UNIT 2 MANAGEMENT INFORMATION SYSTEM

Structure

2.0 Introduction

2.1 Objectives

2.2 MIS: A Three Letter Acronym

2.3 Functions of Management

2.4 Purpose of Information System

2.5 Types of Information System

2.6 Definitions of MIS

2.7 Why Management Information System?

2.8 Different Components of MIS

2.9 MIS: An Integrated Application

2.10 Developing MIS: Do’s And Don’ts

2.11 Forces Which Makes MIS Strong & Successful

2.12 Stumbling Blocks

2.13 Limitations of MIS

2.14 Steps for Avoiding Pitfall

2.15 Summary

2.16 Keywords

2.17 Answers/Solutions

2.18 Further Readings

2.0 INTRODUCTION

In today’s technical era, revolution in business takes place with the foreword of Internet technologies. These Internet technologies are necessary parts for the screen of today’s networked management. Therefore, there is a growing need for all those interested in doing business, management and computerized accountability to understand the concept and scope of this technology and the way it is used to provide information for various functions in business.

When computer technology turns out to be further extensively obtainable in the late 1950s and early 1960s, there was an increased eagerness for information systems to augment management decision processes. Which later converted into a nomenclature known as MIS (Management Information System). MIS is viewed and used at many
levels by management and has turned out to be the favourite software engine for the development of IT in most recent years. This module throws some light on Management Information System, its application, and experience. This impression and framework of MIS in the form of module had been explained in an extremely exhaustive manner and gives reader a solid perceptive about its glimpse from every side that is underneath to pinnacle and more imperative showing the flavour of technology amalgamation with management.

2.1 OBJECTIVES

Information has been and always will be the foundation stone and Management Information Systems encompass an overture to the foundations, technology and applications of Management Information Systems (MIS). The unit emphasizes 'Systems Thinking;' i.e., the conceptualization of Information Systems as structured configurations of elements behaving cooperatively to dish up the information needs of an organization. The goal of this unit is to make available a real-world understanding of information systems (ISs) for the students who are pursuing the “Certificate in Technology”. Like its predecessor, this unit provides students with a firm foundation in business-related information technology (IT) on which they can build successful careers regardless of the particular fields they choose. After reading this unit you will be able to comprehend and will furnish with skills to evaluate information requirements for managerial decision making. It will facilitate learner to assimilate their learning from other functional areas and endow with scope for improved understanding of the decision making process in organizations. It will use information technology in the expansion of systems and trained learners to build up prototype systems using end-user database software.

- Identify systems of information flow
- How organizations use information systems.
- Be familiar with the basic theories, concepts, methods, and terminology used in information systems.
- Conceptualize information systems as Systems of Information; i.e., be able to apply basic concepts of Systems Theory and Information to real-world management information systems.
- Conceptualize information systems as complexes of hardware and software technologies and represent these complexes in system theoretical terms.
- Basics of management information system (MIS) familiarize with the stages of development of a simple MIS and its applications.
- Understand the relationships, both historical and current, between the use of information systems and business productivity.
- List the types of enterprise systems and the function they perform.
- Show the key components of an organization’s network.
- Ensure how there could be a flow of information within and outside the organization.
- Act as interface among sections and management tiers.
Provide an overview of information successes and failures and some of their causes.

### 2.2 MIS: A THREE LETTER ACRONYM

Before going into the details of what is Management Information System [MIS]? First of all, we ought to know the meaning of 3 different terms, which form Management Information and System in accumulation. Management Information System is an old management device, which has been extensively used by people for better management and scientific decision making. Management Information System is primarily reliant upon information, which is a vital ingredient of any Management Information System.

Information is the most critical resource of management Information System and as we all know that information is a fundamental factor for our continuation. Just as our body needs air, water and clothes, we are as much dependent upon information.

Management Information System is a combination of 3 English letters

- **M** Which stands for Management?
- **I** Which stands for Information
- **S** Which stands for System

**Management:** We can define management in many ways like, “Manage Man Tactfully” or Management is an art of getting things done by others. However, for the purpose of Management Information system, management comprises the process and activity that a manager does in the operation of their organization, i.e., to plan, organize, direct and control operations.

**Information:** Information simply means processed data or in the layman language, data which can be converted into meaningful and useful form for a specific user.

**System:** The system can be explained in a following ways

- System can be defined as a set of elements joined together for a common objective.
- A group of interrelated or interacting elements forming a unified whole e.g., business organization as systems.
- A group of interrelated components working together towards a common goal by accepting input and producing output in an organized transformation process.

If we see the diagrammatical view of MIS it is a management which is playing a vital role in bridging the gap between Information and System. With the help of these 3 letters we can make a number of permutation and combinations, namely;

- **MI:** Management Information means information regarding management. (Qualification of management, number of managers, policies etc.)
- **MS:** Management System means the fundamental structure of the management like the hierarchical order of management.
- **IS:** Information System, which provides information?
• **SM**: System Management means how to deal with a system whether it is a business organization, computer system etc.

