

Master of Business Administration
Semester - I



BA4106 Information Management

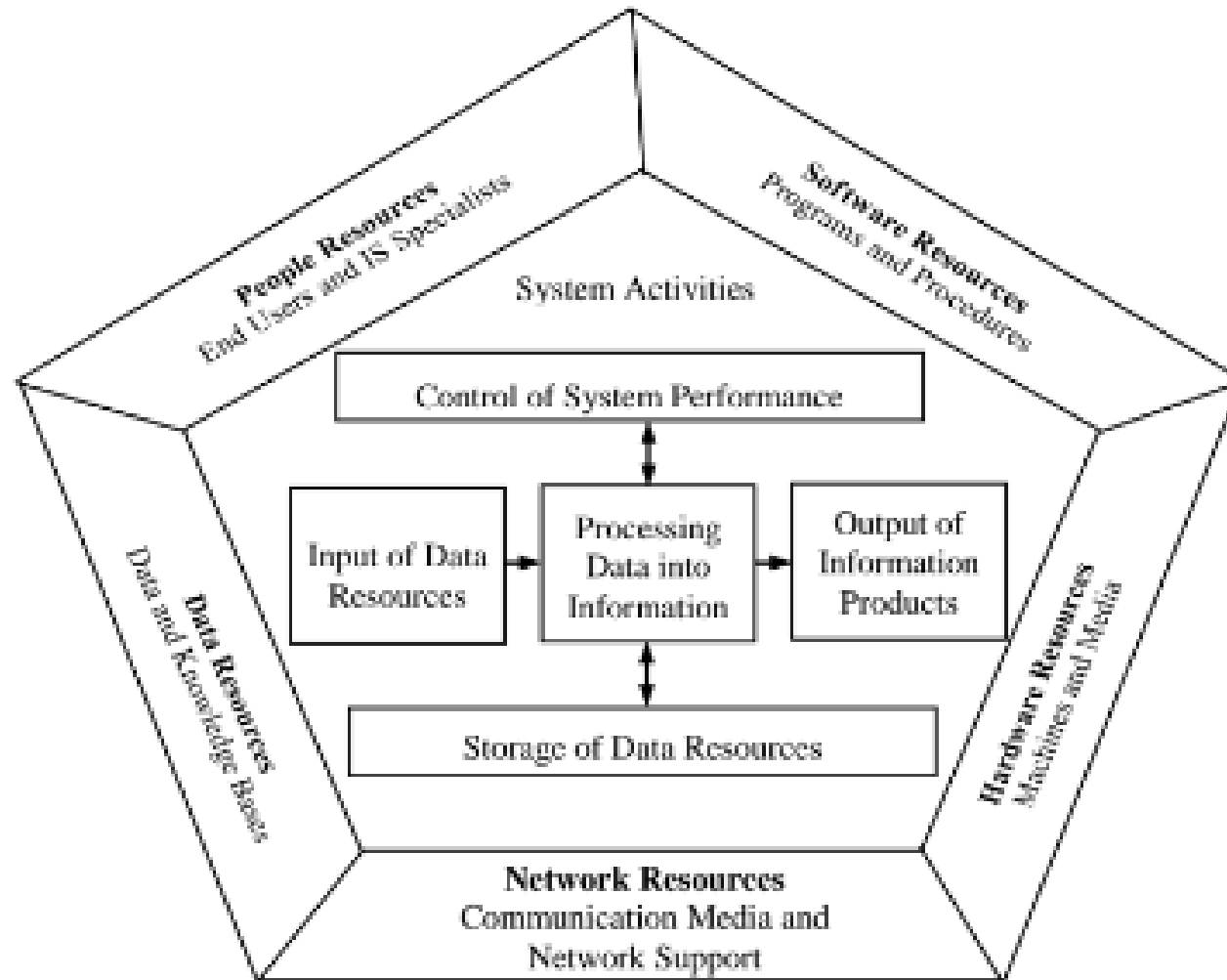
UNIT-I

3. Types of Information Systems Based on Functions and Hierarchy

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Components/Resources of Information System/CBIS



