Unit-3: Introduction to Management Information System

Data, information, computer based information system (CBIS), Information System Resources, Management Information System, Transaction Processing System(TPS), Decision Support System (DSS), Executive Information System (EIS), SCM, CRM and International System: Introduction, Supply Chain Management Systems, Customer Relationships Management System, Enterprise System and Challenges of Enterprise System Implementations- Managing the implementation, International Information Systems- Outsourcing and off-shoring **[8 LH]**

Introduction:

Management Information Systems (MIS) is the study of people, technology, organizations, and the relationships among them. MIS professionals help firms realize maximum benefit from investment in personnel, equipment, and business processes.

A management information system is an information system used for decision-making, and for the coordination, control, analysis, and visualization of information in an organization. The study of the management information systems involves people, processes and technology in an organizational context.

Data:

The raw material from which information is generated, data appears in the form of text, number, audio, video, images, figure or any combination of theses. There are many ways to collect data, including surveys, interviews, the uses of sensors, and the reading of documents.

Information:

Information is an abstract concept that refers to something which has the power to inform. At the most fundamental level, it pertains to the interpretation of that which may be sensed, or their abstractions. It is the result obtained after processing raw facts or data. Information is time-dependent, so its value and usefulness often decrease with time.

Different Between Data and Information

Data	Information
1. Data is unorganized and unrefined facts	1. Information comprises processed, organized data presented in a meaningful context
2. Data is an individual unit that contains raw materials which do not carry any specific meaning.	2. Information is a group of data that collectively carries a logical meaning.
3. Data doesn't depend on information.	3. Information depends on data.
4. Raw data alone is insufficient for decision making	4. Information is sufficient for decision making
5. An example of data is a student's test score	5. The average score of a class is the information derived from the given data.
6. Data does not directly help in decision making.	6. Information directly helps in decision making.

Characteristics of Information:

Subjectivity: The value and use of information are highly subjective because what is information for one person may not be for another. For example, even a small change in the price of the share of company may influence buying and selling shareholders, however to non-shareholders person a share price is just a number with little or no meaning.

Accuracy: Accuracy refers to the correctness and correctness of the information. It should be based on reliable sources and verified data to minimize errors and ensure correctness. Incorrect information can lead to misunderstandings, faulty decisions, and wasted resources. Therefore, ensuring accuracy through validation and cross-referencing is crucial.

Relevance: Relevance indicates how closely the information aligns with the topic or issue at hand. It should directly address the specific needs or inquiries of the user. Unrelated information can divert from the main objectives and waste time and effort. Therefore, information providers should prioritize relevance to enhance its usefulness and applicability.

Completeness: Completeness ensures that all necessary details and aspects of the subject are involved in the information provided. Incomplete information can result in gaps in understanding or decision-making processes. Users rely on complete data to gain a holistic view and make updated choices.

Timeliness: Timeliness refers to how current and up-to-date information is virtual to its usefulness. Outdated information may no longer reflect the recent situation or trends, possibly leading to unsuccessful decisions or actions. Timely updates are essential, especially in fast-paced environments where conditions change rapidly.

Clarity: Clearness emphasizes the need for information to be presented clearly and understandably, without any confusion. Clear information enhances communication and understanding, facilitating informed decision-making and reducing the risk of confusion or miscommunication.

Consistency: Consistency ensures that the information aligns with other available data and does not conflict verify facts or principles. Inconsistent information can create confusion and undermine trust. Maintaining consistency across sources and over time helps establish reliability and credibility.

Accessibility: Accessibility refers to how easily and readily available the information is to those who need it. Accessible information supports efficient decision-making and operations, qualifying users to retrieve and utilize data without unnecessary barriers or delays.

Reliability: Reliability indicates the honesty and integrity of the information source. Reliable information comes from reputable sources and undergoes scrutiny to ensure accuracy and objectivity. It instills trust in users and supports faithful decision-making processes.

Security: Security pertains to protecting sensitive or confidential information from unauthorized access, alteration, or damage. Safe information systems and protocols safeguard data integrity and confidentiality, preventing potential gaps that could compromise its value and reliability.

Data Processing:

Data processing is the process of collecting, manipulating, and analyzing data to extract useful information and draw conclusions. It involves transforming raw data into a more usable format for various purposes, such as reporting, analysis, decision-making, and other business functions. Data processing can involve various steps such as data collection, data entry, data cleaning, data transformation, data analysis, and data visualization.

Data processing occurs when data is collected and translated into usable information. Usually performed by a data scientist or team of data scientists, it is important for data processing to be done correctly as not to negatively affect the product, or data output. Data processing starts with data in its raw form and converts it into a more readable format (graphs, documents, etc.), giving it the form and context necessary to be interpreted by computers and utilized by employees throughout an organization.