• **SI**: System Information means the information regarding the system like what are the dissimilar parts of a system, how they communicate to each other etc.

• **IM**: Information Management means how to handle particular information.

• **MIS**: Management Information system

### 2.3 Functions of Management

If you are going to visualize an army with no general, a player with no coach, or a country without a government. How could the military beat the foe? How could the team win games? How could the nation keep away from total rebellion? So to make these above things streamline we need management which is an important ingredient. Management has been defined as a process of getting things done through others. This process is identified in a set of functions performed by managers to accomplish the goals. A manager is thus someone who defines, plans, guides, helps out, and assesses the work of others, frequently people for whom the manager is accountable in an organization. The following mentioned management functions will involve creative problem solving.

- **Planning**: According to Terry and Franklin, “planning is selecting information and making assumptions concerning the future to put together the activities necessary to achieve organizational objectives.” Planning includes both the broadest view of the organization, e.g., its mission, and the narrowest, e.g., a tactic for accomplishing a specific goal.

- **Organizing**: Organizing is the classification and categorization of requisite objectives, the grouping of activities needed to accomplish objectives, the assignment of each grouping to a manager with the authority necessary to supervise it, and the provisions for co-ordination horizontally and vertically in the organization structure. The focus is on separation, coordination, and control of tasks and the flow of information inside the organization. It is in this function that managers allocate authority to job holders.

- **Directing**: Direction is telling people what to accomplish and seeing that they do it to the finest of their capability. It includes making assignments, corresponding procedures, seeing that mistakes are corrected, providing on-the-job instruction and, of course, issuing orders.” The purpose of directing is to control the behavior of all personnel to accomplish the organization's mission and objectives while simultaneously helping them accomplish their own career objectives.

- **Staffing**: Staffing requires recognition of human resource needs, filling the organizational structure and keeping it filled with competent people. Recruiting, hiring, training, evaluating and compensating are the specific activities included in the function.
2.4 PURPOSE OF INFORMATION SYSTEMS

There is habitually misunderstanding between terms MIS and Information System. An information system is a set of interacting artifact and human activities that performs one or more functions involving the handling of data and information, including data collection, creation, editing, processing and storage; and information selection, filtering, aggregation, presentation and use. As per the encyclopedia Britannica “an integrated set of components for collecting, storing, processing, and communicating information. Business firms, other organizations, and individuals in contemporary society rely on information systems to manage their operations, compete in the marketplace, supply services, and augment personal lives”. Information systems are not about IT which exists to support the business key issues like defining Business Processes, Business Requirements Specification, User Acceptance Testing, Organizational Change Management, etc.

Information is a sum of computer sub system and the social system which in totality take a shape of Information System= Computer System + Social System. It is system which includes systems that are not anticipated for decision making. MIS is sometimes referred to, in a restrictive sense, as information technology management. People entail information for numerous grounds and in wide-ranging ways. For instance, you almost certainly give the impression of being for information for entertainment and illumination by viewing television, watching movies, browsing the Internet, listening to the radio, and reading newspapers, magazines, and books. In business, however, people and organizations inquire about and utilize information exclusively to make sound decisions and to solve problems.
As shown in Figure 2.1 the services, resources and structures are the primary components of information systems and IT management.

2.5 TYPES OF INFORMATION SYSTEM

New information systems based on Internet technology, data warehousing concepts (very large databases of operational data), or Web-enabled inter-organizational systems affix to earlier, more familiar types of systems commonly discussed in the IT literature and found in most organizations. These include transaction processing systems (TPS), management information systems (MIS), decision support systems (DSS), office automation systems (OAS), and expert systems (ES). As per the encyclopedia Britannica “Information systems consist of three layers: operational support, support of knowledge work, and management support”.

- **Transaction Processing Systems**: Transaction processing systems handle routine information items, more often than not manipulating data in some constructive way as it enters or leaves the firm’s databases. An order-entry program is an example of a TPS. Reasons for TP are recording, classification, sorting, calculation, summarization, storage and exhibit of results.

- **Management Information Systems**: Management Information systems make available a focused vision of information flow as it develops during the course of business activities. This information is constructive in managing the business. We will discuss all the aspects of MIS in the coming heads in an elaborate manner.

- **Decision Support Systems**: Decision Support systems are methodical models used to progress managerial or professional decision making by bringing significant data to a manager’s notice. In many cases, these systems use the identical data as management information systems, but DSS purify the data to make it more functional to managers. It support with exceptional and non-recurring decisions, which are moderately unstructured. Mainly what factors to reflect on and what information are needed.

- **Office Automation Systems**: Office automation systems endow with electronic mail, word processing, electronic filing, scheduling, calendaring, and other kinds of support to office workers. First introduced with personal computers, these “groupware” applications became essential with the extensive use of personal digital assistants. It combines word processing, telecommunications and data processing to computerize office information, draws on stored data as a result of data processing and comprise handling of correspondence, reports and documents.

