INFORMATION SYSTEM

WHY NEED TO STUDY INFORMATION SYSTEM

- IS must be managed as a critical resource.
- Is enable change in the way people work together.
- Is are part of almost every aspect of business.
- Is enable business opportunities and new strategies.
- Is can be used to combat business challenges from competitors.
- Information technology (it) is a critical resource for today’s businesses. It both supports and consumes a significant amount of an organization’s resources.

WHY NEED TO STUDY INFORMATION SYSTEM

- Incorporating IS into the design of a business enables people to focus their time and resources on issues that bear directly on customer satisfaction and other revenue and profit generating activities.
- Adopting the wrong technologies can cause a company to miss business opportunities and any revenues those opportunities would generate. Inadequate IS can cause a breakdown in servicing customers, which hurts sales.
- If the systems do not allow the organization to realize its goals, or if IS lack the capacity needed to collect, store, and transfer critical information for the business, there results can be disastrous.
- Customers will be dissatisfied or even lost. Production costs may be excessive . worst to fall, management may not be able to pursue desired business directions that are blocked by inappropriate IS.

FEATURES OF INFORMATION

- Relevant
- Up To Date
- Accurate
- Meeting Users Needs
- Easy to use and understand
- Worth the cost
- Reliable

DATA-INFORMATION-DECISION

Data – Information - Decision

Data

Region	Sales in Rs.
North	50 lacs
West	40 lacs
South	22 lacs
East	10 lacs

Information

Sales is best in North region and worst in the South and East region, where the target of 40 lacs has been missed.

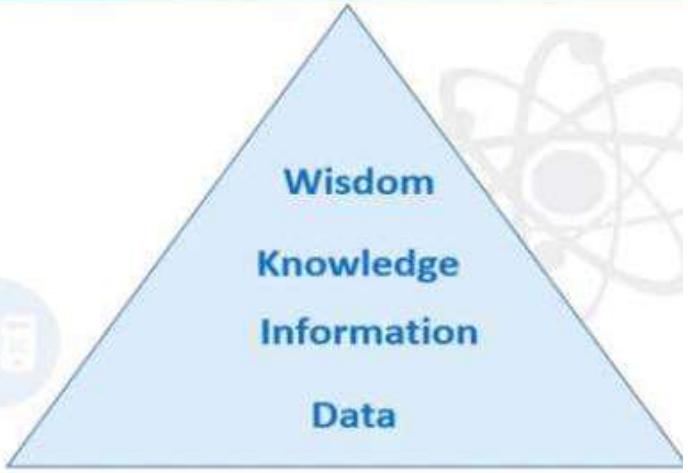
Decision

1. Appoint more sales engineers in South and East region
2. Increase advertisement budget
3. Offer more discounts to dealers