People Resources	
<u>End Users (Users or Clients)</u> Users who use information system or information, are known as 'end users' Example: Customers, sales persons, engineers, clerks, managers...	<u>IS Specialists</u> These people develop and operate information system. They may be system analysts, software developers, system operators or other managerial IS personnel

Hardware Resources	
<u>Computer Systems</u> CPU, handheld devices, Laptop, desktop, computer systems	<u>Computer Peripherals</u> To input the data To provide the output Store data

Software Resources	
<u>Softwares/Programmes/Procedure</u>	<u>System Software</u> Software controls and direct the operations of computer systems ex. Operating system
	<u>Application Software</u> Directs and supports the particular task of computers. Ex, MS Word, MS Excel, etc...

Data Resources

Data Base

Processed and organized Data

Knowledge Base

Knowledge in various forms such as facts, rules and case example of successful business practices.

Example, Sales transaction data is gathered, processed and stored in web-enabled sales **database** which is used for sales analysis reports by managers or marketing professionals.

Knowledge base is used by knowledge management system for sharing knowledge on particular domain.

Network Resources

Communication Media

Used to deliver and receive information or data
Ex: twisted pair wire, coaxial and fiber optic cables, microwave/cellular/satellite wireless technologies

Network Infrastructure

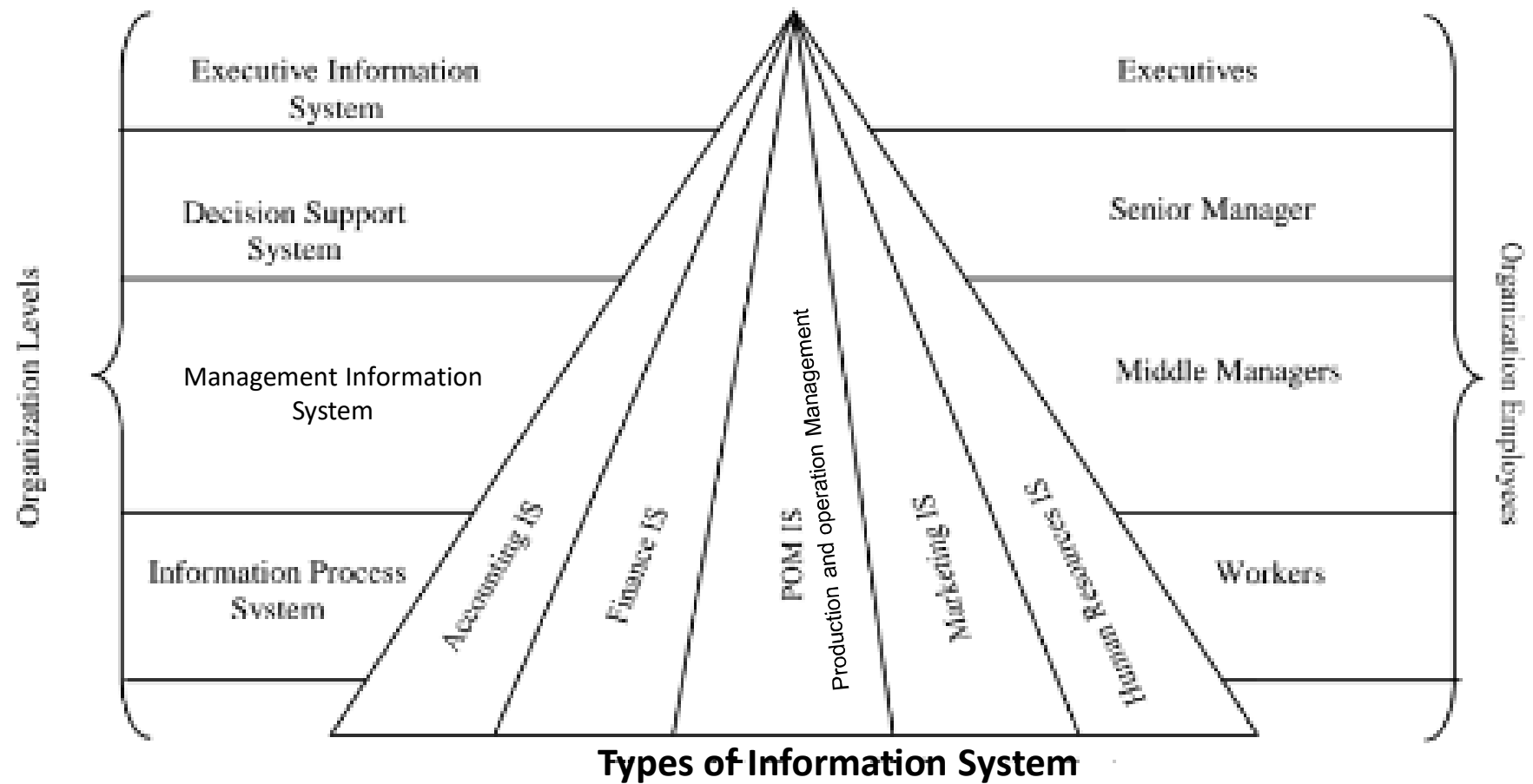
Hardware, software and data technologies to support and control operations of communication network
Ex: Modems, internetwork, processors and communication control software