Stages of data processing

Data Collection | Data Preparation | Data Input | Data Processing | Data Output & Interpretation | Data Storage
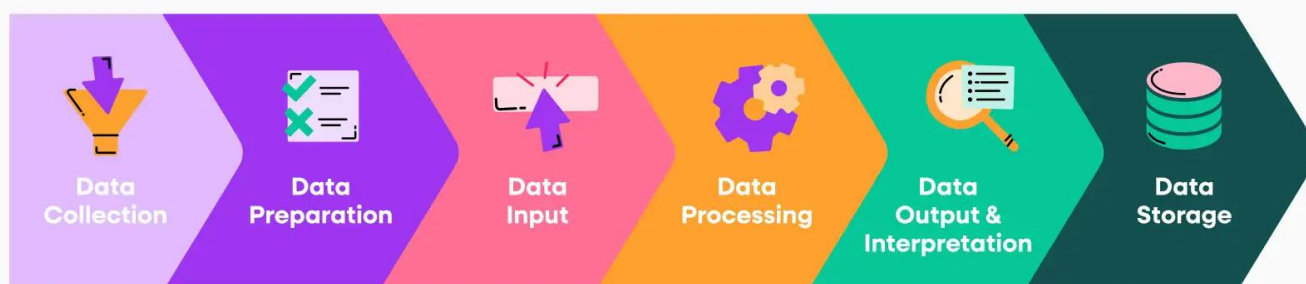
1. **Data collection:** The first stage of data collection involves gathering raw data from various sources, such as sensors, databases, or customer surveys. It is essential to ensure the collected data is accurate, complete, and relevant to the analysis or processing goals.

2. **Data preparation:** Once the data is collected, it moves to the data preparation stage. Here, the raw data is cleaned up and organized for further processing. This stage involves checking for errors and removing any bad data (redundant, incomplete, or incorrect). Data preparation aims to create high-quality and reliable data for subsequent processing steps.

3. **Data input:** The next stage is data input. In this stage, the clean and prepped data is fed into a processing system, which could be software, or an algorithm designed for specific data types or analysis goals. Various methods, such as manual entry, data import from external sources, or automatic data capture, can be used to input data into the processing system.

4. **Data processing:** In the data processing stage, the input data is transformed, analyzed, and organized to produce relevant information. Several data processing techniques, like filtering, sorting, aggregation, or classification, may be employed to process the data. The choice of methods depends on the desired outcome or insights from the data.

5. **Data output and interpretation:** The data output and interpretation stage deals with presenting the processed data in an easily digestible format. This could involve generating reports, graphs, or visualizations that simplify complex data patterns and help with decision-making. Furthermore, the output data should be interpreted and analyzed to extract valuable insights and knowledge.

6. **Data storage:** Finally, in the data storage stage, the processed information is securely stored in databases or data warehouses for future retrieval, analysis, or use. Proper storage ensures data longevity, availability, and accessibility while maintaining data privacy and security.

Information System:

An information system can be defined technically as a set of interrelated components that collect or retrieve, process storage and distribute information to support decision-making and manage control in an organization. In addition to supporting decision-making, coordination and control, information systems may also help managers and workers to analyze problem visualization complex subjects and create new products.

An information system (IS) is a formal, sociotechnical, organizational system designed to collect, process, store, and distribute information. From a sociotechnical perspective, information systems are composed by four components: task, people, structure (or roles), and technology.

Resources of Information System:

The resources of the information systems refer to people hardware software and data. An Information System is generally integrated and co-ordinates a Network, Hardware and Software components, which combine to convert data into information. The information system provides access to information when it is required. The information system is a set of components which generally helps a system.

There are 5 resources of information system which are given below:

1. **Hardware:** The system components which can physically touch – the system unit (tower, desktop, laptop), internal devices and peripheral devices (keyboards and monitors) – are called hardware and it is important to remember that basic definition: The hardware are the parts of the computer that are tangible and can be touched.

   Peripheral devices are provided in many other ways but think of them as hardware that surrounds the system unit. These peripherals devices may be connected by wired or wireless technology to the system unit. Generally, peripherals devices communicate with the interior components of the system unit via installed software. The software itself is intangible and can't be touched physically.

2. **Software:** We know that the hardware needs to know what to do, and that is the role of software. The software may be divided into two types: **first system software** and **second application software**. The primary piece of system software is the operating system, such as Windows or iOS, which manages the hardware's operation. Application software is performed for specific tasks, such as handling a spreadsheet, creating a document, or designing a Web page.

3. **People:** The human element is the most important component of information system and the people that are needed to run the system and the procedures they follow so that the knowledge in the huge databases and data warehouses can be turned into learning that can interpret what has happened in the past and guide future action.

4. **Data:** Data is one of the most important components which is generally stored in form of information in a database system and a database is a place where data is collected and from which it can be retrieved by querying it using one or more specific criteria. All types of data are stored in warehouse without knowing whatever form that an organization needs. The databases and data warehouses have assumed even greater importance in information systems with the emergence of "big data, " a term for the truly massive amounts of data that can be collected and analyzed.