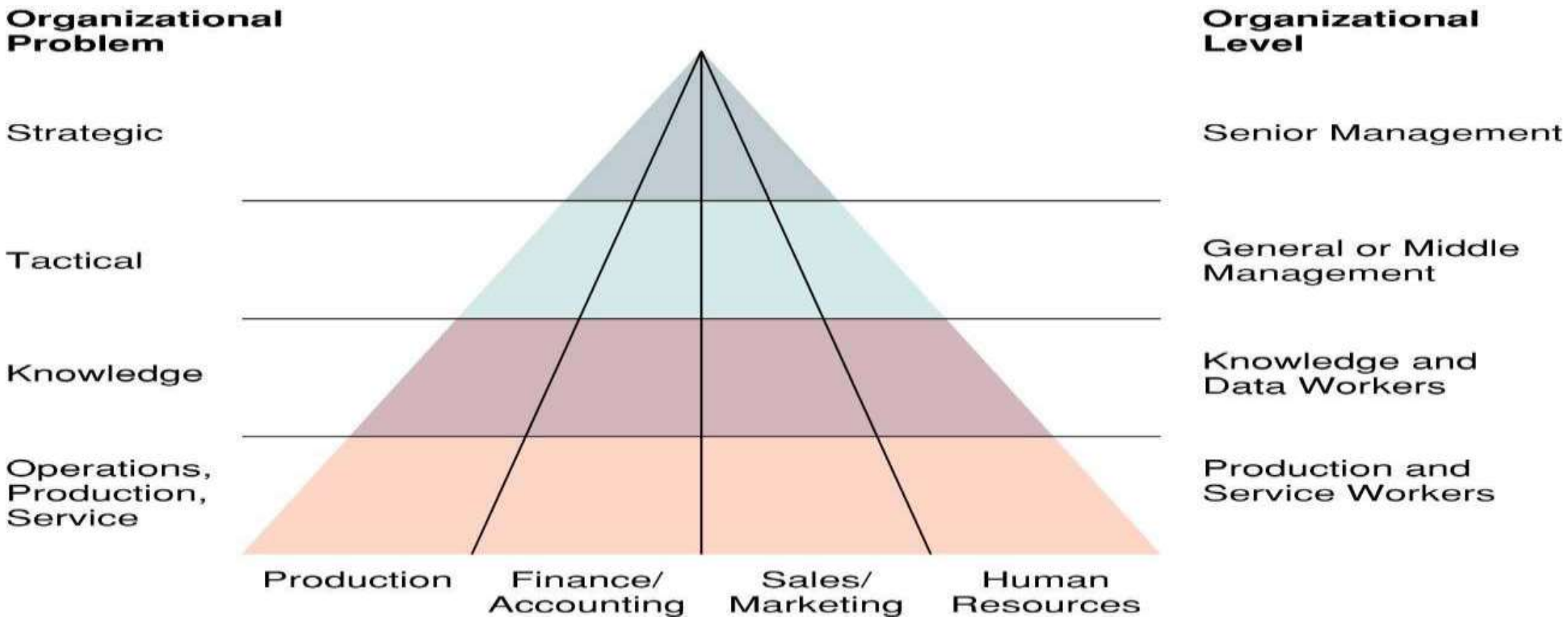
WHAT IS INFORMATION SYSTEM

What Is an Information System? (1 of 3)

- Information system
  - Set of interrelated components
  - Collect, process, store, and distribute information
  - Support decision making, coordination, and control
- Information vs. data
  - Data are streams of raw facts
  - Information is data shaped into meaningful form
  - Information is an ordered set of data that you can understand and act on.



MIS TRIANGLE



MANAGERIAL ROLES FOR IS TO BECOME SUCCESSFUL

Managerial Role	Skill
Visionary	**Creativity**—the ability to transform resources and create something entirely new to the organization **Curiosity**—the ability to question and learn about new ideas, applications, technologies, and business models **Confidence**—the ability to believe in oneself and assert one's ideas at the proper time **Focus on Business Solutions**—the ability to bring experience and insight to bear on current business opportunities and challenges **Flexibility**—the ability to change rapidly and effectively, such as by adapting work processes, shifting perspectives on an issue, or adjusting a plan to achieve a new goal

WHY NEED TO STUDY INFORMATION SYSTEM

Informational and Interpersonal	**Communication**—the ability to share thoughts through text, images, and speech **Information gathering**—the ability to gather thoughts of others through listening, reading, and observing **Interpersonal skills**—the ability to cooperate and collaborate with others on a team, among groups, or across a chain of command to achieve results
Structural	**Project management**—the ability to plan, organize, direct, and control company resources to effectively complete a project **Analytical skills**—the ability to break down a whole into its elements for ease of understanding and analysis **Organizational skills**—the ability to bring together distinct elements and combine them into an effective whole **Planning skills**—the ability to develop objectives and to allocate resources to ensure objectives are met

INFORMATION SYSTEMS

- Modern Organisations are **Open Systems**.
- They exchange information continuously to adapt to the changes imposed by rapidly changing technology and market.
- They need right information at right time.
- The information need to be gathered, organised, processed, evaluated, presented in proper form and transmitted.

INFORMATION SYSTEM

Information System Have:

- Increased data processing
- Complex decision making situations
- Phenomenal rise in knowledge workers

Information System comprise of:

- Computer hardware and software
- Manual procedures
- Model for analysis
- Planning, control and decision making

CHANGING BUSINESS ENVIRONMENT

GLOBALISATION:

- Management and control in a Global Market Place
- Competitive World Markets
- Global Work Groups
- Global Delivery Systems

CHANGING BUSINESS ENVIRONMENT

Transformation Of Global Economics

Example: The rise of e-commerce platforms like Amazon has transformed global retail by enabling businesses to sell products worldwide, affecting traditional brick-and-mortar stores.

- Knowledge And Information Based Productivity

Example: In the tech industry, companies like Google and Microsoft thrive on their ability to leverage data and knowledge to develop innovative products and services.

- New Product And Services(Obsolescence rate high)

Example: Smartphones are a prime example. New models with advanced features are released frequently, making older models obsolete within a short period.

- Leadership

Example: Satya Nadella's leadership at Microsoft has been pivotal in the company's successful transition to cloud computing and other new technologies.

CHANGING BUSINESS ENVIRONMENT

- Time Based Competition(Right time)

Example: Zara, the fashion retailer, excels in time-based competition by rapidly designing, producing, and distributing new fashion trends to stores worldwide.

- Shorter Product Life

Example: In the electronics industry, devices like laptops and tablets have shorter life cycles as new models with better specifications and features are frequently introduced.

- Turbulent Environment

Example: The COVID-19 pandemic created a turbulent environment for many industries, forcing businesses to rapidly adapt to new ways of operating, such as remote work and digital services.

- Limited Employee Knowledge Base

Example: A manufacturing company may struggle to adopt new automation technologies if its workforce lacks the technical skills needed to operate and maintain the new equipment.

CHANGING BUSINESS ENVIRONMENT

Transformation Of the Enterprise

(FUNDAMENTAL CHANGE IN THE WAY A BUSINESS OPERATES)

- **Flattening (Reduction in hierarchy)**

Example: Companies like Google have adopted a flatter organizational structure to foster open communication and quicker decision-making. Employees have more direct access to senior leadership, which can enhance innovation and responsiveness.