E-Business and e-commerce operations of all types of organizations and their information system will succeed, if all above are in place.

Types of Information Systems

Information System Based on Functions

Information System Based on Management Hierarchy



Information Systems Based on Functions....Cntd...

Financial Information System

Responsible for managing firm's financial assets

(Cash, Stocks, bonds and other investments)

Managing the capitalization of the firm
(finding new financial assets in the stocks,
bonds, etc...)

Determine best return on investments
(Obtain information from External
Sources to the firm)

Information Systems Based on Functions....Cntd...

Accounting Information System

Responsible for maintaining and managing firm's financial records (Receipts, disbursements, depreciation, payroll)

Finance and Accounting **share related problems** – keep track of firm's financial assets and fund flow

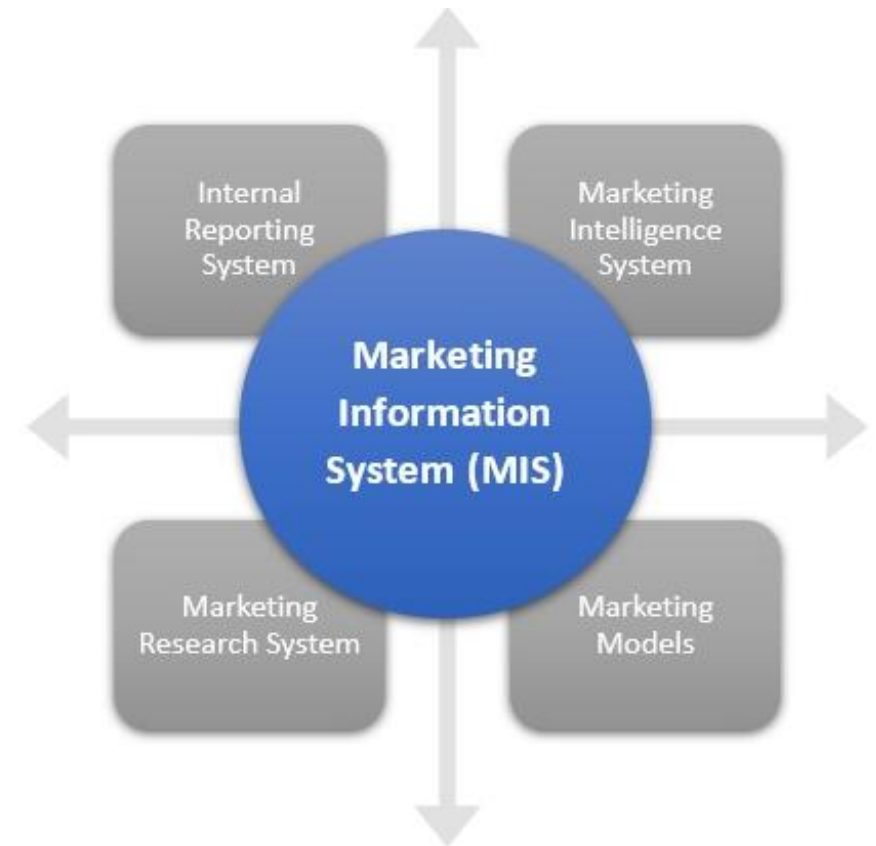
Answers to....

