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

7.1 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.

7.2 ORGANIZATIONAL STRUCTURE OF THE MCC LTD.

INVENTORY MANAGEMENT

A product that is in excessive demand is usually extremely difficult to manage. Supplying the right amount of products implies that an accurate demand forecast is essential. This impacts the entire supply chain to facilitate efficient consumer response based on consumer demands it becomes imperative that such companies consider inventory management seriously. Making accurate demand and supply predictions is an ideal situation that anyone in the supply chain management arena could dream off. By providing timely accurate information pertaining to inventory location, movement and valuation, receipt of goods, sale and return of goods and profits you can make sure that your inventory is visible throughout a network.

With inventory management you can set your product catalog to hide products that are not in stock, or change prices based on the amount of products available in the warehouse. The quantity available can be displayed to the shopper and this can prevent unnecessary confusion when the shopper adds items not available to a shopping cart. The store buyer can be automatically notified about low inventory

levels. IT (Information Technology) is a key enabler in the transformation of purchasing into a strategic business function. The challenge is to find a way to put these technologies to use and create value and competitive advantage.

The Main Objectives in Inventory Management are:

- Improved customer service
- Reduced inventory investment
- Increased productivity
- Benefits of inventory management applications
- Complete control of inventory.
- Complete information about the value of the inventory
- Complete visibility on Quantities on hand, Quantities committed and Quantities sold
- Response time to demand changes reduced
- Increased sales
- Knowledge of the exact size of merchandizing inventory
- Taxes and insurance premiums paid on excess merchandize inventory avoided.

MIS AT MCC CEMENT

MCC 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 keypunching 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.

MCC has made a quantum jump from in-house developed systems using Oracle 9i and Developer 6i to an ERP based solution. This decision was solely based on its strategic objectives and the business benefits that are expected to follow. With this move people, business processes and technologies across the country are aligned.

The IT department is still continuously working on improving the functionality and removing the errors of the system. As a result system is becoming better day-by-day, thus improving the productivity of the company.

NEED FOR AN INTEGRATED MIS

The benefits associated with an integrated MIS are:

☐ Better processing of the large volume of data in an organization.

☐ Reducing the Redundancy of Data that occurs in case of separate packages.

☐ Availability of all the required information about any department through a common system.

☐ Making the system capable of supporting the managers in making decisions.

☐ Facilitate the communication between the various regional offices of the company and the corporate office along with the main plant.

☐ Use of online data to speed up the information flow of the organization and facilitate decision-making

FUNCTIONS PROVIDED BY CURRENT MIS

Plant (Manufacturing & Maintenance) Production

☐ Break down and Plant performance Module

☐ MIS Reports and stoppage Module, Stock position

Raw Materials Management System

☐ Integration with Weigh Bridge and Security Gate

☐ Daily stock, issue position and bill passing

☐ Transport Freight Payment Systems

Weigh Bridge

☐ Integrated with Security Gate

☐ Stopped one mechanical weigh bridge

☐ 500 trucks can weigh for gross and tare in single day $500 \times 2 = 1000$

☐ Time Management Reports, Truck Movement reports

☐ Weighment is integrated with invoice cum challan freight

☐ Payment

☐ Truck position inside and outside the plant.

Computerized Preventive Maintenance Software

☐ Both plant are using this module

☐ Preventive Maintenance and Break down Module

☐ Shutdown module and integrated with inventory

☐ Forecasting of spares and skills usage module

Inward & Outward Materials Security

☐ Control on returnable goods

Work Order and analysis

☐ Work Order will be prepared by authorized person

☐ Provided to all departments. Integrated with Rate Master

☐ And budget.

Labour Deployment and accounting System

☐ Daily supply of Contractor Labour deployment

☐ Against regular, adhoc and shutdown requirements

- Daily/monthly/yearly analysis reports
- Contractor labour Bill passing system

Commercial Applications
Marketing accounting and analysis System

- Excise module and Sales Tax Module
- Transport Bill passing module
- Order Confirmations and Dispatch Instruction
- Free Market Requirements, Railway Receipt
- Commercial Invoice, Debit Note, Credit Notes.

Stores Inventory & Non Inventory

- On Line indent, Issue and Receipt Materials
- Delivery Schedule
- Controlling the inventory
- Controlling the increased inventory
- Stores Ledger, consumption Summary
- MIS reports, Budget V/s Actual Consumption.
- Integrated with financial Package
- Repair & maintenance inventory, Department Wise Expenses.