- **Decentralization**

Example: A global company like Starbucks decentralizes its operations by allowing regional managers to make decisions about product offerings and marketing strategies based on local preferences and market conditions.

- **Flexibility**

Example: Netflix demonstrates flexibility by rapidly shifting its content strategy from DVD rentals to online streaming and then investing in original content production to stay ahead of competitors.

- **Location Independence**

Example: Companies like Twitter and Shopify have embraced location independence by allowing employees to work remotely from anywhere, which has become increasingly popular and practical with advancements in communication technology.

- **Low transaction and coordination costs**

Example: E-commerce platforms like Amazon lower transaction costs by providing a seamless online shopping experience, reducing the need for physical stores and complex supply chain management.

- **Empowerment**

Example: In companies like Zappos, employees are empowered to make decisions that benefit the customer, such as issuing refunds or resolving complaints without needing approval from higher management.

- **Collaborative work and team work**

Example: In software development, Agile teams work collaboratively in sprints, holding regular meetings to discuss progress, address issues, and adjust plans. This approach enhances teamwork and ensures continuous improvement.

INFORMATION SYSTEM

- **A Definition Of Information System:**
- Interrelated Components Work Together To Collect ,Process ,Store And Disseminate Information to support Decision Making, Coordination, Control, Analysis And Visualization in an Organization.

DESIGN AND USE OF INFORMATION SYSTEM

- Environment of the organization
- **Example:** A retail company must consider the competitive landscape, customer preferences, and regulatory policies when designing its information systems to ensure they meet market demands and compliance standards.
- Organizational structure
- **Example:** A company with a hierarchical structure might have different information systems for each department (e.g., HR, finance, marketing), whereas a flat structure might use integrated systems to facilitate communication and collaboration across departments.
- Function of the organization
- **Example:** In a manufacturing company, an ERP (Enterprise Resource Planning) system might be used to manage production schedules, inventory, and supply chain logistics to ensure efficient operations.

- **Policies of the organization**

Example: A company policy on data security will dictate the implementation of access controls, encryption, and other security measures in its information systems to protect sensitive information.

- **Role of management**

Example: The executive team of a company might decide to implement a new CRM (Customer Relationship Management) system to improve customer service and sales tracking. Their role involves overseeing the project, allocating resources, and ensuring alignment with business goals.

- **Management decision making**

Example: A BI (Business Intelligence) system can provide management with real-time insights into sales performance, market trends, and financial health, enabling data-driven decision-making.

- **Capabilities and opportunities of IT**

Example: A company might leverage cloud computing to scale its IT resources efficiently, adopt AI to automate customer service through chatbots, or use data analytics to uncover new market opportunities

DESIGN AND USE OF INFORMATION SYSTEM

Technology:

Example: A smart home system that integrates various technologies (like IoT devices, sensors, and voice assistants) to automate and control home environments, improving convenience and energy efficiency.

- Computer Hardware
- **Example:** A modern laptop used by a graphic designer might include a high-performance CPU, a large SSD for storage, high-resolution display, and a graphics card to handle intensive design software like Adobe Photoshop.
- Computer Software
- **Example:** An accounting firm uses QuickBooks software for bookkeeping, payroll processing, and financial reporting. The software helps streamline their operations and maintain accurate financial records.

- Storage Technology:
- **Example:** Google Drive is a cloud storage service that allows users to store files online, access them from any device with internet connectivity, and share them with others easily. It provides scalability and convenience for both personal and professional use.
- Communication Technology:
- **Example:** Zoom is a widely used communication technology that enables video conferencing, online meetings, and instant messaging. During the COVID-19 pandemic, Zoom became essential for remote work and virtual collaboration, allowing teams to stay connected despite physical distances.

STRUCTURE OF INFORMATION SYSTEM

Based on Operating Elements

Physical Components:

- Hardware

Example: In a retail company, hardware components include the point-of-sale (POS) terminals, barcode scanners, servers that store transaction data, and the network routers that connect different store locations to the central database.

- Software

Example: An ERP software like SAP or Oracle is used by a manufacturing company to manage its supply chain, production processes, and human resources. The operating system running on the company's servers is also part of the software component.

- Database

Example: A customer relationship management (CRM) system in a bank uses a database to store information about customers, their transactions, account details, and interactions with bank representatives.

- Procedures

Example: In a hospital, procedures include guidelines for entering patient information into the hospital management system, steps for processing patient billing, and protocols for generating and distributing medical reports.

- Operating Personnel

Example: In a university, operating personnel include the IT staff who maintain the student information system, the administrative staff who enter student grades and attendance records, and the professors who access the system to manage their courses and communicate with students.

