CHAPTER-I
CHAPTER-I

MANAGEMENT INFORMATION SYSTEM:

1.1 INTRODUCTION:

It is believed that one of the essential functions of managers is to make decisions. As a matter of fact, decision making is not a function of management but all managerial functions involve decision making. The success and otherwise of management depends on the quality of decisions made. Therefore in any case, the decisions have to be made by managers. It is therefore essential for the manager to learn the art of decision making.

Different kinds of decisions are made at different levels of management. The top management is usually involved in making decisions about the purpose and mission of the organisation. Its focus is the environment in which he constantly interacts to remain resident and up to date. The top management that fails to liaise with the environment would soon find it difficult to survive. However, determination of the purpose and mission gives only a broad framework for
directing the policies and strategies towards that end. It is rather broadly defined to tell the society at large how the organisation is serving a useful social function. Purpose and mission are long term perspectives. They need not be evaluated very frequently nor modified in short term perspective.

The middle level managers make decisions which are internal in nature. Their decisions are made in the framework of internal needs and capabilities of the association. They find data for their decisions mostly from internal sources and use them to maintain the effectiveness of the organisation.

The first level managers are generally involved in routine decisions affecting their immediate charge which may be a division or a section within the organisation. As a matter of fact, their decisions are not really made by them. They are made by experts on the basis of their knowledge and experience. These decisions are standardized into routines. The main focus of supervisory level managers is to see that these routine decisions are faithfully followed and implemented.
Thus there are four types of decisions made by managers:

1. Routine Decisions
2. Analytical Decisions
3. Discretionary Decisions and

It may be seen that the role of the individual manager in respect of routine decisions is minimum and in case of the last type of decision is maximum.

It is a well known constant of decision making that the data on which the decisions have to be made are hardly ever complete. The truth is that acquisition of data is a cost incurring process. Therefore the additional benefits of the decisions based on desired data should atleast offset the additional cost incurred for the purpose. Acquisition of data is also a time involving activity. The data may be collected from secondary sources in which case they are invariably not readily usable. Processing these data to make them usable for making decisions by the management of the organisation is delicate and time consuming.
Data may be created from primary sources by undertaking investigations and surveys. They are also cost incurring and time involving.

In many circumstances, the manager has to make a decision under the pressure of time. The higher the pressure, the less perfect the decision is likely to be. This is one of the reasons why all the decisions made by management do not turn out to be right. It is said that a manager who makes fifty percent right decisions is supposed to be a successful manager. Therefore the quality of managerial decision is linked with the quantity, adequacy and speedy availability of data.

Information is the raw material and the product planned is the decision the manager has to make. Thus the better the quality and adequacy of data, the higher the viability of the decision. It is almost a truism that, more often then not, the managers have to make decisions on the basis of incomplete data.

Managers generally complain about the wide gap between the information they get and the information
they want. Information technologists are aware that what they want is often not what they really need. Therefore the ultimate reality today is that the users are faced with an abundance of information which is of little or no relevance to the business needs of the organisation. Moreover with greater proliferation of computers this discrepancy is widening.

In the olden days, information travelled very slowly, about as fast as a horse could gallop.¹ Competition was scarce. As a result the only way for securing information about the market and the competitors was by venturing into the market and visiting the premises of the competitors. With passage of time, quicker ways of sending messages were adopted. The Romans built signal stations along the east coast of Britain, which sent off smoke or fire to indicate the approach of the barbarians. As man became more busy and the element of time became important the semaphore (system of sending messages by holding the arms or two flags in certain positions according to an alphabetic code) was invented to enable quick sending of messages. This consisted of towers with movable arms just within
sight of each other, so that messages could be passed on from station to station. This was the quickest way of sending messages before the advent of electricity. Pigeons were also used for communication of information. This was soon replaced by the post. Timely communication of information is one aspect. Organisation of information for such communication is yet another aspect which deserves considerable attention. The very first attempt at organizing the collection of information and its distribution was first undertaken by 'Reuter' whose name appears so often on the pages of our newspaper till date. In fact, he established the first agency for managing news; with the advent of telegraph code, cables were laid down to send information.