- **Knowledge Work Systems (KWS)**: Information systems that give support to knowledge workers in the creation and integration of new knowledge in the
organization. Knowledge work systems (KWS) and office systems provide the information needs at the knowledge level of the organization. Knowledge work systems aid knowledge workers, whereas office systems primarily aid data workers (even though they are also used expansively by knowledge workers).

- **Executive Support Systems (ESS):** Information systems at the organization’s strategic level designed to address no custom decision making through advanced graphics and communications.

![Types of Information System](Source: www.macs.hw.ac.uk/modules/F24SR1/linksis/lec5.htm)

Figure 2.2 depicts the types of information system.

- Operational support outlines the base of an information system and enfolds a diversity of transaction processing systems for designing, marketing, producing, and delivering products and services.
- Support of knowledge work outlines the middle layer; it includes subsystems for sharing information in an organization.
- Management support, forming the top layer, contains subsystems for managing and evaluating an organization’s resources and goals”.

Apart from this there are many other types of systems which are designed for specific purposes. For example, engineering design systems enable skilled engineers to design
complex computer chips by manipulating design algorithms and laying out millions of circuits on a chip while rigorously obeying numerous electrical ground rules.
2.6 DEFINITIONS OF MIS

The term ‘Management Information System’ (MIS) refers to the data, equipment and computer programs that are used to upsurge information for managerial use. Similar to most complex systems, a management information system can be portrayed in a number of diverse ways:

- “Management Information System is a system that aids management in making, carrying out and controlling decisions”. Here management information system is a system that aids management in performing its job. - J. Kanter.
- A Management Information System is “an integrated man/machine system for providing information to hold up the operations, management and decision making functions in an organization.” Here the system utilizes hardware and software, manual procedures, management decision model and data base. - G.B. Davis.
- Marketing information system consists of people, equipment, and procedures to gather, sort, analyse, evaluate, and distribute needed, timely, and accurate information to marketing decision makers.” - Kotler and Lane.
- Management information system (MIS) is “an integrated user-machine system for providing information to support operations, management and decision making functions in an organization. The system utilizes computers, manual procedures, models for analysis, planning, control and decision making, and a database” -David Olson.
- An MIS is the organization of the university’s basic data in its operating systems (Students, Personnel, Accounting, etc.) and from relevant external sources so that it provides management with the essential information to manage. An MIS need not be wholly computer-based; it is however inevitable that the information deriving from the high volume of data in basic operational processes is computerized; what is still not so certain is whether the once-off “high level” information also needed in an MIS, is best obtained using a computer - Fielden.

Apart from this there are many other thoughts over and above to this definition are as follows:

- A management information system aims at meeting the information needs of managers, predominantly with regard to the current and past operations of the enterprise.
- Management information system is a system which provides precise, timely and meaningful data for management planning, analysis and control to optimize the growth of the organization.

Thus from the above definition it had been extracted that “Management Information System” (M.I.S.) is vitally concerned with processing data into information. Which is
then communicated to the different departments in an organization for appropriate
decision-making?

## 2.7 WHY MANAGEMENT INFORMATION SYSTEM?

A majority of workers nowadays are knowledge workers as they spend time in
creating, distributing, or using information. The very high-quality illustration are
bankers, coordinators, caseworkers, counselors, community organizers, programmers,
insurance advisors, consultants, etc.

Now there is a million Euros question is “Whether there is literally a need of MIS” or
we are hyping an issues by simply talking about. If we go into the depth of answers of
this type of questions which had been evoked, it can not be answered at this juncture
as implementation of MIS is in itself an answer. Nonetheless if we read the following
points up to some extent we can reach the expectations of one’s mindset with respect
to MIS:

- About 80% of an executive’s times are devoted to information receiving,
  communicating, and using it.
- Information is the starting point for virtually all activities performed in an
  organization.
- Best use of two key ingredients in organizations – people and information
- Effective utilization of information systems in management.
- Productive use of information.
- Information is a source to augment competence, effectiveness and
  competitiveness of an enterprise.

### Some Examples of MIS

- Airline reservations (seat, booking, payment, schedules, boarding list, special
  needs, etc.).
- Bank operations (deposit, transfer, withdrawal) electronically with a distinguish
  payment gateways.
- Integration of department with the help of contemporary software’s like ERP.
- Logistics management application to streamline the transportation system.
- Train reservation with the help of IRCTC.

### Check Your Progress 1

1) Briefly Comment on the Following Statements.
   a) Management Information system is an integrated, user, machine system for
      providing information.

   ………………………………………………………………………………………
   ………………………………………………………………………………………
   ………………………………………………………………………………………
b) A majority of workers nowadays are knowledge workers.