STRUCTURE OF INFORMATION SYSTEM

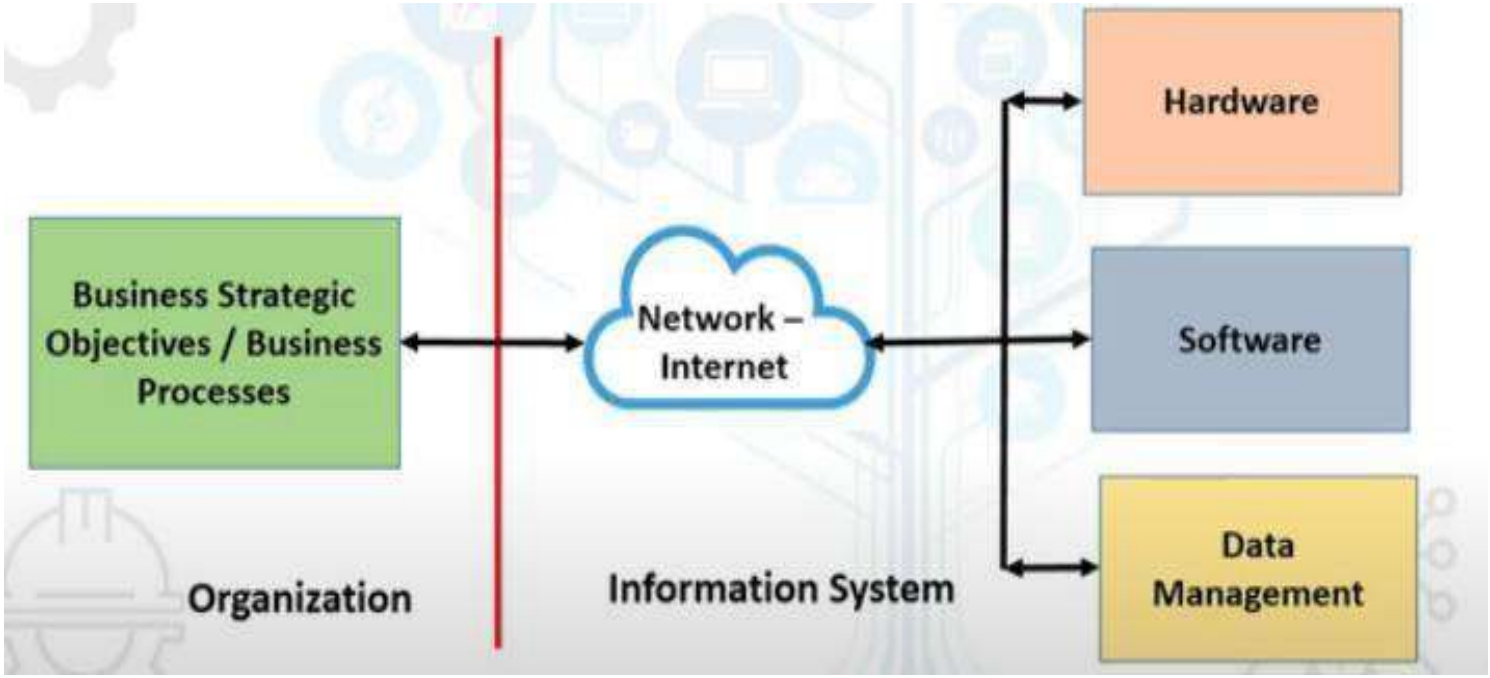
Based on Operating Elements

Processing Functions:

- Process Transactions
- **Example:** In a retail store, the point-of-sale (POS) system captures sales transactions, processes payments, updates inventory levels, and generates receipts for customers.
- Maintain master files
- **Example:** A human resources management system (HRMS) maintains a master file of employee information, including personal details, employment history, benefits, and payroll data. This information is used for various HR functions like payroll processing and performance evaluations.

- Produce reports
- **Example:** A sales management system generates monthly sales reports that provide insights into total sales, sales by region, sales by product category, and comparisons with previous months. These reports help management analyze performance and make informed decisions.
- Process inquiries
- **Example:** In a banking system, customer service representatives can process inquiries about a customer's account balance, transaction history, or loan status by accessing the relevant information from the bank's database.
- Interactive Support
- **Example:** A Decision Support System (DSS) in a manufacturing company allows managers to interactively explore production data, simulate different production scenarios, and analyze the impact of various decisions on production efficiency and costs.

INTERDEPENDENCE BETWEEN ORGANISATION AND IS



Referred from NPTEL site

INFORMATION SYSTEM –ECO SYSTEM

BUSINESS PROCESS

- BUSINESS PROCESS : Tasks, rules, behaviors that been developed to produce business Results.
- E.G:
  - Developing new product
  - Creating market plan
  - Hiring an employee
- Considered source of competitive strength
- Information system automate many business process

INFORMATION TECHNOLOGY AND ORGANISATION INFLUENCE ONE ANOTHER

Following are the major influencers in an Organization.

- ✓ Structure
- ✓ Business processes
- ✓ Politics
- ✓ Culture
- ✓ Environment, and
- ✓ Management decisions

FIRMS INVEST HEAVILY IN IS TO ACHIEVE 6 STRATEGIC BUSINESS OBJECTIVES (WHY FIRMS USE IS?).