What is current inventory of financial assets?

What record exists for receipts, payroll and other fund flows?

Information Systems Based on Functions....Cntd...

Marketing and Sales Information System



Information Systems Based on Functions....Cntd...

Production and Manufacturing Information System

Planning ,
Development
and
maintenance
of production
facilities

Scheduling of
equipment,
facilities,
materials,
labour
required

Storage and
availability of
production
materials

Establishment
of production
Goals

Responsible
for producing
Firm's Goods
and services

Information Systems Based on Functions....Cntd...

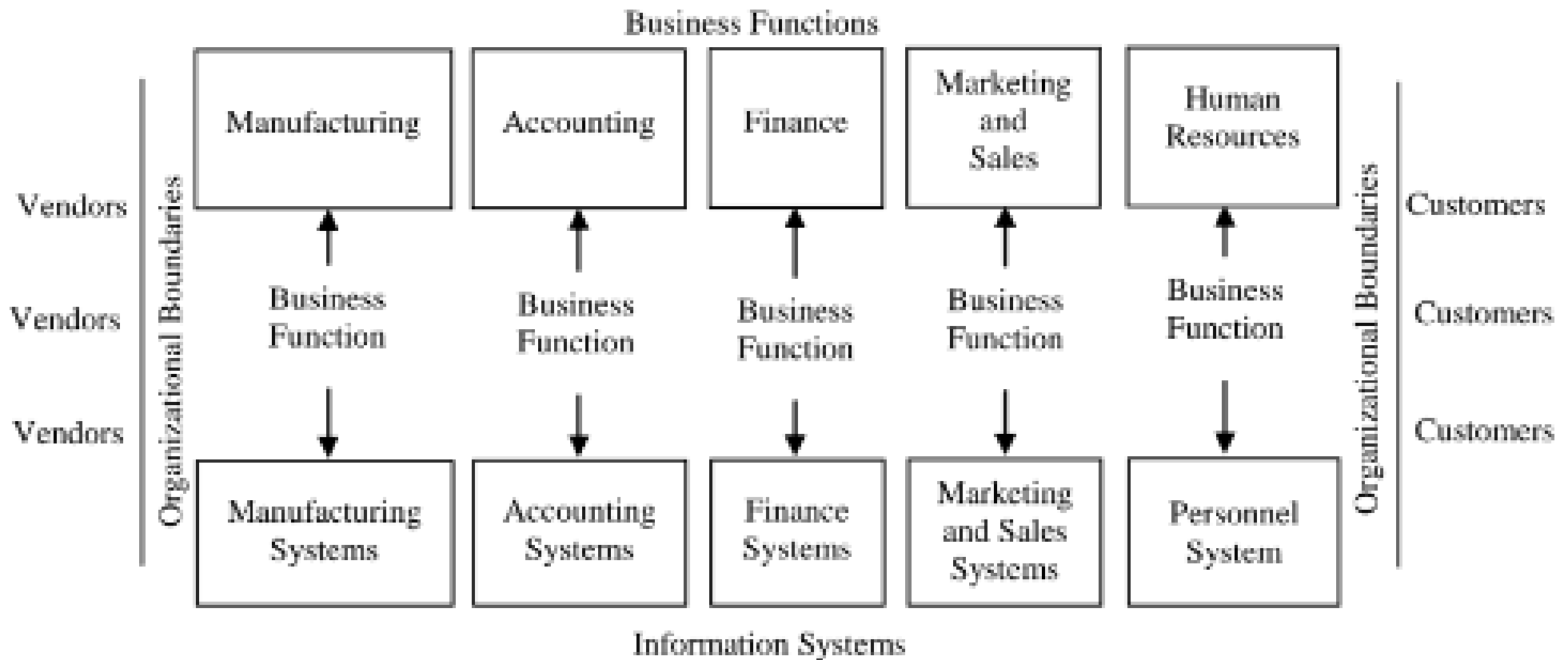
Personnel Information System (Human Resource Management)