Purchase Management System

- Purchase Order integration with indent
- On line enquiry, Party wise information
- Pending list of purchase order
- MIS reports, Purchase / Indent Register
- Payment Advice System (Advance, regular)

Financial accounting System

- All types of voucher feeding
- Purchase and freight bill passing
- Other Expenses bill passing and TDS Module
- General Ledger, Sub Ledger and Trial balance of two
- Financial years.
- Auto payment advice, Bank forwarding letters, payment
- System, Overhead Analysis reports.
- Integrated with inventory and Payroll module MIS Reports
- Cash Budget,

Vehicle Movement

- Controlling on Taxi, Car etc

On line General information System

- Information provided to Users about
- On line Leave status I.e. opening, availed and closing status

- Electricity Deduction Employee wise, Quarter wise
- Over time Status department wise
- Welfare rules and Regulations, Telephone list, etc
- Actual Consumption against budget, Welfare information

Human Resource Development
- Topic Courses, General Awareness Programme,
- TNA of Workmen, TNA of LCW, Individual record of ext/int
- Training, Pending Training etc.

Payroll & PIS Module
- Pay slip of Staff, Worker, School, Badli & Casual Worker
- PF, VPF, Bonus, Gratuity Module
- LIC, CTD, Thrift Society, Co-operative advances Module.
- Recovery & Deduction, PIS and Income Tax Employee wise
- Integrated with Financial Package
- Over Time, C-off Module
- Payroll of Marketing Department (Transferred from HO)

Sales accounting Systems
- Sales accounting Systems, Rent Payment System
- Data loading, Expenses Payment System,
- Freight Payment, MIS, Transferring in FAS

Gate Pass System (Returnable &Non-returnable goods)
- All goods send through Computerized Gate Pass
- Integrated with Gate System.
- Pending repair items information

Inventory Management Module of Current MIS

Current MIS of the company is basically a In-house developed system, also comprising of few specialized readymade software packages bought from outside developers. It comprises of 11 main modules covering all the main functions of the company. Inventory Management Module is one of the most important parts of the system. It is highly integrated with the other modules and capable of functionalities like Auto Alarming when inventory is low. It is capable of generating more than 200 different types of reports to help managers in different required ways. Its main parts include Inventory issue, purchase, bill passing, other OER passing, freight passing, stock updation etc.

After analyzing the system properly, it was concluded that system is working fine at an overall level and consisting of very minimal problems. These problems can't be stated as such problems and instead can be stated as future path as follows: -
- Still lack of system integration after a level. Though inventory management module is integrated well with all the other modules like financial system, thus

reducing the redundancy. But still there is need of paper work and manual intervention when reordering is required. System cannot be configured to reorder automatically, even for the fast moving raw material.

☐ Lack of Web Integration**:** MCC hasn't still employed the concept of taking orders or ordering through web and have no integration of its system to its website.

☐ Legacy Network Support: Backbone network used by MCC is still the same, which they used in 1993. They haven't upgraded the network support from then, which has started creating problems for them already. As MIS of the company is improving day-by-day including more and more functionalities, the network has already become very slow.

☐ Lack of training to managers to effectively use the decision support functionalities of system: This is another problem that we felt at the company. IT department is basically making the improvements in the system continuously with new added functionalities, but there is lack of training to managers to effectively use these functions in way that can support them to make better decisions. For example, on an average, a manager uses only 10-15 types of reports out of more than 200 types of reports available.

CONCLUSIONS

Considering the given problems, their analysis and research on comparative MIS systems used in the similar kind of industries, following recommendations for the company are suggested.

☐ IT department of the company should now work towards integrating the system on a higher level and making the company Paper-Less Office. This should be done by integrating the system in a way that the manual intervention be minimized in the day-today process.

☐ The company should also start Web-Based ordering and selling, so that to be able to catch up with the growing industry.

☐ As more improvements in MIS would be done, and Web-support to be also incorporated, it is more than sure that current Network available is going to crash. To cop this, company needs to upgrade its network. For this purpose, it is suggested the tie-up of company with some outside contractors like IBM or CISCO to continuously upgrade and maintain their network.

☐ With each up gradation, it is suggested to give training to the managers of the company about effectively using the added functionalities and use of them in a better way. This can be also done by providing a handbook along with each up gradation.