1.Operational excellence(Amazon, Flipkart, Alibaba)

2.New products, services, and business models(Uber, Airbnb, Amazon) it as enabler, digital ecosystem

E.G: Apple’s I-pad, Google's android O.S.

3.Customer and supplier intimacy

4.Improved decision making

5.Competitive advantage

6.Survival

1. OPERATIONAL EXCELLENCE

Definition: Improving the efficiency of operations to achieve higher profitability.
Example:

- **Amazon**: Uses advanced algorithms and automated warehouses to ensure fast and accurate order fulfillment, reducing costs and improving customer satisfaction.
- **Flipkart**: Similar to Amazon, utilizes technology to streamline logistics and inventory management.
- **Alibaba**: Employs big data analytics to optimize supply chain operations and reduce delivery times.

2. NEW PRODUCTS, SERVICES, AND BUSINESS MODELS

- **Definition**: Using IS to create new offerings and innovate business models.
- **Example**:
- **Uber**: Developed a platform that connects riders with drivers, revolutionizing the taxi industry.
- **Airbnb**: Provides a marketplace for people to rent out their homes or rooms, creating a new way to find accommodations.
- **Amazon**: Expands into new areas like cloud computing (AWS) and streaming services, leveraging its digital platform.

3. CUSTOMER AND SUPPLIER INTIMACY

- **Definition**: Strengthening relationships with customers and suppliers to boost loyalty and improve service.
- **Example**:
- **Amazon**: Uses personalized recommendations and customer data to enhance the shopping experience.
- **Dell**: Collaborates closely with suppliers to optimize production and delivery processes.

4. IMPROVED DECISION-MAKING

4. Improved Decision Making

Definition: Utilizing data and analytics to make better business decisions.

Example:

•**Google**: Uses vast amounts of data from searches to make informed decisions about new services and product features.

•**Netflix**: Analyzes viewing data to decide which new shows or movies to produce.

5. COMPETITIVE ADVANTAGE

5. Competitive Advantage

Definition: Using IS to gain an edge over competitors.

Example:

•**Apple**: Continuously innovates its products (like the iPhone and iPad) and integrates them with services (like iCloud) to stay ahead of competitors.

•**Tesla**: Utilizes advanced software and over-the-air updates to continually improve vehicle performance and customer experience.

6. SURVIVAL

6. Survival

Definition: Implementing IS to stay competitive and avoid going out of business.

Example:

•**Traditional Retailers**: Many brick-and-mortar stores, such as Walmart, have adopted e-commerce platforms to compete with online retailers like Amazon.

•**Newspapers and Media**: Many have transitioned to digital formats and online subscriptions to survive in the digital age.

IT ENABLED STRATEGIES FOR MANAGING COMPETITIVE FORCES

- Low-cost leadership – e.g Walmart
- Product differentiation – e.g. Apple , Google
- Focus on market niche – e.g. Uber , Airbnb
- Strengthen customer and supplier intimacy – e.g. Netflix , Amazon

MAJOR CAPABILITIES OF INFORMATION SYSTEMS

- Perform high-speed, high-volume numerical computations.
- Provide fast, accurate communication and collaboration within and among organizations.
- Store huge amounts of information in an easy-to-access , yet small space.
- Allow quick and inexpensive access to vast amounts of information, worldwide.
- Interpret vast amounts of data quickly and efficiently.
- Automate both semiautomatic business processes and manual tasks.

TRANSACTION PROCESSING SYSTEM

A **Transaction Processing System (TPS)** is a type of information system that collects, stores, modifies, and retrieves the data transactions of an organization. TPS is essential for managing business transactions efficiently and accurately.

Key Features of TPS:

1. **Real-time Processing**: Transactions are processed immediately as they occur.
2. **Batch Processing**: Transactions are collected and processed in groups or batches.
3. **Data Integrity**: Ensures that data is accurate and consistent.
4. **Efficiency**: Handles a large number of transactions quickly.
5. **Reliability**: Ensures system availability and quick recovery from failures.

Examples of TPS:

1. **Point of Sale (POS) Systems**:
    1. **Example**: When you buy groceries at a supermarket, the POS system records the transaction, updates inventory levels, and processes the payment.
2. **Online Booking Systems**:
    1. **Example**: When you book a flight online, the booking system processes your reservation, confirms your seat, and updates the availability in real-time.
3. **ATM Transactions**:
    1. **Example**: When you withdraw cash from an ATM, the system processes the transaction by debiting your account and dispensing the cash.

Example in a Real-World Context:

Amazon's Order Processing System:

- When a customer places an order on Amazon, the TPS:
  - Captures the order details (items, quantity, shipping information).
  - Processes the payment.
  - Updates the inventory.
  - Sends order confirmation to the customer.
  - Generates a shipping order to the warehouse.

MANAGEMENT INFORMATION SYSTEM

- Serve middle management
- Provide reports on firm's current performance, based on data from TPS
- Provide answers to routine questions with predefined procedure for answering them
- Typically have little analytic capability
- Examples: sales analysis, production performance, and cost trend reporting systems.