5. **Network:** The network is defined as a system in which more than the system is connected through a transmission media. It provides an interface to receive a piece of information or send information. It is also one of the best resources in the information system.

Types of Information System:

1. **Transaction processing system (TPS):** At the operational level, managers need systems that keep track of the organization for necessary activities and operations, such as sales and material flow in a factory. A transaction processing system is a computer system that performs and records the routine (daily) operations necessary for managing affairs, such as keeping employee records, payroll, shipping merchandise, keeping records, accounting and treasury.

   At this level, the primary purpose of systems is to answer routine questions and monitor transactions flow through the organization.

   At the operational level, tasks, resources, and objectives are predefined and highly structured. The decision to grant credit to a customer, for example, is made by a primary supervisor according to predefined criteria. All that needs to be determined is whether the client meets the criteria.

2. **Management information systems (MIS):** Middle managers need systems to help with oversight, control, decision making, and administrative activities. The main question that this type of system must answer is: is everything working correctly?

   Its role is to summarize and report on essential business operations using data provided by transaction processing systems. Primary transaction data is synthesized and aggregated, and it is usually presented in reports produced regularly.

3. **Decision support systems (DSS):** DSS supports decision-making for unusual and rapidly evolving issues, for which there are no fully predefined procedures. This type of system attempts to answer questions such as: What would impact production schedules if we were to double sales for December? What would the level of Return on investment be if the plant schedule were delayed by more than six months?

   While DSSs use internal information from TPS and MIS systems, they also leverage external sources, such as stock quotes or competitor product prices. These systems use a variety of models to analyze the data. The system can answer questions such as: Considering customer's delivery schedule and the freight rate offered, which vessel should be assigned, and what fill rate to maximize profits? What is the optimum speed at which a vessel can maximize profit while meeting its delivery schedule?
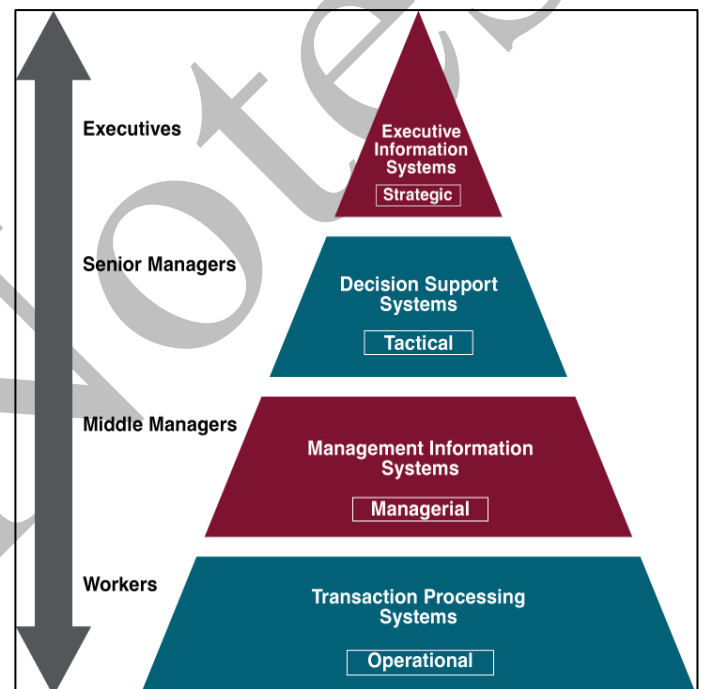
4. **Executive support system (ESS):** ESS helps top management make decisions. They address exceptional decisions requiring judgment, assessment, and a holistic view of the business situation because there is no procedure to be followed to resolve a given issue at this level.

   ESS uses graphics and data from many sources through an interface that senior managers easily understand. ESS is designed to integrate data from the external environment, such as new taxes or competitor data, and integrate aggregate data from MIS and DSS. ESSs filter, synthesize and track critical data. Particular attention is given to displaying this data because it contributes to the rapid assimilation of these top management figures. Increasingly, these systems include business intelligence analysis tools to identify key trends and forecasts.

Enterprise resource planning (ERP)

Enterprise resource planning is a software system that helps you run your entire business, supporting automation and processes in finance, human resources, manufacturing, supply chain, services, procurement, and more.

It is the business system that integrates multiple applications relating to accounting, Human resources, inventory, orders, shipping and services.. ERP Systems have been widely used since the early 1990s and fall under the umbrella of enterprise applications, as larger businesses often used them.

The simplest way to define ERP is to think about all the core business processes needed to run a company: finance, HR, manufacturing, supply chain, services, procurement, and others. At its most basic level, ERP helps to efficiently manage all these processes in an integrated system. It is often referred to as the system of record of the organization.