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

Management Information System

Management Information System is “an integrated man/machine system

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

2) Fill in the blanks with the appropriate word given in the brackets:

a) __________ is the course of action that measures present performance and
    guides it towards some pre-determined goal. [Controlling/Staffing]

b) KWS and office systems provide the information needs at the __________
    level of the organization. [Unawareness/knowledge]

c) Information is a source to__________ competence [augment/decrease]

d) Management Information System (M.I.S.) is vitally concerned with
    processing data into ___________ [Data/Information]

3) State True or False

a) Transaction processing systems handle routine information items

b) System Management means how to deal with a system

c) Decision support systems are unreasonable models used to progress
    managerial

d) MIS is best obtained using a computer

4) How MIS is link with an Organization. Illustrate with the help of example.

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

5) In what manner Management Information system is playing a vital role in
    building an organization image, illustrate.

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………

2.8 DIFFERENT COMPONENTS OF MIS

MIS is an integrated information system, which is used to endow with
management with needed information on a regular basis. The information can be used
for various purposes, strategic planning, delivering increased productivity, reducing service cycles, reducing product development cycles, reducing marketing life cycles, increasing the understanding of customers' needs, facilitating business and process re-engineering. If the necessities go beyond the capabilities of accounting software and other application software, we find the prospect of implementing conventional MIS software. The world's most excellent easy-to-use MIS solution. It is fully web-enabled, seamlessly integrated, MIS software that can be implemented in weeks. And can computerize your entire operations globally. MIS can help achieve unimaginable efficiency of operations, significant cost savings, and maximize profits. MIS is packed with powerful features, extremely easy to implement and use, comprehensive in its scope, modular and flexible, fully customizable, totally secure, and incredibly robust. To enable the easy handling of the system MIS has been divided into the following core subsystems:

• **Planning**: With better-quality planning capabilities and user interfaces, MIS makes available the information required to quickly and easily act in response to scheduling problems as they take place. This advanced planning functionality allows you to condense and diminish costs and increase productivity by eliminating stock shortages, improving delivery performance, and increasing flexibility in building your demand schedule. Straightforwardly analyze material requirements with graphical pegging information and make accurate delivery commitments on the fly. Engender and modify material plans on demand. Increase production cost control and resource management efficiency with flexible bills of material management. Initiate engineering changes without losing control of manufacturing operations and assess the impact of engineering alter throughout the operations.

• **Inventory & Material Management**: Effectual management of finished goods, work-in-process and raw material is critical to your entire operation. MIS System provides a healthy and structured materials management system -- everything you need to accurately control inventory transactions, product costs, and material usage. From material procurement to allocation of finished products, it permit you to administer important inventory information with a multi-attribute "item card." Instant access to real-time data let you to track inventory levels by item, location, warehouse, product family and historical usage with the click of 'a mouse. Simplify daily inventory transactions and increase user productivity with automated features for frequently performed tasks.

• **Finance & Accounting**: MIS takes care of complete Financial Accounting of the enterprise over the web. It maintains all the books and records that are essential for proper book-keeping stock analysis and accounting. All transactions affect and update the entire system, and all reporting is on the fly, for the most
accurate information at all times. MIS helps in managing all kinds of taxes, bank reconciliation inventory cashed and everything else that is required for efficient and complete financial accounting, modules for book-keeping and making sure the bills are paid on time. Examples: General ledger keeps centralized charts of accounts and corporate financial balances. Accounts receivable tracks payments due to a company from its customers. Accounts payable Schedules bill payments to suppliers and distributors. Fixed assets Manages depreciation and other costs associated with tangible assets such as buildings, property, and equipment. Treasury management monitors and analyses cash holdings, financial deals, and investment risks. Cost control Analyses corporate costs related to overheads, products, and manufacturing orders. MIS's wide-ranging, all-inclusive and flexible financial management features allow you to track the flow of money in your company in a protected and truthful environment. Sophisticated functionality streamline Easily manage and process your accounts payable and accounts receivable. Track all accounting activity with MIS's general ledger and easily generate financial statements, budgets, and other advanced financial reports.

• **Purchasing:** Manage all purchasing activities, from preferred vendor selection to entering bids, and from purchase order admission to receiving and inspecting the materials as they are received. Empower the purchase functions like sales. Indents, Orders, and MIS covers all aspects of production, including issues, quality control, material receipts, purchase invoices and production receipts, multiple bills of material, supplier database and comprehensive purchase analysis, production batches, cost sheets, standard costing, variance reports, and the valuation of Work in Progress.

• **Manufacturing & Logistics:** MIS's fully-featured manufacturing functionality assist you manage your work-in-process activities and increase the productivity of your production staff with labour-saving features that make available more control over production and scheduling. Quickly generate work orders from planned orders. Maximize manufacturing efficiency with automated back wash out, infinite and finite loading, forward and backward scheduling. Improved manage labour and equipment capacity with powerful shop floor scheduling and explore "what if" scenarios to rapidly identify and resolve schedule conflicts and load issues. Manufacturing and accounting data are absolutely integrated to help you accurately track product costs. A group of application for planning production, taking orders, and delivering products to the customer. Examples: **Production planning** perform-ins capacity planning and creates a daily production schedule for a company's manufacturing plants.