The history of information is as old as the oldest writing in the world. The oldest evidence of writing by man discovered so far consists of clay tablets excavated at Sumer in Mesopotamia and dated approximately 3000 B.C. These tablets contain records from an inventory system carrying information on
receipts and issues made to individuals from a temple grain store. Infact, many historians believe that writing arose in response to the need for such management information.

Since then, society has moved through five distinct stages of information revolution. The first stage was the invention of language, which allowed men to codify their knowledge and transmit it from one person to another. The second stage was the invention of printing, which enabled transmission of moderate quantities of information through time and space. The third stage was heralded by the mass media, particularly radio and television. The fourth stage was the invention of the computer which is bringing about a revolution in computing and the managers work style. The use of computers in organisations has become so vast that apart from large and medium organisations, its use has percolated down to the small organisations too. It is being used for multiple purposes from data processing applications like payroll, provident fund, financial accounting, invoicing, dividend warrants, process control, budget, planning, warehousing to corporate
planning, investment analysis, project monitoring and its appraisal.

The fifth and final stage is the recent link up of computers with communication networks. This provides a challenge to management. Such networks allow the sharing of central processing units resources, discs, printers and other hardware. It allows economic transmission of large amount of information across long distances instantaneously. It helps in communication with other offices in the same building or offices situated at far off places. This further has helped in organising video conferences that is where the persons do not need to be physically present at one place at the time of conference but communication could take place through the communication networks established.

Currently, the United States and Japan are occupied with the task of inventing a 'thinking computer'. They are working on the lines to invent a computer which will offset the only one deficiency of a computer which exists today that is, it will be able to take decisions on its own just like a human being. The
computer will be so designed so as to resemble the human thought process and is expected to operate at a speed much faster than today's computers. The technology of these thinking machines, artificial intelligence, fulfil the role of human experts and hence are called 'expert systems'. This is expected to result in drastic changes in the structure and responsibility of management.

Technology has been providing mankind with new tools and new opportunities and, in response, society has evolved new institutions and has changed its physical forms. Sometimes these responses have been comfortable and swift as in the case of telephone and radio; at other times they have been halting and painful. The changes brought about in the society through the earlier revolutions were slow and unnoticeable, but computers and communications have changed the whole working environment. Some have gone as far as to term today's society as the 'information society' and new terms such as 'information workers' have been coined. Whatever the degree of impact on society, one cannot ignore the fact that the importance
of information in the context of organisation have been growing steadily.

However, there are three principal reasons why information systems are a subject of great interest today. First, organisations have grown to unprecedented complex levels. Information plays a vital role in holding together and co-ordinating organisations. The second reason is the advent of computer. Computers are able to access and record information and perform calculations at speed which are truly unbelievable.

The third reason is the progress made in communication technology and the feasibility of linking computers through communication networks. Traditionally, management had to think of managing four resources: money, materials, men and machines. It must add a fifth resource to this list, namely information. In fact, some researchers in management have gone so far as to define a manager as a transducer that transfer information to decisions. Hence a new discipline called Management Information System (MIS) was born in response to this challenge.
1.2. MIS DEFINED:

Man has over the years used machines and animals to lighten the burden of manual labour. Today, we use computers to lighten our burden of storing, processing and retrieving data for decision making. Conversely, computers may store data which may be in abundance and irrelevant. Distorted, polluted, tampered with or similarly unclear data is worse than no data at all. Any decision would be highly detrimental to managerial functions of the organisation, under this climate. Hence, it has become impertinent to exercise control over collection, processing and retrieval of data.

Control it should be understood, is in every sphere of life and company as an entity should be controlled efficiently and effectively. This will help to achieve the objectives of the organisation. Like the human body, if any system fails to function properly in accordance with the law of nature, the whole body system will either breakdown or be adversely affected; so also in an organisation, all sections must function together with a set objective as to enable the organisation to survive. Control is the uniting factor and for this
reason management control could be regarded as a cord or link which binds all the various activities of the organisation together. It enables the firms to achieve its set objectives. So control reaches out to all far flung corners of the enterprise. It should be adequately exercised and monitored in order to reap the benefits accruing from it and enhance the overall corporate effectiveness.\(^7\)

For exercising effective control an appropriate tool is needed. This tool is information.

