Unit-5
MIS in functional areas of business

- Accounting information systems
- Geographical information systems
- Human resource information systems
- Inventory information systems
- Manufacturing information systems
- Marketing information systems
- Quality information systems

Accounting information systems

- An accounting information system (AIS) is a structure that a business uses to collect, store, manage, process, retrieve, and report its financial data.
- AIS can be used by accountants, consultants, business analysts, managers, chief financial officers (CFOs), auditors, regulators, and tax agencies etc.
- Specially trained accountants work in-depth with AIS to ensure the highest level of accuracy in a company's financial transactions and record-keeping, as well as make financial data easily available to those who legitimately need access to it—all while keeping data intact and secure.

Functions of an Accounting Information System

Accounting information systems have three basic functions:

- The first function of an AIS is the efficient and effective collection and storage of financial data.
- The second function of an AIS is to supply information useful for making decisions, including producing managerial reports and financial statements.
- The third function of an AIS is to make sure controls are in place to accurately record and process data.

Parts of an Accounting Information System

An accounting information system typically has six basic parts:

- **People** who use the system, including accountants, managers, and business analysts
- **Procedure and instructions** are the ways that data are collected, stored, retrieved, and processed
- **Data** including all the information that goes into an AIS
- **Software** consists of computer programs used for processing data
- **Information technology** infrastructure includes all the hardware used to operate the AIS
- **Internal controls** are the security measures used to protect data.

Benefits of Using an Accounting System

1. Saves Time and Costs

- Bookkeeping is known as a very time-consuming task because there are plenty of transactions to record and count.
- However, with an accounting system, all the procedures can be automated so that they can be finished quickly.

2. Increases Financial Visibility

- An accounting system makes it easy for stakeholders to monitor the company's financial position more comprehensively.

3. Minimizes Errors

- Manual calculations have a higher risk of errors, because in order to ensure accuracy you have to depend on the accountant's precision.
- However, with an accounting system, the calculation process is automated. Errors like duplicate data can also be detected.

4. Improves Asset & Inventory Management

- A good accounting system should be connectable with company's asset and inventory management. This means that it must enable to manage your assets and inventory as well.

5. Provides Real Time Data

- Accounting software allows to track company's financial data in real time. We can immediately find out the exact amount of money that goes in and out anytime.

6. Enhances Decision-Making Process

- With complete, accurate, and real-time reports, stakeholders will be able to make better financial decisions for the company. They will be able to find out what processes cost the most, which costs can be reduced, and so on.

7. Gives High Flexibility

- Web-based accounting software gives users the convenience of tracking their company's financial information and performing accounting tasks from anywhere. Users only need an internet connection to be able to use the app through a web browser.

Geographical information systems

- A geographical information system (GIS) is a computer-based system that include digital mapping technology.
- It is used to store and manipulate data that are viewed from a geographical point of reference.
- This system has four main capabilities: data input, data storage and retrieval, data manipulation and analysis, and data output.
- A GIS is one of the powerful and versatile tools as it can create information by integrating different data, sometimes from different sources, and display the data in different ways to the end-user.
- Geography plays an important role in many business decisions, since 85% of corporate data involve a number of business decisions, such as store locations, sales territories, sales promotions, and regulatory compliance rely heavily on geographical data.

Importance/Role of GIS in MIS

- Management Information Systems (MIS) and Geographic Information Systems (GIS) improve decision making. Two of the integration areas of importance for MIS and GIS are user interface and database.
- The MIS allows for understanding and the GIS for up-to-date data transfer.
- MIS is important in the ways of project planning, implementation and monitoring, as it provides strength improves systems and processes. It works in respect to executive and technical functions; it also works towards efficient use of resources. Adding GIS will make it more efficient and easier to understand.

- Integrating MIS and GIS on a user-interface level allows for the usage of one interface with multiple databases attached. This means that MIS and GIS teams will have to cooperate. When integration takes place on a database level, the two systems share one database. Once the common database has been set up the MIS and GIS teams can work independently on their applications unless the database is designed for one application. The ideal integration is on both user-interface and database level.

Human resource information systems

- HRIS stands for Human Resources Information System. The HRIS is a system that is used to collect and store data of an organization's employees.
- In most cases, an HRIS encompasses the basic functionalities needed for end-to-end Human Resources Management (HRM).
- It is a system for recruitment, performance management, learning & development, and more.

Benefits of an HRIS

- **Record-keeping.** An HRIS is a record-keeping system that keeps track of changes to anything related to employees.
- **Compliance**. Some data is collected and stored for compliance reasons. This includes material for the identification of employees in case of theft, fraud, or other misbehaviors, first contact information in case of accidents, citizens identification information for the tax office, and expiration dates for mandatory certification.
- **Efficiency**. Having all this information stored in one place not only benefits accuracy but also saves time.
- **Self-Service HR**. When done right, the HRIS can offer a good employee experience.

Functions of HRIS

- **Time & Attendance**. With the use of HRIS we can automatically keep track of arrival and departure of employee rather than doing it manually.
- **Training**. This module is often referred to as an LMS, or Learning Management System, when it's a stand-alone. An LMS usually includes available e-learning and other courses to be followed by employees.
- **Performance management**. Performance ratings are generated once or multiple times a year by the direct manager or peers of the employee.
- **Employee self-service**. Organizations are focusing increasingly on having employees and their direct supervisors manage their own data. Requests like holidays can be asked for by the employee him/herself. After approval, these are then immediately saved into the system (and registered to track for payroll and benefits purposes).
- **Reporting & Analytics**. A much rarer module in HRIS systems is reporting and analytics. Modern systems enable the creation of automated HR reports on various topics like employee turnover, absence, performance, and more. Analytics involves the analysis of these insights for better-informed decision making.