• **Materials management** controls purchasing of raw materials needed to build products. Manages inventory stocks, order entry and processing automates the data entry process of customer order and keeps track of the status or orders.

• **Warehouse management** maintains records of warehoused goods and processes movement of products through warehouses. Transaction
management arranges, schedules, and monitors delivery of products to customers via trucks, trains, and other vehicles.

- **Project management** monitors costs and work schedules on a project-by-project basis. Plant maintenance sets plans and oversees upkeep of internal facilities.

- **Customer service management** administers installed-base service agreements and checks contracts and warranties when customers call for help.

- **Quality Control**: By implementing an MIS system, you are by now taking the first step in improving quality control across your entire operation. MIS takes that level of quality a step further with specific quality-focused tools to help out your company in achieving optimal quality control in excess of your products, performance and procedures. Preserve a high-level of product quality with complete inspection procedures -- from raw materials, to work-in-process, to customer returns. Effortlessly track defective materials and assign them for return to vendor, scrap, or rework. Effectively track your production performance and procedures with statistical process control tools. The quality of your products and the efficiency of your operations will significantly contribute to a more satisfied customer base! Ad Hoc Report Wizard. The MIS Ad Hoc Report Wizard provides all of your users with the autonomy to speedily and straightforwardly create custom reports based on MIS data. The key to the real power of this product is that no database, query building, field name or programming knowledge is obligatory to take full advantage of the features of the Ad Hoc Report Wizard. The entire user needs to be acquainted with the fields on they want the report and in which order they want them in, and the wizard takes care of the rest. With this tool, any MIS user can make trouble-free or sophisticated custom reports without difficulty-and without needing to know any data structures or having to make modifications to the system. It is tremendously easy to shift fields to where you want them, add data filters, change sorting and grouping, etc. which means you can design your reports in exactly the way you want to see them. The user can also add simple or complex calculations to reports without needing to understand programmatically how to make this happen.

Reports created by the Ad Hoc Report Wizard include:

- Type data display
- Easy graphing and distribution
- Dynamic borders and floating data for easy reading
- Ability to dynamically change filters on the fly

- **Globalization**: Compete seamlessly in today's global marketplace with MIS's extensive multi-language and multi-currency capabilities. MIS is designed to hold up businesses that operate locally or globally. Language and currency need not be
Management Information System

a blockade to conducting business. With multi-language and multi-currency capabilities, MIS can be implemented around the earth. Whether you administer a small company in Paris or an international firm in Los Angeles, MIS supports your needs and save queries. Query reports can then come to you in a scheduled manner, or on demand.

- **Budgeting:** You can implement a complete Budgeting and Performance Analysis. MIS enables you to manage all aspects of sales. Raise system, offering all variance reports, and periodically generating Quotations on customers, Book Sales Orders, Make Deliveries, Critical information and timely alerts. Variances can be configured Raise Invoices. It can also link help in Quotations to orders, orders to lead to locked transactions, or their being sent for authorization, deliveries, and deliveries to Invoices. This allows for easy carry forward of transactions, entries and printing of documents.

- **Funds Management:** MIS enables you to manage funds efficiently. For each, MIS maintains your complete customer database and does kind of transaction specified to see its effect on flow of funds.

- **Extensive Sales Analysis:** Sales analysis reports give you total sales information, sorted and presented by products, parties, time periods, MIS offers you a forecast of funds based on or in any combination of them. It also helps in transactions and your specifications of funds movement.

- **Retail:** MIS includes a Point-of-Sale billing system with barcode label reading and printing, quick billing and collections.

- **Inventory:** MIS offers total Inventory Management for all kinds of businesses. With unlimited products, grouped as appropriate, Quality Control, valuation on multiple bases, stock ledgers and lists, ABC analysis, Fast Moving Consumer Goods (FMCG), dead stocks, ageing analysis and more. The inventory module integrates seamlessly with all other modules including sales, purchase and financial accounting, resulting in automatic updation of all inventory records on any transaction in other modules. MIS offers complete reorder management enabling you to achieve efficient management of stocks depending on minimum, maximum and reorder levels specified by you for each item of stock.

- **Asset Management:** The system maintains complete records of fixed assets with all details of the assets and their location, with reminders for insurance expiry, AMC renewals and more. Depreciation can be computed in multiple ways, and assets can be revalued if required.
• **Branches & Profit Centers**: We can integrate and perform accounting for an unlimited number of Branches and Profit Centers. These can be grouped as required

---

## 2.9 MIS : AN INTEGRATED APPLICATION

An integrated information system that serves all departments within an enterprise. Evolving out of the manufacturing industry, MIS implies the use of packaged software rather than proprietary software in black and white by or for one customer. As the internet has developed, all of the foremost MIS solutions have now been written to be accesses via web browsers. While developing an integrated MIS system one should follow certain steps.