Information is needed to keep managers informed about what is going on to ensure that the work done by the separate responsibility centres is coordinated. This information is required to flow in a systematic manner, in exact quality and quantity, that is neither too much nor too little, and to the respective persons in the organisation who require it. Hence emerges the importance of Management Information System, a major technique for control in organisations, without which decisions tend to be inaccurate.
Different systems have emerged to cater to the needs and requirements of different interest groups. Management Information System satisfy the information for the managerial level while transaction processing and executive support systems do so for the operational and strategic levels, respectively. We are concerned with the system for the managerial level. Management level systems are designed to serve the monitoring, decision-making, controlling and administering of activities of an organisation. They are oriented almost exclusively to internal, not environmental or external events. They focus on daily, weekly and monthly summaries of transactions that are useful for monitoring and controlling operational-level activities. (Gerry and Morton, 1971).

1.3. MIS ORGANISATION:

The design of MIS, its measurement and also its re-design is of utmost importance. This answers the questions pertaining to where the MIS should be located within the company, how the MIS group itself is organised, what is its nature of functions undertaken and also how effective it proves to be.
At TELCO (Tata Engineering and Locomotive Company Ltd.) the organisation is headed by the Resident Director who is ably assisted by three senior managers namely Sr. Manager, Calcutta Board, Sr. General Manager, and Assistant General Manager Management Division - performing a supportive function.

The Sr. General Manager has a span of four managers; the Sr. Deputy General Manager—Productivity Services, Administration and Personnel and Engineering Services and the General Manager of Auto Complex which forms the main unit at TELCO plant, Jamshedpur. Each of these divisions have various Assistant General Managers in their respective sphere of activity who are reporting directly to the Sr. Deputy General Manager. One of these Assistant General Managers - who is existing totally in an advisory capacity and contributing to development of plans and also control of activities - is the Assistant General Manager - Management Services Division (AGM-MSD). He is reporting directly to a top level position - the Senior General Manager. Such access directly to top, helps contribute maximum in
terms of value of information as it does away with all the barriers associated with information flow semantic barriers and the personal barriers of the superior or the subordinate. From this level also starts an uninterrupted series of authority - accountability relationship to form a hierarchical relationship to the very lower most level in the organisation. All these are performing a staff function. The AGM-MSD has a Senior Manager - MSD reporting directly to him. He in turn maintains close liaison with various Senior Managers of different plants and divisions for example Senior Manager - Auto Material, Senior Manager - Auto Spares, after sale, Engineering and so on. Also he receives information from the lower level managers following in the same hierarchy. Further, it can be seen from the organisation chart I-A that the Assistant General Manager - Management Services Division maintains close liaison with the Assistant General Manager - Finance. This close contact and communication may influence the Assistant General Manager - Management Services Division to take decisions in a financial perspective rather than a conceptual perspective (which
would give equal weightage to all concerned areas). A move in the future should be to remove all such direct communication with functional heads at such level—instead create a team of management scientist from diverse background for an unbiased decision. (Refer Organisation Chart I-B).