➢ ERP software can integrate all the processes needed to run a company.
➢ ERP solutions have evolved over the years, and many are now typically web-based applications that users can access remotely.
➢ Some benefits of ERP include the free flow of communication between business areas, a single source of information, and accurate, real-time data reporting.
➢ There are hundreds of ERP applications a company can choose from, and most can be customized.
➢ An ERP system can be ineffective if a company doesn't implement it carefully.

It provides a centralized platform for functions such as finance, procurement, order management, and inventory management. ERP systems enable businesses to streamline operations, improve efficiency, and enhance collaboration across departments. By automating and integrating these critical processes, ERP helps organizations optimize resource allocation, reduce costs, and make informed decisions based on real-time data. With its comprehensive features and functionalities, ERP serves as a powerful tool for businesses to achieve operational excellence and drive growth in today's competitive market.

ERP Features
1. **Automation for Better Decision-Making:** ERP systems automate business processes, providing accurate data for improved decision-making. From sales to finance, ERP manages every aspect of a business, offering a centralized location for a single source of truth.
2. **Customizable and Adaptable:** ERP systems are highly customizable and adaptable, allowing businesses to tailor the software to their specific needs. This flexibility improves accuracy, productivity, reporting, and overall efficiency.
3. **Real-time Access & Visibility:** ERP provides real-time access to critical business operations, enabling businesses to make informed decisions quickly. This centralized view helps streamline operations and enhances collaboration across departments.
4. **Integration:** ERP integrates operational, business, and financial data, eliminating data silos and providing a holistic view of the organization. This integration enables seamless management of various processes and facilitates data-driven decision-making.

5. **Finance & Accounting:** ERP systems centralize financial data, allowing businesses to manage accounting processes, track expenses, generate financial reports, and streamline financial operations. This feature ensures accurate financial management and compliance with accounting standards.
6. **Analytics & Reporting:** ERP systems offer robust analytics and reporting capabilities, providing businesses with data-driven insights into various aspects of their operations. These insights help identify trends, optimize processes, and make informed decisions to drive growth and profitability.
7. **Security:** ERP systems prioritize data security and adhere to industry standards to protect sensitive business information. With features like user access controls, data encryption, and regular backups, ERP ensures the confidentiality, integrity, and availability of critical data.
8. **Risk Management:** ERP systems help businesses ensure compliance with industry regulations and manage risks effectively. It includes features such as audit trails, security controls, and risk assessment tools to mitigate risks and maintain data integrity.
9. **Mobile and Cloud Capabilities:** Modern ERP systems often offer mobile and cloud capabilities, allowing businesses to access and manage critical data from anywhere, anytime. This flexibility enables remote work, enhances collaboration, and improves overall system accessibility.

Components of an ERP System (Core ERP Modules):

An ERP comprises several modules — bundles of features tailored for various aspects of the business, including back- and front-office roles. This goes beyond financial and fundamental functions like supply chain management and customer communication.