**Figure 2.3 : Integrated MIS System**

<table>
<thead>
<tr>
<th>Groundwork examination</th>
<th>Requirements psychoanalysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>⇒ The problem</td>
<td>⇒ Knowing the primary and secondary users</td>
</tr>
<tr>
<td>⇒ Magnitude and scope</td>
<td>⇒ Ascertaining user needs</td>
</tr>
<tr>
<td>⇒ Alternatives</td>
<td>⇒ Primary and secondary sources of information</td>
</tr>
<tr>
<td>⇒ Viability and cost effectiveness</td>
<td>⇒ Design, development and implementation needs</td>
</tr>
<tr>
<td>Systems blueprint</td>
<td>Acquisition/procurement</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>⇒ Inputs</td>
<td>⇒ Compatibility</td>
</tr>
<tr>
<td>⇒ Processing</td>
<td>⇒ Cost effectiveness</td>
</tr>
<tr>
<td>⇒ Outputs</td>
<td>⇒ Performance standards</td>
</tr>
<tr>
<td>⇒ Storage</td>
<td>⇒ After sales service</td>
</tr>
<tr>
<td>⇒ Procedures</td>
<td>⇒ Configuration</td>
</tr>
<tr>
<td>⇒ Human resources</td>
<td>⇒ Portability</td>
</tr>
</tbody>
</table>
2.10 DEVELOPING MIS : DOS AND DON’TS

Once you are in the process of developing MIS or rather makeup your mind to implement MIS the best way to accomplish some homework which can facilitate in finding out what is right and what is wrong.

Table 2.1: Developing MIS – Dos and Don’ts

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Particular</th>
<th>Do’s</th>
<th>Don’t</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Layman</td>
<td>Have simpler and manageable system</td>
<td>Be ambitious</td>
</tr>
<tr>
<td>2</td>
<td>Bridging</td>
<td>Develop common understanding between consultant and the organization</td>
<td>Be unrealistic in developing action plan</td>
</tr>
<tr>
<td>3</td>
<td>Contribution in Totality</td>
<td>Involve programmer in needs assessment</td>
<td>Delay decisions on hiring application developer/s</td>
</tr>
<tr>
<td>4</td>
<td>Tailor-made</td>
<td>Customize off-the-shelf software</td>
<td>Depend heavily on the Consultant</td>
</tr>
<tr>
<td>5</td>
<td>Interpretation</td>
<td>Have simple software for users to handle</td>
<td>Invest heavily in in-house application development</td>
</tr>
<tr>
<td>6</td>
<td>Synchronization</td>
<td>Extensively involve users in MIS development</td>
<td>Let vendors determine hardware needs for LAN</td>
</tr>
<tr>
<td>7</td>
<td>Application</td>
<td>Adopt modular approach for s/w development</td>
<td>Go for large applications</td>
</tr>
</tbody>
</table>

2.11 FORCES WHICH MAKES MIS STRONG & SUCCESSFUL

There are distinguish forces which make MIS well-built & flourishing. These are not confined to following but changed according to the circumstances.

- **E-commerce**: Without internet & e-commerce MIS is like a boat without rudder as there are many locations which can not be accessible by road so there is a need of wireless systems which can efficiently be managed through internet.

- **Customer**: Customer is vital for every vendor either it is fast moving consumer goods, or service oriented organization like MIS. Because If there could be no customer there would be no circulation consequently no selling, thus without customer MIS is useless.

- **Enterprise**: It is an appropriate place where it can show its potential.

- **Financial infrastructure**: MIS needs a fiscal setup.
2.12 STUMBLING BLOCKS

MIS System though boon to the corporate world is again not fool-proof. However, this system suffers a number of problems including:

- **Confusing and difficult:** MIS Software’s are a gigantic package and consists of n-number of module, so it is very difficult to understand its characteristics but once you understand it becomes easier to work.

- **Customization is costly:** Customization is obviously costly, for instance when report is needed to configure, one person expected from the MIS vendor’s side has to come and give support. Hence more the customization /configuration greater should be the service cost charged by vendor.

- **Customization is time consuming and in many cases impractical:** MIS is not a one or two day job it is a regular process it requires years to complete as many things have to be incorporated into it i.e. mindset, office automation, etc. There is clause of hidden cost which always pinches the user.

- **Decline of an individual’s monopoly over information monopoly:** As information can be put into the server and rights and authority can be given to appropriate people who can access it i.e. production department data can not be confined to production department people. It can be shared by marketing department people with the help of login name and password thus cutting short time and reducing paper work.

- **MIS engenders a host of fears. One of them is job redundancy:** There is misconception among the employees that MIS can be a threat as for upcoming employment, this is not absolutely true because the persons who are not working hard have to be more cautious as performance appraisal chart is regularly maintained and monitored. Therefore for people who take no pain there is no gain.

- **Geographic Restriction:** The MIS packages are readymade packages made by the MIS vendors and can be customized according to the user need, thus sometimes not suits individual persons who are geographically away.