DECISION SUPPORT SYSTEM

A **Decision Support System (DSS)** is a type of information system that helps with making decisions by analyzing large amounts of data and presenting useful information. DSS is designed to support business and organizational decision-making activities.

Key Features of DSS:

1.Data Analysis: Uses data from various sources to provide insights.

2.Modeling: Employs mathematical models to simulate different scenarios and predict outcomes.

3.Interactive Interface: Allows users to interact with the system and analyze data in various ways.

4.Support for Complex Decisions: Assists with making decisions that are complex and not routine.

Example in a Real-World Context:

Hospital Resource Management:

•A DSS can help a hospital manage its resources by analyzing patient data, staff schedules, and equipment usage.

• For example:

- **Data Collection**: Gathers data on patient admissions, treatment times, and staff availability.
- **Data Processing**: Analyzes the data to predict peak times and resource shortages.
- **Information Output**: Provides recommendations on staffing levels and equipment needs.
- **User Interaction**: Hospital administrators can input different scenarios, like a flu outbreak, to see how resources should be allocated.

IMPACT OF INFORMATION SYSTEM ON SOCIETY AND ORGANISATION

- Impact of information technology on organizations and society internet has a powerful impact on the way business organizations operate.
- There are “virtual teams “ that operate successfully where team members in virtual contact- “mouse to mouse” and face to face as is the case of conventional work teams. In these virtual teams, it is possible team members have not met each other in a conventional manner-across the table but have been communicating electronically.

IMPACT OF INFORMATION SYSTEM ON SOCIETY AND ORGANISATION

- Impact of information technology on society positive impact it and internet together affected individuals adversely.
- All these revolutions created new opportunities, reduced costs, saved time enabled fast processing of information and decision making.
- It affects favorably, the cost of job and time taken to complete. Individual became a highly productive resource.
- It application affect individuals, their family, work groups, organization
  And business at large

HOW DOES IT IMPACT ORGANIZATIONS?

- It reduces the number of middle managers
- It changes the manager’s job
- Will it eliminate jobs?
- It impacts employees at work

IT REDUCES THE NUMBER OF MIDDLE MANAGERS

- IT MAKES MIDDLE MANAGERS MORE PRODUCTIVE
- CONSEQUENTLY, IT REDUCES THE NUMBER OF MIDDLE MANAGERS REQUIRED

IT CHANGES THE MANAGER'S JOB

- DECISION MAKING IS THE MOST IMPORTANT MANAGERIAL TASK
- IT CHANGES THE WAY MANAGERS MAKE DECISIONS
  - IT PROVIDES NEAR-REAL-TIME INFORMATION
  - MANAGERS HAVE LESS TIME TO MAKE DECISIONS
  - IT PROVIDES TOOLS FOR ANALYSIS TO ASSIST IN DECISION MAKING

WILL IT ELIMINATE JOBS?

- THE COMPETITIVE ADVANTAGE OF REPLACING PEOPLE WITH IT & MACHINES IS INCREASING RAPIDLY
- INCREASING THE USE OF IT IN BUSINESS ALSO:
  - CREATES NEW JOB CATEGORIES
  - REQUIRES MORE EMPLOYEES WITH IT KNOWLEDGE AND SKILLS

IT IMPACTS EMPLOYEES AT WORK

- IT IMPACTS EMPLOYEES' HEALTH & SAFETY
  - JOB STRESS
  - LONG-TERM USE OF THE KEYBOARD & MOUSE
- IT PROVIDES OPPORTUNITIES FOR PEOPLE WITH DISABILITIES
  - SPEECH-RECOGNITION FOR EMPLOYEES UNABLE TO TYPE DUE TO PHYSICAL IMPAIRMENT
  - AUDIBLE SCREEN TIPS FOR EMPLOYEES WHO ARE VISUALLY IMPAIRED

IMPORTANCE OF INFORMATION SYSTEMS TO SOCIETY

- IT AFFECTS OUR QUALITY OF LIFE
- THE ROBOTS REVOLUTION IS HERE NOW
- IMPROVEMENTS IN HEALTHCARE

IT AFFECTS OUR QUALITY OF LIFE

- IT HAS CHANGED THE WAY WE WORK
  - Smartphones provide constant access to text, email, and voice Communications
  - The lines between time at work and leisure time at home have become blurred
  - Surveys indicate employees take laptops and smartphones on vacation

THE ROBOT REVOLUTION IS HERE NOW

- ROBOTICS USED IN INDUSTRY:
  - MANUFACTURING
  - HOSPITALS
  - FARMING OPERATIONS

THE ROBOT REVOLUTION IS HERE NOW

- ROBOTICS USED IN THE HOME:(Product sold by irobot)
  - ROOMBA TO VACUUM OUR FLOORS
  - SCOOBA TO WASH OUR FLOORS
  - VERRO TO CLEAN OUR POOLS
  - LOOJ TO CLEAN OUR GUTTERS