While most companies find that modern ERPs support their businesses "out of the box," some firms need to add to the extensive built-in functionality. If you have a lot of specialized processes, look for an extensible system that allows your integrator or IT staff to write code that adds needed features or that can integrate with homegrown or legacy solutions.
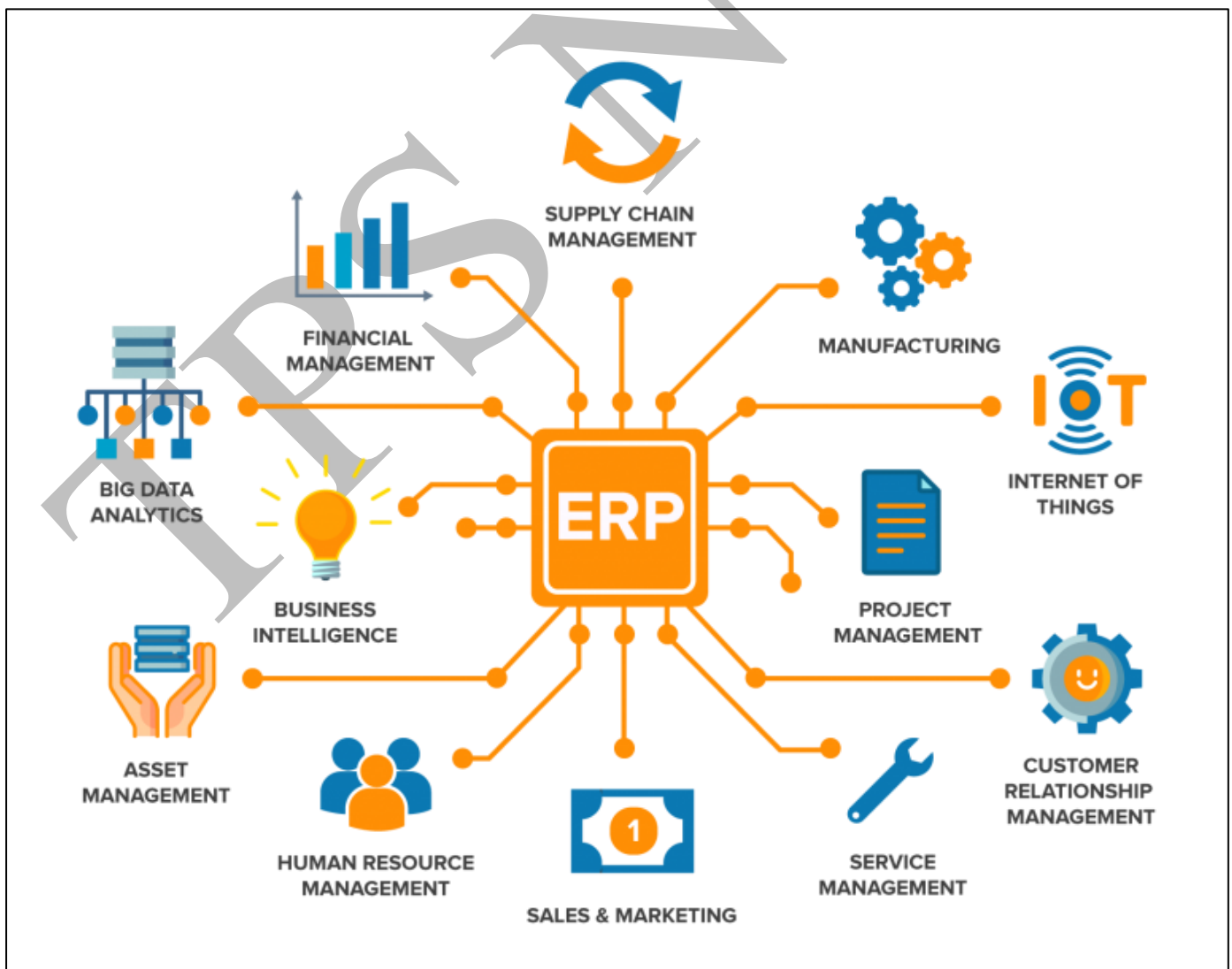
1. **Financial Management:** A finance module, the foundation of every ERP system, manages the general ledger and all financial data. It tracks every transaction, including accounts payable (AP) and accounts receivable (AR), and handles reconciliations and financial reporting.
2. **Human Resource Management (HRM):** A human resources management (HRM) or human capital management (HCM) module is like a workforce management module. It keeps employee records with detailed information, like available PTO and performance reviews, and can tease workforce trends in various departments or demographics.
3. **Supply Chain Management:** Supply chain management modules enable companies to oversee the flow of goods from suppliers through manufacturing and into customers' hands. Keep production running smoothly by ensuring all materials are available and in the correct locations and accurately schedule machinery and labor resources.
4. **Customer Relationship Management (CRM):** CRM is a popular module for businesses in various industries. It tracks all client communications, assists with lead management, and can enhance customer service and boost sales.
5. **Manufacturing:** Manufacturing can be complicated, and this module helps companies coordinate all the steps to make products. The module can ensure production meets demand and monitor the number of in-progress and finished items.
6. **Inventory (Assets) Management:** An inventory management module shows current inventory levels down to the SKU level and updates those numbers in real time. It also measures key inventory-related metrics. Any products-based company needs this module to optimize stock on hand based on current and forecasted demand.
7. **Project Management:** Services businesses often utilize a professional services automation (PSA) or project management module to plan and track projects, including the time and resources spent on them. It can simplify client billing and encourage collaboration among staff members working on a project.
8. **Ecommerce:** An ecommerce module allows retailers and brands to manage their online stores' back and front ends. With this application, they can change the site's look and feel and add and update product pages.
9. **Marketing Automation:** This module manages marketing efforts across all digital channels — email, web, and social — and enables organizations to optimize and personalize their messaging. A marketing automation tool can boost leads, sales, and customer loyalty.
10. **Procurement:** The procurement module manages raw materials or finished goods purchasing. It can automate requests for quotes and purchase orders and minimize overbuying and underbuying when linked to demand planning.
11. **Order Management:** This application monitors and prioritizes customer orders from all channels as they come in and tracks their progress through delivery. An order management module can speed up fulfillment and delivery times and improve the customer experience.
12. **Warehouse Management:** A warehouse management module directs activities like receiving, picking, packing and shipping. It can save time and cost in the warehouse by identifying more efficient ways to execute these tasks.
13. **Workforce Management:** A workforce management (WFM) module keeps track of attendance and hours worked; some can also manage payroll. This tool can record absenteeism and productivity by department, team, and individual employees.

Benefits of Using ERP Software System:

1. **Cost Savings:** The biggest value proposition of ERP systems is that they can save your organization money in several ways. By automating many simple, repetitive tasks, you minimize errors and the need to add employees at the same rate as business growth. Cross-company visibility makes it easier to spot inefficiencies that drive up costs and leads to better deployment of all resources, from labor

to inventory to equipment. And with cloud ERP, companies may quickly see incremental value from the software, over and above what they're spending.

