During the study, the MIS support to the Company as a whole with special emphasis on Inventory Management practiced in the Material Stores Department of the company is covered.

METHODOLOGY

The Primary Data was collected from SAP Implementation Head IT Infrastructure Managers in the Information System department of MCC Limited by conducting telephonic interviews and collecting documentation which gave an insight into the

procedures being followed with regards to the functioning of MIS. The Secondary Data was taken from various online sources like the website of the company www.MCCcement.com and various reference books on MIS.

6.4 NEED FOR MANAGEMENT INFORMATION SYSTEM

This is a universally accepted fact that all managerial functions are performed through decision making. For taking rational decisions, timely and reliable information is essential and is procured through a logical method of information collecting, processing and disseminating to decision makers. In today's world of ever increasing complexities of carrying out business, every organization, in order to survive and grow, must have a properly planned, analyzed, designed and maintained MIS. This need is even more increased because organizations now have to compete not only locally but also globally. MIS assist decision makers, by providing the required information at various stages of decision making and thus greatly help the organization to achieve its goals and objectives. On the other hand, if an MIS is poorly planned and constructed, it may provide inaccurate, irrelevant or obsolete information, which may even prove fatal for the organization.

TYPES OF MIS AND USES

MIS is a concept, which is a matter of degree rather than an absolute one. In management there are perhaps few other areas other than MIS which has created so much controversy. We would make an attempt to try to look into different types of MIS as they have evolved during the course of time.

1. Transaction Processing System
2. Management Information System
3. Decision Support System
4. Executive Support System
5. Office Automation System
6. Business Expert System

Transaction Processing System: It processes transactions and produces reports. It represents the automation of fundamental, routine processing used to support business operations. It does not provide any information to the user for decision making. TPS uses data and produces data.

Management Information System: MIS is an information system that processes data and converts it into information. A management information system uses TPS for its data inputs. The information generated by the information system may be

used for control of operations, strategic and long-range planning, short-range planning, management control and other managerial problem solving.

Decision Support System: A decision support system is an information system application that assists decision-making. DSS tends to be used in planning, analyzing alternatives and trial and error search solutions. They incorporate a variety of decision-making models and thus are capable of performing what-if analysis.

Executive Support System: An ESS is a special kind of DSS. It is specially tailored for the use of chief executives of an organization to support his decision-making. Thus ESS is a comprehensive information system that includes various types of decision support systems, but it is more specific and person oriented.

Office Automation System: Office automation refers to the application of computer and communication technology to office functions. Office automation systems are meant to improve the productivity of managers at various levels of management by providing secretarial assistance and better communication facilities.

Business Expert System: A BES is a knowledge based information system that uses its knowledge about a specific, complex application area to act as an expert.

ROLES OF MIS

THE PERFORMANCE MONITORING ROLE

MIS are not just statistics and data analysis. They have to be used as an MBO (Management by Objectives) tool. They help:

- to establish relevant and measurable objectives
- to monitor results and performances (reach ratios)
- to send alerts, in some cases daily, to managers at each level of the organization, on all deviations between results and pre-established objectives and budgets.

THE FUNCTIONAL SUPPORT ROLE

Business processes and operations support function is the most basic. It involves collecting, recording, storing, and basic processing of data. Information systems support business processes and operations by:

- recording, storing and processing sales data, purchase data, investment data, payroll data and other accounting records

- recording, storing and processing inventory data, work in process data, equipment repair and maintenance data, supply chain data, and other production/operations records
- recording, storing and processing personnel data, salary data, employment histories, and other human resources records
- recording, storing and processing market data, customer profiles, customer purchase histories, marketing research data, advertising data, and other marketing records
- recording, storing and processing business intelligence data, competitor analysis data, industry data, corporate objectives, and other strategic management records use of all the above to implement, control, and monitor plans, strategies, tactics, new products, new business models or new business ventures.

THE DECISION SUPPORT ROLE

The business decision making support function goes one step further. It is an integral part of making decisions. It allows users to ask "What if...?" questions: What if we increase the price by 5%? What if we increase price by 10%? What if we decrease price by 5%? What if we increase price by 10% now, then decrease it by 5% in three months? It also allows users to deal with contingencies: If inflation increases by 5% (instead of 2% as we are assuming), then what do we do? What do we do if we are faced with a strike or a new competitive threat?

COMPANY PROFILE MCC

MCC Limited is India's foremost manufacturer of cement and concrete. MCC's operations are spread throughout the country with 14 modern cement factories, 13 Ready mix concrete plants, 19 sales offices, and several zonal offices. It has a workforce of about 9000 persons and a countrywide distribution network of over 9,000 dealers. MCC's research and development facility has a unique track record of innovative research, product development and specialized consultancy services. Since its inception in 1936, the company has been a trendsetter and important benchmark for the cement industry in respect of its production, marketing and personnel management processes.

Its commitment to environment-friendliness, its high ethical standards in business dealings and its on-going efforts in community welfare programs have won it acclaim as a responsible corporate citizen. MCC has made significant contributions to the nation building process by way of quality products, services and sharing its expertise. In the 70 years of its existence, MCC has been a pioneer in the manufacture of cement and concrete and a trendsetter in many areas of cement and concrete technology including improvements in raw material

utilization, process improvement, energy conservation and development of high performance concretes. MCC's brand name is synonymous with cement and enjoys a high level of equity in the Indian market. It is the only cement company that figures in the list of Consumer Super Brands of India.

The company's various businesses are supported by a powerful, in-house research and technology backup facility - the only one of its kind in the Indian cement industry. This ensures not just consistency in product quality but also continuous improvements in products, processes, and application areas. MCC has rich experience in mining, being the largest user of limestone, and it is also one of the principal users of coal. As the largest cement producer in India, it is one of the biggest customers of the Indian Railways, and the foremost user of the road transport network services for inward and outward movement of materials and products. MCC has also extended its services overseas to the Middle East, Africa, and South America, where it has provided technical and managerial consultancy to a variety of consumers, and also helps in the operation and maintenance of cement plants abroad. MCC demonstrates the practices of being a good corporate citizen undertaking a wide range of activities to improve the living conditions of the under-privileged classes living near its factories.