IMPROVEMENTS IN HEALTHCARE

- IT USED IN HEALTHCARE TO:
  - Make better/faster diagnoses
  - Monitor critically ill patients more accurately
  - Streamline the process of researching & developing new drugs
  - To enhance the work of radiologists
  - Allow surgeons to use virtual reality to plan complex surgeries & use robots to remotely perform surgery

1.Which of the following best describes an information system?

a) A collection of hardware and software
b) A system for processing data
c) A set of interrelated components that collect, process, store, and distribute information
d) A computer program

2.Which component is NOT part of an information system?

a) Hardware
b) Software
c) Data
d) Furniture

3.What is a computer-based information system?

a) A system that only uses manual procedures
b) A system that relies on technology to collect, process, store, and distribute information
c) A system that doesn't require any human interaction
d) A system used exclusively for gaming

3.Which of the following is an example of a computer-based information system?

a) Filing cabinet
b) Desktop computer running payroll software
c) Whiteboard
d) Paper calendar

5.How has IT impacted organizations in terms of data processing?

a) Reduced the amount of data processed
b) Increased the speed and efficiency of data processing
c) Made data processing more difficult
d) Eliminated the need for data processing

6.What is one major impact of IT on organizational communication?

a) Decreased communication speed
b) Increased the cost of communication
c) Enhanced the ability to communicate quickly and effectively across long distances
d) Reduced the need for communication

7.How do information systems contribute to societal development?

a) By reducing access to information
b) By limiting the use of technology
c) By providing tools for education, healthcare, and communication
d) By making information less accessible

8.Which of the following is NOT a benefit of information systems to society?

a) Improved access to education
b) Enhanced healthcare services
c) Decreased environmental impact
d) Increased digital divide

9.What role do information systems play in organizational strategy?

a) They are used solely for data storage
b) They support decision-making and help organizations achieve their goals
c) They are not relevant to organizational strategy
d) They are used only for employee communication

9.Which of the following is a key component of an organizational strategy that involves information systems?

a) Marketing
b) Customer service
c) Strategic use of technology to gain competitive advantage
d) Human resources

11.How can information systems provide a competitive advantage?

a) By increasing operational costs
b) By making business processes less efficient
c)By improving customer service, efficiency, and decision-making
d) By reducing employee productivity

12.Which of the following is an example of using information systems for competitive advantage?

a) Installing a new air conditioning system
b) Implementing a customer relationship management (CRM) system to better understand and serve customers
c) Reducing the number of employees
d) Increasing the price of products

13.Which of the following best describes the role of a knowledge worker in the context of information systems?

•a) A worker who produces goods
•b) A worker who manages and uses information to solve problems and make decisions
•c) A worker who performs manual labor
•d) A worker who only follows instructions without using information

14.What is the primary purpose of a model for analysis within an information system?

•a) To store data
•b) To provide a framework for analyzing data and making predictions
•c) To replace human decision-making
•d) To display data on a screen

15.Which of the following is NOT typically considered a component of a computer-based information system?

•a) Hardware
•b) Software
•c) Internet connection
•d) Physical building structure

Introduction to Information Systems

1.Which of the following best describes an information system?

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Importance of IS to Society

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https://www.youtube.com/watch?v=E97Tm15CY4o

https://www.youtube.com/watch?v=aRW1i4SYWjs&list=PPSV

1.What is the primary purpose of a Management Information System (MIS)?

A) To manage payroll and employee records
B) To provide managers with information for decision-making
C) To automate manufacturing processes
D) To maintain customer relationships

2.Which of the following is a component of an MIS?

A) Hardware
B) Software
C) Data
D) All of the above

3.Which type of MIS provides routine information to managers?

A) Decision Support System (DSS)
B) Executive Information System (EIS)
C) Transaction Processing System (TPS)
D) Knowledge Management System (KMS)

4.What does the acronym ERP stand for in the context of MIS?

A) Enterprise Resource Planning
B) Electronic Resource Planning
C) Enterprise Resource Programming
D) Electronic Resource Programming

5.Which of the following best describes a Decision Support System (DSS)?

A) It processes business transactions.
B) It supports business decision-making activities.
C) It manages customer relationships.
D) It oversees enterprise resources.

6.An Executive Information System (EIS) is specifically designed to:

A) Handle day-to-day operations
B) Assist senior management in strategic decision-making
C) Manage supply chain operations
D) Conduct market research

7.Which of the following is NOT a characteristic of an MIS?

A) Timeliness
B) Accuracy
C) Redundancy
D) Relevance

8.In an MIS, data that is processed into a meaningful form is known as:

A) Information
B) Raw data
C) Knowledge
D) Metadata

9.The process of transforming raw data into useful information is called:

A) Data mining
B) Data processing
C) Data collection
D) Data warehousing

10.Which MIS tool is used to model the relationships between entities in a database?

A) Flowchart
B) Gantt chart
C) Entity-Relationship Diagram (ERD)
D) Histogram

11.In an MIS, the use of dashboards is primarily for:

A) Data entry
B) Data processing
C) Data visualization
D) Data storage

12.Which of the following is a key advantage of using an MIS?