2. **Workflow Visibility:** With all workflows and information in one place, employees with access to the system can see the status of projects and the performance of different business functions relevant to their jobs. This visibility may be particularly valuable to managers and leaders, and it's far faster and easier than searching for the right documents and constantly asking colleagues for updates.

3. **Reporting and Analytics:** Data is useful only if companies can analyze and understand it; an ERP helps with that. Leading solutions have impressive reporting and analytics tools that allow users to track KPIs and display any metrics or comparisons they can dream up. Since an ERP is all-encompassing, it can help a business understand how a change or problem with a process in one department affects the rest of the company.

4. **Centralized Data:** Because ERPs can access real-time data across the company, these systems can uncover impactful trends and provide extensive business insights. This leads to better decision-making by organizational leaders who now have easy access to all relevant data.

5. **Regulatory Compliance:** Financial reporting standards and governmental and industry-specific data security regulations change frequently, and an ERP can help your company stay safe and compliant. An ERP provides an audit trail by tracking the lifecycle of each transaction, including adherence to required approval workflows. Businesses may also reduce the chance of errors and related compliance snafus with automation.

6. **Risk Management through Mobility:** ERP technology reduces risk in a few ways. Granular access control and defined approval workflows can strengthen financial controls and reduce fraud. Additionally, more accurate data prevents mistakes that could lead to lost sales or fines. And finally, the ability to see the status of the entire operation enables employees to quickly handle risks posed by business disruptions.

7. **Data Security:** ERP providers understand that your system houses critical, sensitive data and take necessary steps to ensure it is secure. This diligence is more important than ever as the volume and scale of cyberattacks increase. Vendor-managed cloud ERP software, particularly, uses cutting-edge security protocols to ensure your company doesn't fall victim to a damaging attack.

8. **Increased Productivity:** Employees are most effective when they work together. ERP solutions make it easy to share information — like purchase orders, contracts, and customer-support records — among teams. It knocks down walls between departments by giving employees appropriate access to real-time data on related business functions.

9. **Scalability:** The right ERP system will be scalable and flexible enough to meet your company's needs today and for the foreseeable future. Cloud systems adapt to minor and major operational changes even as the amount of data the organization captures and the demand for access increase.

10. **Flexibility:** While ERP software helps businesses follow best practices, it also offers the flexibility to support unique processes and objectives. The system allows administrators to build company-specific workflows and create automatic reports important to different departments and executives. An ERP enhances your organization's innovation and creativity.

11. **Customer Service and Partner Management:** An ERP can strengthen a company's partner and customer relationships. It can provide insights on suppliers, shipping carriers and service providers, with the cloud enabling even better, more convenient information exchange. Regarding customers, the solution can track survey responses, support tickets, returns and more so the organization can focus on customer satisfaction.

12. **Forecasting:** Finance and FP&A departments are pressured to develop accurate forecasts in response to evolving conditions. Such dynamic financial forecasting empowers organizations to quickly adjust plans based on real-time data and new insights. Seamless synchronization between your ERP and planning and budgeting systems empowers finance teams to easily seed actuals and information in daily planning and forecasts, eliminating the need for departments to coordinate and consolidate offline.

Supply chain management:
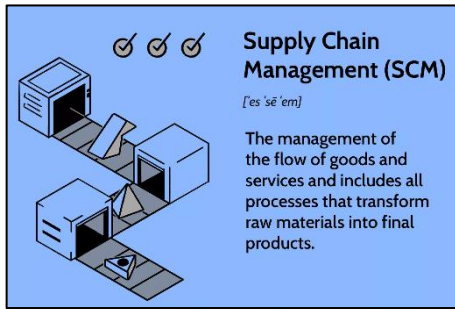
Supply chain management includes all activities that turn raw materials into finished goods and put them into customers' hands. This can include sourcing, design, production, warehousing, shipping, and distribution. The goal of SCM is to improve efficiency, quality, productivity, and customer satisfaction.

Supply chain management (SCM) is the monitoring and optimization of the production and distribution of a company's products and services. It seeks to improve and make more efficient all processes involved in turning raw materials and components into final products and getting them to the ultimate customer. Effective SCM can help streamline a company's activities to eliminate waste, maximize customer value, and gain a competitive advantage in the marketplace.

- ➢ Supply chain management (SCM) is the centralized management of the flow of goods and services to and from a company and includes all the processes involved in transforming raw materials and components into final products.
- ➢ With SCM, companies can cut excess costs and deliver products to the consumer faster and more efficiently.
- ➢ Good SCM can help prevent expensive product recalls and lawsuits as well as bad publicity.
- ➢ The five most critical phases of SCM are planning, sourcing, production, distribution, and returns.
- ➢ A supply chain manager is tasked with controlling and reducing costs and avoiding supply shortages.