Another alternative of placement of MIS function is as seen at HCL (Hindustan Copper Limited). (Refer Organisation Chart No-II). It have an Executive Director (ED) at the head of the organisation. Reporting to him are two General Managers (Personnel and Administration) and General Managers - Indian Copper Complex (GM-ICC). The General Manager - ICC has a span of five Deputy General Managers Finance, System, Engineering Services and Works and Exploration. In this kind of an organisational arrangement, the DGM - Systems has direct access to the top management cadre. This ensures timely and accurate flow of information to the top management without distortion or disinformation. This division is staffed by a number of persons at different levels who enable flow of information in both the direction. The team consists of system managers and
programmers reporting to him - the Manager Systems, Deputy Manager Systems, Assistant Manager Systems, Senior Systems Officer, Programmers and so on to handle work at each level. This team helps in distribution of work and thus release burden of DGM-Systems. Organised data is collected at the top with the Deputy General Manager-Systems who directly assists the General Manager. Majority of the work undertaken is in an advisory capacity and of a specialized nature. These often relate to finance, material, industrial engineering, mechanical engineering, civil and also instrumentation engineering. However, the information relating to plants like rolling mills, by products, refinery, smelter, castings are generally not within its purview. This situation has an edge over the one present at TELCO as it has no direct link with the finance division where there is a tendency of all decisions to be influenced by financial perspective.

At TRF (Tata-Robins-Frasers Ltd.), the MIS group reports to the Vice President - Finance. This is yet another alternative. The organisation chart of TRF
(Organisation Chart-III) depicts that the Assistant General Manager - Electronic Data Processing (AGM-EDP) reports to the Director of Finance and Company Secretary (DFCS).

In the past, the most common place for MIS was under the Vice President of Finance. This is because in many companies, the finance organisation gained early control over the computer centre. Consequently, the information system was conceived of as a control decision aid rather than planning decision aid. In such circumstances, the EDP has a tendency to process data with a bias towards the functional aspect of the organisation. Every decision, therefore, generally emphasises the financial implications and not company wide information pertaining to all functional areas. This weakness has been overcome by TELCO and HCL to a large extent.

What should be the strength of the personnel in MIS largely depends upon the size of the company and its requirements. Whatever the number, if MIS is to assist managerial decision making at all levels of the company,
the low-organisational level information system must be integrated in broader MIS until one company wide MIS is available for the top management. The company wide MIS should be headed by a top management figure with him reporting directly to the President, or the General Manager, depending upon the nomenclature used.

An interesting study was carried out some years ago on the relationship of success or failure and the level at which information was controlled. There were some interesting findings - the best result were when the whole information control was exercised at the top level; when control was delegated to the third level, the success level was NIL. This traces the need to place MIS head at the top most level.

Therefore as we march forward into the Information Age, we must be prepared for changes in the way we work, live and even think. As such, many far sighted organisations are already repositioning their EDP Departments to cater to the new challenges and opportunities. Within the existing framework of operations and responsibilities, these organisations are
giving their EDP departments new and demanding responsibilities.

These departments are in a state of flux; the onus is on the management to carve out a useful future role for them. Unfortunately organisations, which are consciously repositioning their EDP Departments are the exception rather than the rule.

The winds of change are going to be particularly squally at the EDP Department but change will come and will be for the better. Clearly, the EDP Department needs a new name; perhaps 'Information Technology Department' (ITD). It also needs to shed some of its old garbs like:

- It will-the ITD will not come under the finance or production functions
- Its chief will be at par with the heads of other functions.
- It is possible that the ITD and the traditional corporate planning function will be merged into a single entity, giving it wide ranging jurisdiction and powers.
- It will not be the centre of organisations' IT skills. It will be the centre of organisations' specialist and high-tech IT skills.

To summarise, the ITD will have a two-fold role—one, to form synergic partnership, with the other departments of the organisation while the other could be to help management respond and adapt positively to a rapidly changing environment.

With information holding the key to the long term competitiveness and well-being of an organisation, as well as becoming an increasingly important source of value-added, the ITD must find itself in the forefront among the strategic planners.

1.4 Characteristics of MIS:

In the past, managers had the tendency to solve problems as isolated situations, independent of other operations of the company. For example, if a shoe manufacturer noted a decline in sales and traced it to lack of aggressive effort by salesmen the problem was
assumed to be related to sales management. Solution was sought through better training or replacement of salesman.

It was never thought that there could be other factors which would increase sales. For instance, better advertising, better management of sales routes, better quality control in the factory, better design, fewer styles, more sizes, prompt and correct shipment of orders, better credit arrangements, and better marketing strategy could contribute to increase sales.