Attracting, developing firm's work force

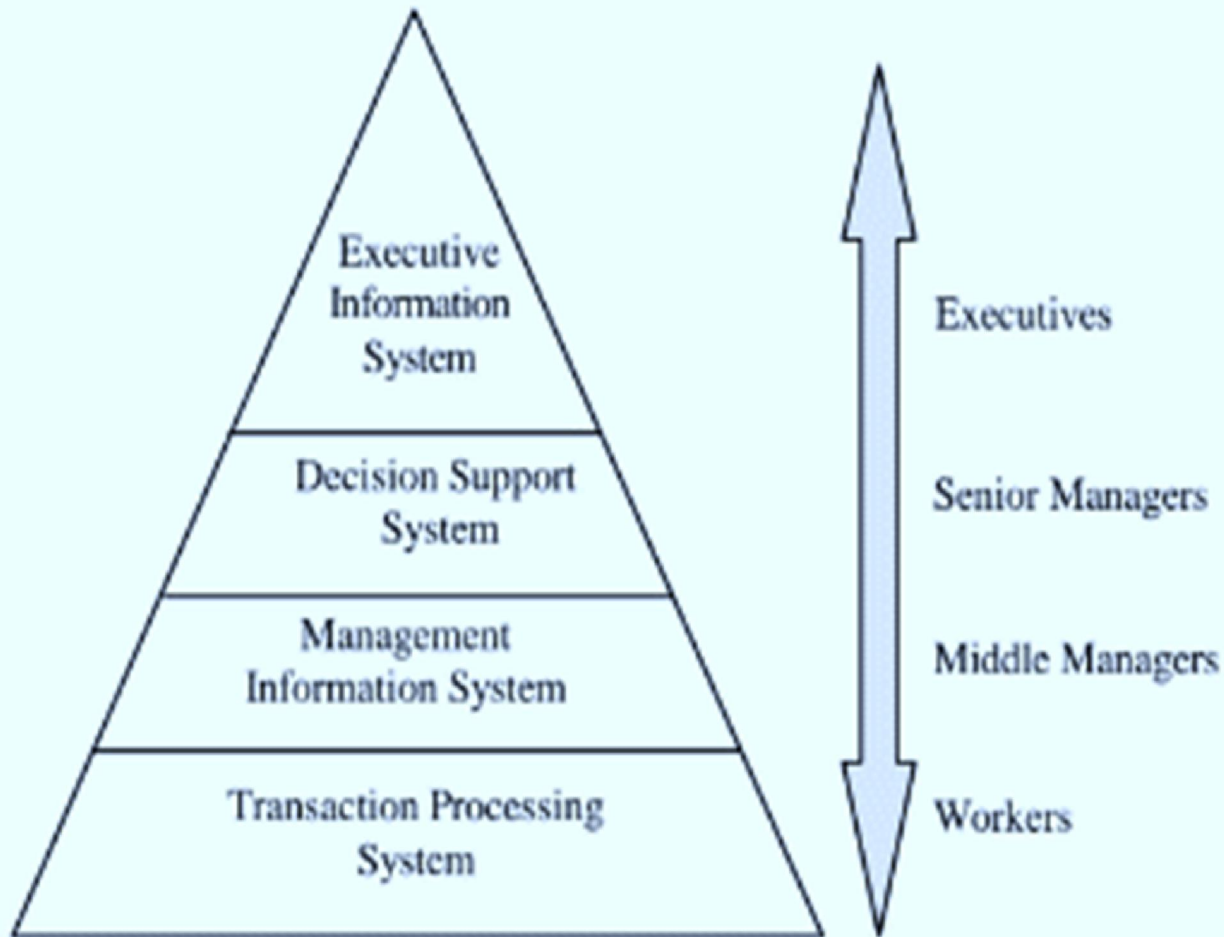
Maintaining complete records



Information Systems Based on Functions



Information Systems Based on Hierarchy

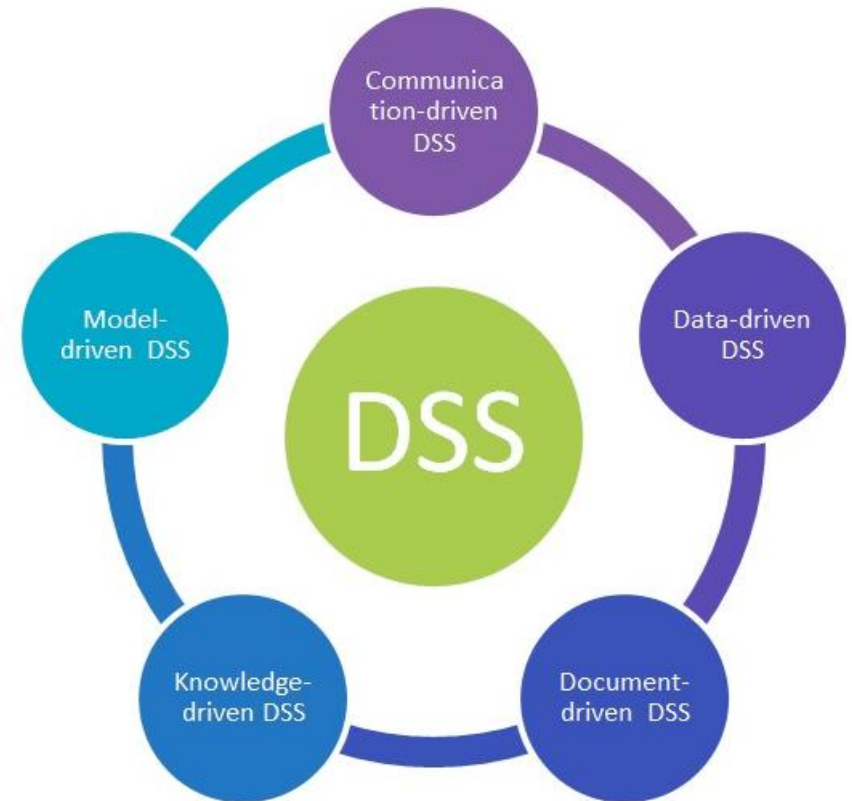


Executive Information System (EIS)/ Executive Support System (ESS)

- ❑ Cater the specific needs of executives.
- ❑ providing the ability to analyze trends, augmenting an executive's leadership capabilities
- ❑ The information includes data on competitors and information from market research.
- ❑ It is computer based information delivery and communication to support the needs of top executives.

2. Decision Support Systems (DSS)

- ❑ Supports the process of decision making.
- ❑ Decision maker can **retrieve the information** and find the alternative solutions.
- ❑ **Helps managers** in problem identification, selection of relevant data/ right approach
- ❑ DSS is interactive computer based systems, which help decision –makers utilize data and models **to solve unstructured problems**.