Measure Task of Supply Chan Management:
- ➢ Decide when and where to produce, store and move
- ➢ Rapidly Communicate orders
- ➢ Track the status of orders.
- ➢ Check inventory availability and monitor inventory levels
- ➢ Reduce inventory, transportation, and warehousing cost
- ➢ Track shipments
- ➢ Plans production based on actual customer demand
- ➢ Rapidly communicate changes in product design
- ➢ Make product available in the market

Customer Relationship Management (CRM):

Customer relationship management is a process in which a business or other organization administers its interactions with customers, typically using data analysis to study large amounts of information. CRM is the combination of practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle. The goal is to improve customer service relationships and assist with customer retention and drive sales growth. CRM system examines customers from a multifaceted perspective. These systems use a set of integrated applications to address all aspects of the customer relationship, including customer service, sales and marketing.

Essential CRM Features

Choosing a CRM system can be confusing because not all CRMs are the same, and each offers vastly different features compared to its contemporaries. So, if you're looking to buy a CRM, but can't decide, this section will help you understand the eight essential features you need in a CRM software. These eight features are described below:

1. **Contact Management:** All the essential information related to a lead/customer's contact such as their name, email address, phone number, work details, past communications, etc. should be easily accessible and modifiable.
2. **Lead Management:** Keeping track of leads can often be tedious if you're still relying on spreadsheets or other incompatible tools. The lead management Opens a new window feature gives you an overview of your leads with their status, lead score, etc. By clicking on an entry, you can view their profile, recent activities on your website, prior communication, complaints, and so on.
3. **Pipeline Management:** The pipeline management feature gives you a visual representation of your current leads and deals. The deals are segregated according to the stage of the sales pipeline. This makes it easy for salespeople to understand the status of each lead and helps them decide which leads to pursue.
4. **Sales Automation**: The sales department is possibly already taxed with too much work. The addition of repetitive administrative tasks such as sending invoices or following-up with a cold lead can negatively impact their productivity. With the sales automation feature, salespeople can automate repetitive tasks so that they can focus on hitting the sales target. Automation workflows are initialized based on triggers or rules. For example, if a lead hasn't replied after three days, the follow-up workflow will be activated wherein a reminder email will be automatically sent to the contact.
5. **Sales Forecasting:** A CRM tool processes tons of data daily. The sales forecasting feature uses this data to predict future sales. This way, salespeople can get an approximate understanding of their pipeline and how efficiently they can push sales. Salespeople can effectively use this information and convert hot leads.
6. **File Storage and Sharing:** Rather than relying on external file storage applications, salespeople can store important and frequently required files such as quotes, feature sheets, sales scripts, etc. in a centralized repository and share them with co-workers instantly.
7. **Email Management:** You can integrate your email with CRM so that you don't have to jump between multiple tabs to send an email. With the email management feature, you can send emails right from the CRM interface, mark the status of the lead, mention a remark, and prioritize emails. This way, you won't miss out on connecting with any of your leads.
8. **Reporting and Analytics:** This feature summarizes sales performance in a single dashboard. You can customize or create new types of reports based on your requirements and export them in different formats.

Critical Benefits of CRM
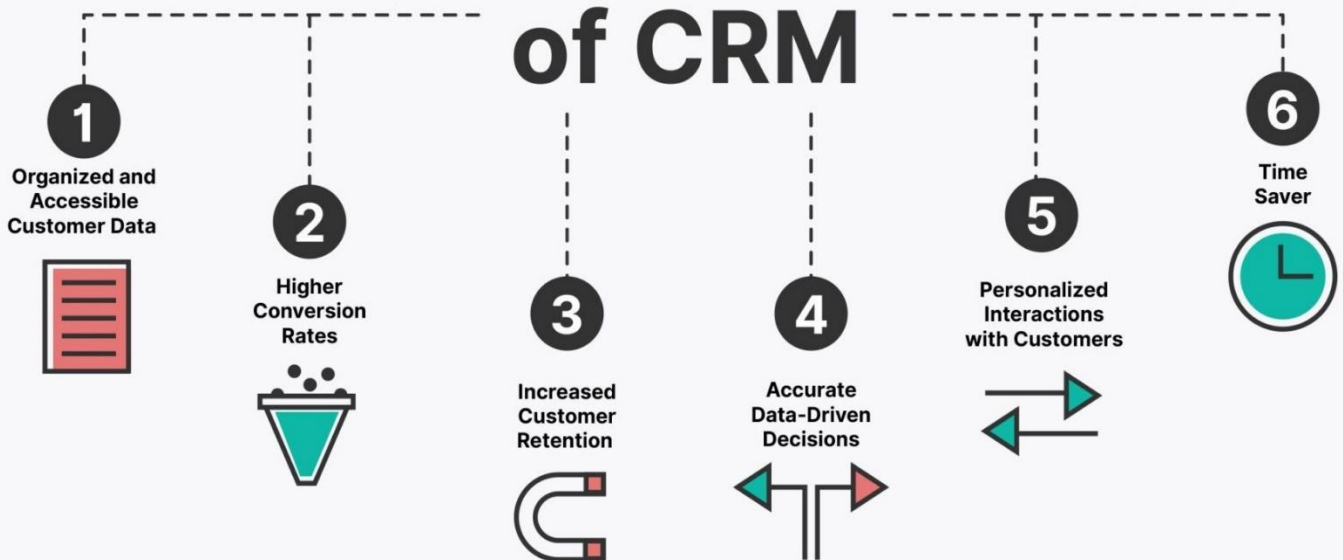
1. **CRM Keeps Customer Data Organized and Accessible:** The more info you have about customers, the more you can target and delight them with the right messaging and offers. What's even better is having this data available all in one place for stakeholders to see and make customer-informed decisions.