It is because of the various underlying characteristics of MIS that now people have come to realise its importance. The various characteristics of MIS are:

(i) Management Oriented:

This is the most important characteristic of MIS. The system is designed from top down. The 'top down' approach does not imply that the system is geared to providing information directly to top management; rather the system development starts from an appraisal of management needs and overall business objectives. It is
possible that middle management or operating management is the focus of the system, so that their needs are the cornerstone on which the system is built. For instance, a payroll system designed to process employee time cards and produce pay checks, deduction registers, payroll registers and supporting material needed for government purposes is not management oriented system. This is because it fulfills administrative ends. On the other hand, a payroll system that supplies foreman with daily and weekly labour-cost variance reports and production management with monthly labour summaries showing the amount of overtime, idle time, labour variances, and labour cost trends is management oriented. It is geared to satisfy management needs, which, are to optimize the use of labour force.

(ii) Management Directed:

It is of utmost importance that management actively direct the system development efforts. Continuous review and participation is necessary to ensure that the implemented system meet the specifications of the system that was designed. Therefore management is responsible
for setting system specifications, and it must play a major role in the subsequent trade-off decisions that are inevitably encountered in the system development. A process for determining the priority for application development must be established for an effective system planning.

(iii) Management Integrated:

Integration refers to taking a comprehensive view at the interlocking sub-systems that operate within a company. A company can start an MIS by attacking a specific subsystem, but unless its place in the total system is realized and properly reflected, serious shortcomings often crop up. Thus an information system that blends information from several operational areas is a necessary element of MIS. This feature was found in TELCO.

(iv) Common Data Flow:

Because of the feature of integration, there lies an opportunity to avoid duplication and redundancy in gathering, storage and dissemination of data. System designers are aware that a few key source documents
account for much of the information flow and affect many functional areas. It would be best to capture data closest to the source where the event occurs and use it throughout the functional areas - and capture it once and avoid the duplicate entry of source data into several systems. For instance, customer orders form the basis for billing the customer for the goods ordered, setting up the accounts receivable, initiating production activity, sales analysis, sales forecasting and so on. This approach holds in building and using masterfiles and in providing reports. This common data flow concept supports several of the basic tenets of system's analysis - avoiding duplication, combining similar functions, and simplifying operations wherever possible. The concept of development of common data flow is economically and logically sound and acceptable.

(v) Heavy Planning Element:

Planning for installing a MIS takes long to frutify MIS takes three to five years for its establishment in a company. Therefore the MIS must be developed with the full appreciation of future requirements. It ought to be seen that the system does
not become obsolete before it starts operating. Sound system planning is one of the essential ingredients for a successful MIS.

(vi) **Sub-System Concept:**

The system is generally viewed as a single entity. But it needs to be broken down into viable sub-systems which can be implemented one at a time. For this, a planning phase needs to be developed.

Breaking down of MIS into meaningful sub-systems sets the stage for the planning phase. Many a time sub-systems can further be broken down into additional sub-systems. For instance, the company is a system which has three sub-systems - Market Research, Strategic Planning and Financial Administration control. Each of these sub-systems act as a system and is therefore broken down into further sub-systems. For instance, strategic planning is broken down into Production Scheduling, Control Order Processing and Material Control. On the same lines, Material Control is broken down into Factory and Vendor sub-systems. Factory is broken down into Raw-Material, Work-in-progress, and Finished goods.
This sub-system analysis is a must for laying boundaries to the problem, and thus making it possible for the designer to focus on manageable entities that can be assigned and computerized by selected system and programming teams.

(vii) Central Data Base:

Database in the element which holds the functional systems together. Each system needs access to a masterfile of data which covers inventory, personnel, vendor, customer, general ledger, work-in-progress, etc. If data is stored efficiently and with common usage in mind, maintaining one masterfile will provide the data needed by any of the functional systems. It is practical and logical to collect data once, validate it, place it on a central storage medium that can be accessed by any system. However many a time a company maintains several data files, one for functional system and another for another system.

Though the basic objectives can be achieved without a Central Data Base, involving higher cost for duplicate storage, file updating, a Central Data Base is
a definite characteristic of Management Information Systems.