- **Implementation of an MIS project is a long process:** Like customization implementation is also a long process because there is ample number of departments and MIS can come in full-flow or to get its full flavour, the entire department should be fully compatible with MIS integration.

- **Platform restrictions:** Platform restricts could be the another obstacles up to some extent as they are using different operating systems.
2.13 LIMITATIONS OF MIS

The following are some of the limitations of MIS:

- **Customization is costly**: Customization is obviously costly, for instance when a report is needed to configure, one person expected from the MIS vendor’s side has to come and give support. Hence, more the customization/configuration greater should be the service cost charged by the vendor.

- **Customization is time consuming and in many cases impractical**: MIS is not a one or two day job; it is a regular process that requires years to complete as many things have to be incorporated into it i.e. mindset, office automation, etc. There is a clause of hidden cost which always pinches the user.

- **Implementation of an MIS project is a long process**: Like customization implementation is also a long process because there is ample number of departments and MIS can come in full-flow or to get its full flavour, the entire department should be fully compatible with MIS integration.

- **MIS engenders a host of fears. Some of them are; Job Redundancy**: There is misconception among the employees that MIS can be a threat as for upcoming employment, this is not absolutely true because the persons who are not working hard have to be more cautious as performance appraisal chart is regularly maintained and monitored. Therefore, for people who take no pain, there is no gain.

- **Decline of an individual’s monopoly over information monopoly**: As information can be put into the server and rights and authority can be given to appropriate people who can access it i.e. production department data can not be confined to production department people. It can be shared by marketing department people with the help of login name and password thus cutting short time and reducing paper work.

2.14 STEPS FOR AVOIDING PITFALL

An MIS system will perhaps be one of the prime investments you will make, so it's critical to the enterprises to do it accurately. The worst thing you can do is most often by picking the wrong software, make a team to undo the mess, and then relocate for a correct "aim." We have all read the horror stories of enterprises that acquire implementation decision in haste by initially purchasing software before they were ready.

- **Classify the Methodology**: choose on and stick to a lucid, analytical methodology. The methodology should guide you through each step in the selection process and diminish the emotional proportion in the selection. The processes includes distinctive phases for completing a thorough business-process review; evaluating vendors; managing software demonstrations; supporting the
eventual decision-making process; and structure the supporting implementation plan, together with costs.

• **Plot to Business Processes:** Don't start with software demos. Begin with your business processes, and then map out your feature/function requirements through a series of business-area reviews, the creation of process maps, an assessment of "to be" process changes, and the development of a requirements matrix with supporting business scenarios.

• **Be conscious of Organizational Chemistry:** Use your instincts when it comes to the organizational chemistry between your enterprises your consultants, and your selected vendor. You want a consulting organization that you sense relaxed with, one that can extract the input it needs from your in-house team members. Be on the watch out for a solution that sounds too trouble-free or will be done in a month. You are making a critical decision this has to be taken into consideration always.

• **Elect to choose a well-built Team:** Set up a steering committee with the president or CEO and heads of sales, finance, and operations, and sanction them to make decisions.

• **Scrutinize Potential Vendors:** Accomplish a rigorous software-selection process, and situate potential vendors under the microscope. Think about more than just features and functionality: Financial stability, technology strategies, long-term support, implementation successes, and corporate culture, are key factors.

• **Appraise Business Processes:** Be equipped to alter some business processes. You want to minimize or eradicate customization. Even the smallest enterprises have to make process compromises in their final solution.

• **Bargain Customizations:** Negotiate all of your customizations before signing a contract. If you do have to customize, you want to be acquainted with up front what it will cost and more important discuss about hidden cost and then incorporate that as part of your contract.

• **Modernize Infrastructure:** Plan for an infrastructure improves to sustain the new system. Some MIS implementations require the redesign of your network; make sure you identify what you require to do and how much it will cost.

• **Predict Elaborately:** Elaborately look after your implementation plan. The goal is to foresee now, to eliminate implementation setbacks in terms of both cost and time. Implement will always be preferred or rather become mandatory with the Vendor team i.e. make convinced that your software vendor has a role in your implementation. The software vendor has the most vested interests in making clear-cut that you are a pleased customer.

**Check Your Progress 2**

1) Briefly comment on the following statements
   a) MIS applications and enhancements to existing systems adequately support corporate goals.
b) MIS is being developed in compliance with an approved corporate MIS policy

c) Do all MIS s use computers?

d) The information system facilitates decision making

e) Any MIS should be relevant to the individual decision-maker.

f) MIS implementations require the redesign of your network

2) Fill in the blanks with the appropriate word given in the brackets:
   a) Implement will always be preferred or rather become mandatory with the ________team [Vendor/User]
   b) worst thing you can do is most often by picking the wrong ________ [hardware/software]
   c) MIS is packed with powerful features, extremely ________ to implement and use. [easy/tricky]
   d) __________MIS of the enterprise over the web maintains all the books and records that are essential for proper book-keeping stock analysis and accounting. [Production\Financials]

3) State True of False.
   a) MIS can be a threat as for upcoming employment
   b) MIS System though boon to the corporate world is again not fool-proof.
   c) Without internet & e-commerce MIS is like a boat without rudder
   d) MIS is an integrated information system, which is used to endow with management
   e) MIS can help achieve imaginable efficiency of operations,
4) Whether MIS applications provide, users with timely, accurate, consistent, complete, and relevant information.