2. **CRM Systems Increase Conversion Rates:** Since you have access to prospect and customer data, it's easier to track and qualify leads based on activity, and you can use the insights to launch personalized, targeted campaigns.

3. **CRM Boosts Customer Retention Rates:** Repeat customers are the key to your business's long-term success. CRM gives you an insight into customers' needs at different stages of their journey. The more you learn about customers, the better positioned you will be to anticipate and satisfy their needs repeatedly.

4. **CRM Platforms Empower Teams to Make Accurate Data-Driven Decisions:** Most CRM tools analyze customer data and uncover hidden insights you ordinarily would have missed. You can track and measure to see if you are meeting expectations and learn more about what resonates with customers and what needs to change.

5. **CRM Enables Personalized Interactions with Customers:** A CRM gives you access to your customer's contact details, buying habits, as well as their intent. With this info, you can have conversations based on data, not assumptions.

6. **CRM Saves Time:** You can automate processes like sending out bulk emails, qualifying leads, re-engaging old customers or leads, and establishing a stronger bond with customers.

Common Types of CRM Implementation Challenges:

1. **People Challenges**: You might believe that the most difficult aspect of CRM deployment is mainly technological. However, that is never the case. Out of all the CRM implementation challenges you face, your people will be the most difficult to deal with.
   Some people will welcome change and innovation, while others might be resistant. While a CRM system can assist your company to break down barriers, just changing how everything is done in your marketing, sales, and customer care departments might cause differences among your employees.

2. **Technology Challenges**: In the era of digitization, every other company is using some sort of software to automate tedious processes. The issue emerges when none of these systems are connected, and there is no data flow between them.

3. **Business Process Challenges:** One feature that your CRM must have is scalability; so that it can grow along with your company. Installing a CRM with limited and fixed capacity might not be the most intelligent choice for companies. It may fit you now, but when your customer base grows, you will find your CRM failing.

HOW TO AVOID THE MOST COMMON CRM CHALLENGES

Now that we have a general idea of what the basic challenges of CRM implementation are, let us dive into the approach for overcoming these challenges.

Convincing Your People to Change

In the majority of the scenarios, it is not viable to expect your employees to dive in and adopt a new CRM software as soon as you implement it.

Getting Approval from Management

Employees must communicate a convincing pitch to senior executives in order to persuade them for adopting the latest CRM technology.

Setting Objectives

Defining clear objectives before starting off is one of the key steps to a smooth and successful CRM implementation process.

Deciding on Cost

According to a survey published by Harvard Business Review, $1.3 trillion was spent on digital transformation in 2019.

CRM Deployment Type

It all boils down to on-premise vs cloud computing. Before deciding whether to go with on-premise or cloud, examine the set budget versus the total cost of ownership.

CRM Integration

To avoid CRM implementation overkill and information overload for your employees, it is a good idea to consider any integration requirement ahead of time.

CRM Training

Your routine operational processes must be replicated in the new system so that users may continue to carry out their everyday tasks without difficulty.

CRM Software Vendor

If the CRM implementation vendor has never worked on a CRM project that is of similar scale to yours, there might be unforeseen obstacles.

Handling Data Security

Your corporate data is likely the most valuable asset you have in terms of your business. After all, by 2023, the Big Data industry is expected to be valued at $77 billion.

Assignment:

1. Explain data, Information and Information system with example.
2. Why information is important? Explain the characteristics of information with examples.
3. Explain Management Information System and its usage in the organization.
4. Explain Transaction processing system with its major characteristics.
5. How does DSS add value for organization explain with proper example?
6. Comparative differences among TPS, MIS, DSS, ESS.
7. How do enterprise systems help businesses achieve operational excellence?
8. How do supply chain management systems coordinate planning, production, and logistics with suppliers?
9. How do customer relationships management systems help firms achieve customer intimacy?
10. What types of companies are most likely to adopt cloud-based ERP and CRM software services? Why? What types of companies might not be well-suited for this type of software?
11. What are challenges posed by enterprise applications?
12. List and describe the challenges posed by enterprise applications.
13. Explain how these challenges can be addressed.
14. Which enterprise applications should a business install first: ERP, SCM or CRM? Explain your answer.