(viii) Computerized:

It is possible to have an MIS without the existence of a computer, but a computer is considered a must where large scale information is dealt with. A computer is the sine qua non of medium and large scale information system. The advantages of a computer - speed, accuracy, consistency in processing data, ease of handling large and wide variety of information, reduction of demand on clerical grade, has made a computer indispensable for the MIS requirement of a company.

1.5. Importance of MIS:

1. Changing role of Information Systems in Organisations:

The first information systems were in the 1950s. These were followed by management level systems in the 1970s and strategic level systems in the 1980s. Because early systems addressed largely technical operational issues, managers could afford to delegate authority and concern to lower-level technical workers.
However, today's system directly affect how managers decide, how senior managers plan, and in many cases why products and services are produced (how they are produced). The responsibility of information system cannot be delegated to technical decision makers. Therefore, information system today plays a strategic role in the life of a firm. A growing dependence between business, strategy, rules and procedures on one hand and information systems, software, hardware, data and telecommunications on the other have been felt. A change in any of these components implies changes in other components. This relationship becomes more critical when planning for the future. What a business would like to do in five or ten years, in many respects depends upon what the system will be able to do.

Another change is that the importance of systems results from the growing complexity and scope of system projects and applications. Building systems today involves a much large part of the organisation than it did in the past. Early systems involved mainly technical changes that affected few people, contemporary systems
bring about managerial changes and also institutional ‘core’ changes. (i.e. what products and services are produced, under what conditions and by whom). Such change was observed at HCL where the DGM System worked in direct consultation with Finance, Materials, Industrial Engineering, Mechanical and Civil Engineering Departments.

2. Changing Nature of Information Technology:
   The growing power that is the magnitude of information it can handle on one hand and declining cost of information technology on the other is one of the reasons why systems play a larger role in organisations, and why they affect more people. The changing nature of information technology throws light on the fact that nowadays it is possible to put a mainframe computer on every desktop in an organisation - which once took up much of an entire floor say three decades back. As such, mini frame and mainframe Computers have been installed by the organisations surveyed.

3. Changing Character of Applications:
   Both the changing role of systems and the new technology have brought about new kinds of systems and
applications. Whereas in the past massive systems were built to provide generic information on sales, inventory, production, finance, and marketing, it is now feasible and desirable to create custom-made, specialized applications that serve just one or a few people or groups in the organisation. Moreover these new kinds of applications require direct and close interaction between technical support personnel managers who will use the system and also senior management support.

4. The Need to Plan the Information Architecture of an Organisation:

Information architecture is the particular form that information technology takes in an organisation to achieve selected goals or functions. Managers today play a critical role in defining information architecture.

It deals with aspects such as whether corporate pay roll data and functions should be centralized at headquarters or be distributed to each corporate remote site; should it purchase stand-alone micro computers or build a more powerful centralized mainframe environment.
within an integrated telecommunications framework; should it built its own data communication utility to remote sites or rely on external providers eg. telephone company and the like. TELCO has built a powerful centralized mainframe environment. All divisions and departments of TELCO can have access to data and information held here.

5. Socio Technical Systems:

A socio technical systems approach helps to avoid a purely technological approach to information systems. The need of the day is to optimize the performance of the system as a whole—both, the technical as well as the behavioural components. This implies that technology must be changed and designed in such a way that it fits organisational and individual needs. At times, technology must be 'deoptimized' to accomplish this fit. Organisation as well as individuals must be changed through training, learning and planned organisational change in order to allow the technology to operate and prosper. All organisations surveyed train a certain section of their employees. IOL nd TELCO have undertaken intensive training programmes in
collaboration with private computer institutes and depute their managers to these institutes. For instance, in 1993 managers at IOL were enrolled at Apple Industries, for learning certain packages for six months.

6. Information Requires a Context:

Much of the information that can be mechanized or automated need not be necessarily important from a managerial perspective. The value of information depends upon analysis, interpretation, explanation and finally understanding. In other words, information requires a context; and this context is supplied by the user’s stock or core of knowledge.