……………………………………………………………………………………..
………………………………………………………………………………….…..

2.15 SUMMARY

Nowadays, Information technology persuades the arrangement and maneuver of organizations more overwhelmingly than any other technology ever has except the upcoming integrated system like ERP System. Advances in space travel, nuclear energy, medical technology, pharmacology, chemical fertilizers, insurance, academic institutions, and break-through in plant and animal genetics have all been extremely imperative to the humankind and its people, but none has affected organizations in the deep-seated technique than information technology has. MIS endow with moderately lot of benefits to the business organization the means of effectual and well-organized coordination between departments; rapid and consistent referencing; access to relevant data and documents; use of less labour; perfection in organizational and departmental techniques; management of routine activities (as accounts, stock control, payroll, etc.); everyday assistance in a department and closer contact with the rest of the world. It is imperative to note that whatsoever IT is installed must be appropriate to the organization, and to each department.

Management success is gained through accomplishment of mission and objectives. The terms MIS and information system are repeatedly mystified. To transform data into information, processing is needed and it must be done while considering the context of a decision. Information systems take account of systems that are not anticipated for decision making. MIS is occasionally referred to, in a preventive logic, as an information technology management. That area of learning should not be puzzled with computer science. If we see the IT service management it is a practitioner emphasis discipline. MIS has furthermore a quantity of variation with Enterprise Resource Planning (ERP) as ERP is an industry term is a broad set of activity supported by multi-module application software that help an organization rather we can say that over and above to MIS as it focus more on product planning parts purchasing maintaining inventory, interacting with suppliers and many more rather not just incorporates elements that are automatically focused on decision support. The learners can elaborately get an elaborate idea of ERP System once they go through the course MCS-052.

So Management Information Systems (MIS) is a rapidly growing field. A student with a concentration in MIS may seek employment as an information analyst, application
developer, consultant, or IS support staff. The MIS program of study includes courses in systems analysis and design, decision support systems, database management, expert systems, and other information technology topics.
2.16 KEYWORDS

The following are some of the keywords in MIS:

**Application Software:** The program that accomplishes the specialized tasks of the user. Contrasts with the operating system software, which allows the computer to work. A computer-aided dispatch system is application software, as if each word is processing program.

**Computer:** An electronic device capable of accepting and processing data (information) and supplying the results of such processes. Contemporary computers, combined with application software, permit the user to perform various tasks. In some discussions, "computer" means only the central processor. In others, "computer" means the entire package including the central processor, input and output devices, storage, arithmetic, logic, and control units.

**Data Base Management:** A computerized software system for creating, maintaining, and System (DBMS) protecting data bases.

**Data Base:** A repository for stored data that is integrated and shared. In a formal computerized method for storing details of interest to a business so that the stored items may be accessed and manipulated.

**Data Processing:** A generic term in which the computer is instructed to sort, organize, summarize, and otherwise manipulate information.

**Information Systems** is the multi-disciplinary study of the collection, processing and storage of data; of the use of information by individuals and groups, especially within an organizational context; and of the impact, implications and management of artifacts and technologies applied to those activities.

**Management:** The ‘Management’ perspective is subdivided into the three main areas of management responsibility: resources (or the ‘inputs’ to the process), organisation (or the ‘process’ itself) and services (or the ‘outputs’ of the process).

**Management Information System (MIS):** Is a system or method that endow with the information essential to deal with an organization efficiently. MIS and the information it engenders are by and large considered vital components of prudent and rational business decisions.

**Office Information Systems:** A variety of hardware and software systems. These systems include word processing, electronic mail, image processing, and creation of
compound documents, application processing tools, distributed relational data bases, and object-oriented computing.

**Peripheral**: Any devices or equipment that support the central processor. Peripherals include terminals, printers, disk drives, and tape drives.

**Software**: Programs written for computers. The computer typically has two types of software: operating system software (to make the computer work) and application software (to perform the task required by the user).

**System**: System may be defined as a group of two or more interrelated components or sub-systems that serve a common purpose. A system is an integrated set of components, or entities, that interact to achieve a particular function or goal.

### 2.17 ANSWERS /SOLUTIONS

**Check Your Progress 1**

2. (a) Controlling  (b) Knowledge  (c) Augment  (d) Information

3. (a) True  (b) True  (c) False  (d) True

**Check Your Progress 2**

2. (a) Vendor  (b) Software  (c) Easy  (d) Financials

3. (a) False  (b) True  (c) True  (d) True  (e) False

### 2.18 FURTHER READINGS

- [http://ocw.mit.edu](http://ocw.mit.edu)