Inventory information systems

- An inventory information system is the combination of inventory management software and inventory management processes & procedures to connect, track and manage the flow of goods, activities, information and resources across a business.
- Purchasing is a very important component of an inventory information system. Too little inventory results in out of stocks. Too much inventory leads to obsolete inventory and limits cash flow.
- Purchasing includes forecasting, trend analysis, purchasing of goods and/or raw materials, vendor management, special orders and may include other arrangements, such as drop shipping.
- Inventory management & warehousing are at the heart of an inventory information system.

Advantages of Inventory Information System

The following are the advantages of strong inventory information system:

1. **Better Inventory Accuracy**: With solid inventory management, you know what's in stock and order only the amount of inventory you need to meet demand.
2. **Reduced Risk of Overselling:** Inventory management helps track what's in stock and what's on backorder, so you don't oversell products.
3. **Cost Savings:** Stock costs money until it sells. Carrying costs include storage handling and transportation fees, insurance and employee salaries. Inventory is also at risk of theft, loss from natural disasters or obsolescence.
4. **Avoiding Stockouts and Excess Stock:** Better planning and management helps a business minimize the number of days, if any, that an item is out of stock and avoid carrying too much inventory.
5. **Greater Insights:** With inventory tracking and stock control, you can also easily spot sales trends or track recalled products or expiry dates.
6. **More Productivity**: Good inventory management solutions save time that could be spent on other activities.
7. **Increased Profits:** A better understanding of both availability and demand leads to higher inventory turnover, which leads to greater profits.
8. **Better Customer Experience:** Customers that receive what they order on time are more loyal.

Manufacturing information systems

- The manufacturing information system refers to the management information system that is designed for use anywhere manufacturing or production is occurring.
- Generally, nowadays management information systems are computerized and are planned for collecting and presenting the data which managers require for planning and directing functions within the organization.
- It supports the manufacturing functions of purchasing, receiving, quality control, inventory management, material requirements planning, capacity planning, production scheduling, and plant design.

Benefits of MIS implementation might include:

- Reduced costs, waste, and re-work
- Increased efficiency in set-up times
- Assessment of correct order priority
- Assignment and reassignment of inventory as necessary
- Evaluation of optimal times to turn machines on and off
- Scheduling and rescheduling equipment
- Embedding best practices
- Improving reaction time within the supply change management process
- Making and measuring parts
- Assigning personnel

- Managing suppliers
- Increasing total output

Marketing information systems

- A marketing information system (MKIS) is a management information system (MIS) designed to support marketing decision making.
- It as a "system in which marketing data is formally gathered, stored, analyzed and distributed to managers in accordance with their informational needs on a regular basis."
- In addition, the online business dictionary defines Marketing Information System (MKIS) as "a system that analyzes and assesses marketing information, gathered continuously from sources inside and outside an organization or a store."
- Furthermore, "an overall Marketing Information System can be defined as a set structure of procedures and methods for the regular, planned collection, analysis and presentation of information for use in making marketing decisions."

Components of Marketing Information System

1. **Internal Records:** The Company can collect information through its internal records comprising of sales data, customer database, product database, financial data, operations data, etc.

2. **Marketing Intelligence System:** The marketing intelligence system provides the data about the happenings in the market, i.e., data related to the marketing environment which is external to the organization. It includes the information about the changing market trends, competitor's pricing strategy, change in the customer's tastes and preferences, new products launched in the market, promotion strategy of the competitor, etc.

3. **Marketing Research:** The Marketing Research is the systematic collection, organization, analysis and interpretation of the primary or the secondary data to find out the solutions to the marketing problems. Several Companies conduct marketing research to analyze the marketing environment comprising of

changes in the customer's tastes and preferences, competitor's strategies, the scope of new product launch, etc. by applying several statistical tools.

4. **Marketing Decision Support System:** It includes several software programs that can be used by the marketers to analyze the data, collected so far, to take better marketing decisions.

Importance/Benefits of Marketing Information System

1. **Fills up Information Gap:** The purpose is to meet their information needs and being aware of the world-wide scenario.
2. **Facilitates Decision Making:** It is a useful tool for future decision making involving the strategic, operational and control related decisions.
3. **Marketing Planning:** Marketing information system assesses the market demand and prospective sales to ensure effective planning of the marketing operations.
4. **Saves Cost and Time:** Marketing information system targets the problem area and take desired decisions to avoid the wastage of time, cost and efforts on unnecessary activities.
5. **Systematic Recording of Data:** It provides for an orderly arrangement of the gathered data to provide useful information for further marketing planning and decision making.
6. **Better Evaluation and Control:** Marketing information system helps to monitor and evaluate the marketing operations and programs. It also provides for taking corrective actions in case of not acquiring the desired outcomes.

Quality information system

- Quality information systems are standalone system or embedded system that helps an organization to achieve its quality goals.
- The aim of most firms all over the world is to produce high-quality goods and services; information is essential to achieve this goal—accurate, timely, and reliable information.
- Achieving quality also involves being able to develop strategic alliances with suppliers and customers, and information is again essential to this process.

Benefits of quality information system

1. **Timeliness**- The speed at which the information is received. Normally, faster the information better is its quality.
2. **Appropriateness**- is the suitability matching of the receiver and the information, more the suitability of the information to the receiver, better its quality.
3. **Reliability** – the reliability of information is a key attribute of quality. Only if the information is reliable is it of any use. The understanding of reliability comes from past experience, the standing/reliability of the source, the methodology adopted to acquire and process the information and the channel of delivery.
4. **Accuracy** – is the correctness of the information. Normally, the higher the accuracy of the information, the better is its quality.
5. **Completeness** – is the measure of comprehensiveness. It is required to ensure that the information provided gives the complete picture of reality and not a part of the picture.