Information without context by which we mean the absence of analysis, interpretation, or explanation is thus of little value. Moreover, human beings and organisations develop the context within which information is valuable. Machines, information systems and related technology can provide only the information.
7. Some Important Information cannot be put into a System:

Much essential information in an organisation is not essentially systematic and therefore cannot be turned and put inside a machine. Ideas for new products, the opinions of other managers, plans of competitors, or intentions of large entities such as nations and societies are a few oft quoted examples. Moreover, views and perspectives contrary to accepted organisational wisdom are frequently not a part of formal information systems.

8. Value of Information Decays with Time:

The value of information changes rapidly with the passage of time. Useful information has a sharp exponential decay function at least from the perspective of management control. The knowledge that a particular product has a defective component is extremely valuable in the early production runs; i.e. when changes in sub-components and assemblies can still be made; as opposed to a year later, after an entire year’s production of defective products. Information that is a year or two years old may have historical value; and therefore be
important for statistical analysis and strategic planning; but, it is useless from the point of view of management control. Therefore, information must be timely. In the organisations surveyed, information that is old and has lost significance is deleted from the records.


Information requirements are never static. Information systems exist in a dynamic and changing environment. Information systems built to fit one set of requirements are continually being outdated by changes in the environment - both internal as well as external environment.

External environment also bring about changes in the internal information systems. Complying with requirements of national legislation frequently entails creation of entirely new information systems.

According to an information industry adage 'systems are never built; they are always being built. Information systems are not mechanistic. They are, in fact, like organisms; they are born; they grow, become
obsolete and are replaced.

10. Rapidly Changing Technology:

Computer technology is changing at a very fast rate. Costs have been falling sharply while capacity has increased exponentially. Consequently, systems are often technically obsolete shortly after they are installed. To amortize the cost of expensive hardware and information systems, systems are often used long after more advanced technology has appeared. In IOL and TELCO, COBOL is still being used though more advanced packages have been developed. This is because of the cost of the package and also cost involved in training personnel.

It has been rightly observed by an author that information is 'that piece of knowledge that alters the degree of uncertainty in a given situation'. Operations of organisations are becoming increasingly complex day by day due to many factors both within and outside the organisation. The growing or ever expanding size of an organisation in terms of geographical coverage, the number of people employed and the diverse nature of its operations have made management of the enterprise
difficult. In addition to these are the aspects of increasingly fierce competition faced and the several regulatory measures imposed by enactments and agencies. All these have added considerably to the all pervading uncertainty in which business systems operate. It is in this context that information comes in very useful towards managerial effectiveness.

As organisations have grown larger since the beginning of the Industrial Revolution, the necessity for formalised systems of informations flow has risen in parallel. The information requirements of managers must be satisfied by a MIS. This MIS must be designed on the basis of management task; management principles, individual management styles and behaviour, and organisation structure and behaviour. Moreover, the nature of MIS design and the method of its implementation are reflected back by the members of the organisation to impact managers and the functioning of the organisation.

Any organisation when it comes into existence sets before itself an objective or set of objectives. It is the people in the organisation who have relentlessly to
work towards these goals. Within the overall organisational goals are the various sub-goals of individual managers and it is the aggregate of the various sub-goals that make organisational goals. All sub-goals have to run in the same direction, that is, towards the organisational goals. Even for simple reason whether organisational goals are being achieved through achievement of sub-goals, there is a need to have periodical flow of relevant information to a manager’s table. As managers have to commit resources, it should become the endeavour of every manager to optimise the resources that he commits whether they be money, men, machinery, equipment, etc. For all this, he has to plan, organise, control and review, which are generally referred to as managerial processes.

Keeping this aspect in mind, an attempt is made to delve into the needs of management information system for the purpose of decision making. It seeks to determine the information required for decision making in different functional areas of management and establish norms and list discrepancy (if any) and the reasons thereof.
REFERENCES


3. Ibid., pp.66.


10. Ibid., p.17.