A) Increased data redundancy
B) Enhanced decision-making capabilities
C) Reduced need for management
D) Simplified regulatory compliance

13.What does CRM stand for in the context of MIS?

A) Customer Resource Management
B) Customer Relationship Management
C) Corporate Resource Management
D) Customer Retention Management

14.Which of the following systems is designed to handle complex queries and support decision-making in organizations?

A) Transaction Processing System (TPS)
B) Decision Support System (DSS)
C) Executive Information System (EIS)
D) Knowledge Management System (KMS)

15.An MIS that provides high-level summaries and trends to top executives is called:

A) Operational Information System (OIS)
B) Tactical Information System (TIS)
C) Strategic Information System (SIS)
D) Executive Information System (EIS)

1.Answer: B) To provide managers with information for decision-making
2.Answer: D) All of the above
3.Answer: C) Transaction Processing System (TPS)
4.Answer: A) Enterprise Resource Planning
5.Answer: B) It supports business decision-making activities.
6.Answer: B) Assist senior management in strategic decision-making
7.Answer: C) Redundancy
8.Answer: A) Information
9.Answer: B) Data processing
10.Answer: C) Entity-Relationship Diagram (ERD)
11.Answer: C) Data visualization
12.Answer: B) Enhanced decision-making capabilities
13.Answer: B) Customer Relationship Management
14.Answer: B) Decision Support System (DSS)
15.Answer: D) Executive Information System (EIS)

Overview of Mumbai Dabbawallas

Mumbai Dabbawallas are a group of **around 5,000 semi-literate individuals who deliver over 200,000 lunchboxes (dabbas) daily** with astonishing precision. Their operation, which dates back to 1890, has achieved a Six Sigma level of quality, meaning they have an error rate of less than 3.4 defects per million opportunities.

Key Elements of Their Management System

1.Coding System:

1. **Unique Code for Each Dabba**: Each lunchbox is marked with a unique code that includes the destination, the recipient, and the dabbawalla responsible for the final delivery.
2. **Color Coding and Symbols**: A combination of colors, symbols, and numbers helps the mostly semi-literate workforce to sort and deliver the dabbas accurately.

2.Logistics and Supply Chain Management:

1. **Collection**: Dabbas are collected from homes between 9:00 and 10:30 AM.
2. **Sorting**: The dabbas are sorted at various collection points and loaded onto trains.
3. **Transportation**: They are transported via local trains to various stations.
4. **Delivery**: At the destination stations, they are again sorted and delivered to the respective offices.

Organization and Roles:

Hierarchy: The organization follows a flat hierarchy. Dabbawallas are divided into groups, each with a team leader (Mukadam) who oversees operations.
Team Coordination: Teams work in harmony, relying on precise timing and synchronization to ensure timely delivery.

Operational Efficiency:
Punctuality: Strict adherence to schedules minimizes delays.
Low Technology Dependence: Their system relies on human coordination rather than sophisticated technology, making it cost-effective.

Communication:
Minimal Use of Technology: Communication is primarily verbal, with occasional use of mobile phones for urgent issues.
Problem Solving: Issues are resolved on the spot, maintaining the flow of operation

Management Information System Analysis

1.Data Collection and Processing:

1. **Manual Coding**: The manual coding system serves as a data collection method, tracking each dabba's journey.
2. **Real-time Processing**: Each step of sorting and delivering acts as real-time data processing, ensuring the system adapts to daily variations.

2.Information Flow:

1. **Decentralized Information**: Information about each dabba is decentralized, handled by different teams at different stages.
2. **Visual Management**: The use of colors and symbols ensures quick visual identification and minimal errors.

3.Decision Making:

1. **Local Autonomy**: Team leaders and dabbawallas make decisions on the ground, enabling quick problem-solving.
2. **Feedback Loop**: Continuous feedback from the delivery process helps in maintaining efficiency and addressing issues promptly.

4.Performance Metrics:

1. **Accuracy**: Error rate is a critical metric, with their Six Sigma performance indicating high accuracy.
2. **Timeliness**: Delivery times are strictly monitored, ensuring lunchboxes reach on time.

5.Customer Relationship Management (CRM):

1. **Personal Touch**: Direct interaction with customers ensures personalized service.
2. **Reliability**: Consistent performance has built strong customer trust and loyalty

Lessons for Modern MIS

1.Simplicity and Efficiency:

1. A well-designed, simple system can outperform complex technological solutions in certain contexts.
2. Efficient use of human resources and minimal technology can achieve remarkable results.

2.Adaptability:

1. Systems should be adaptable to changes and capable of real-time adjustments.
2. Decentralized decision-making allows for flexibility and quicker responses.

3.Visual Management Tools:

1. Visual aids (color codes, symbols) can significantly enhance information processing and reduce errors.

4.Human Element in MIS:

1. The human element remains crucial; effective training, communication, and coordination are key.
2. Empowering employees to make decisions fosters responsibility and accountability.

5.Customer Focus:

1. Strong customer relationships and reliability build trust and long-term success.