3. Management Information Systems (MIS)

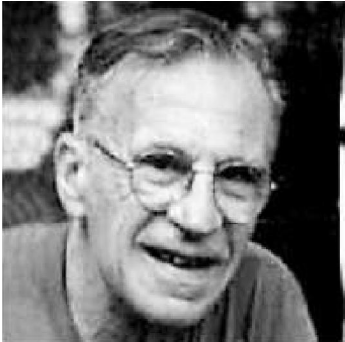
An Management Information System (MIS) can play a very crucial role to provide strategic support to management of an organization.

MIS provides following types of Information to the companies

- 1.Descriptive
- 2.Diagnostic
- 3.predictive
- 4.Prescriptive

According to Institute of Management Accounts,

“ MIS is a system in which defined data are collected, processed and communicated to assist those responsible for the use of resources.



According to Jerome Kanter,

“ MIS is a system that aids management in making, carrying out and controlling decisions.”



According to G.B.Davis,

“ MIS is a an Integrated man/machine system for providing information to support the operations, management and decision making function in an organization.”

Type of MIS Users:

Every person in an organization uses MIS

Clerk

- ☐ Search Data
- ☐ Make a statement
- ☐ Submit to higher level

Officer

- ☐ Data manipulation and integration
- ☐ Analyze the data in predetermined manner

Assistant

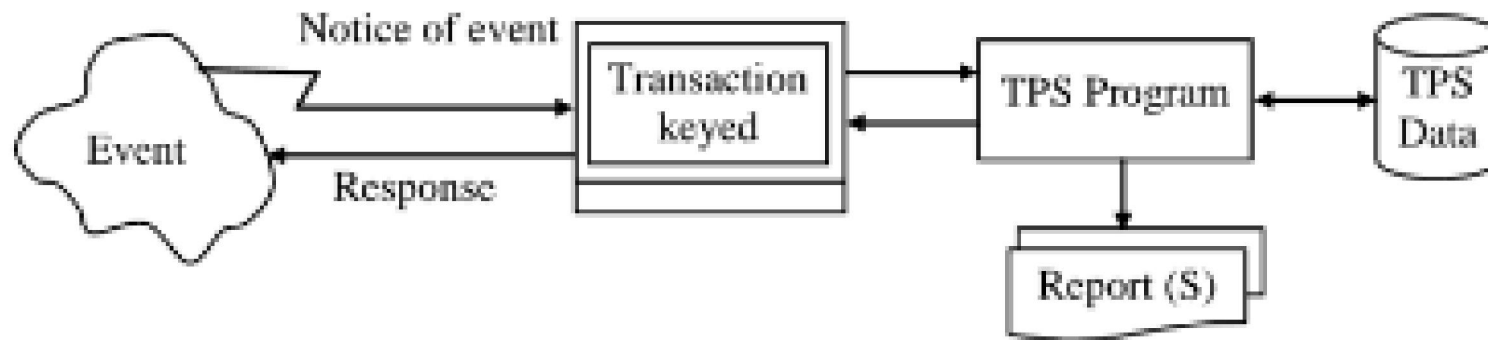
- ☐ Collecting and organizing Data
- ☐ Analyze the data
- ☐ Integrating the data from different disciplines
- ☐ Making critical comments

Executive or Manager

- ☐ Responsibility and accountability for business result.
- ☐ Strategist and long term planner
- ☐ Uses his analytical ability in the top management functions

4. Transactions Processing Systems (TPS)

- ❑ To record, process, validate and store transactions occurring in various functional areas of business.
- ❑ It is a cross-functional information system that processes data which is produced by execution of business transactions.
- ❑ 'Transaction' is an exchange between any two or more business units.
 - ❑ Example: Ticket Reservation System. TPS Data contains location of available seats.



- The TPS data contains the location of available seats.
 - It displays a message on the terminal indicating seats sold out to people.
 - It also prints the tickets and perhaps a mailing label for sending them.
- ✔ So the **TPS** program generates two types of outputs:
- It sends message back to the operator terminal
 - It generates printed documents

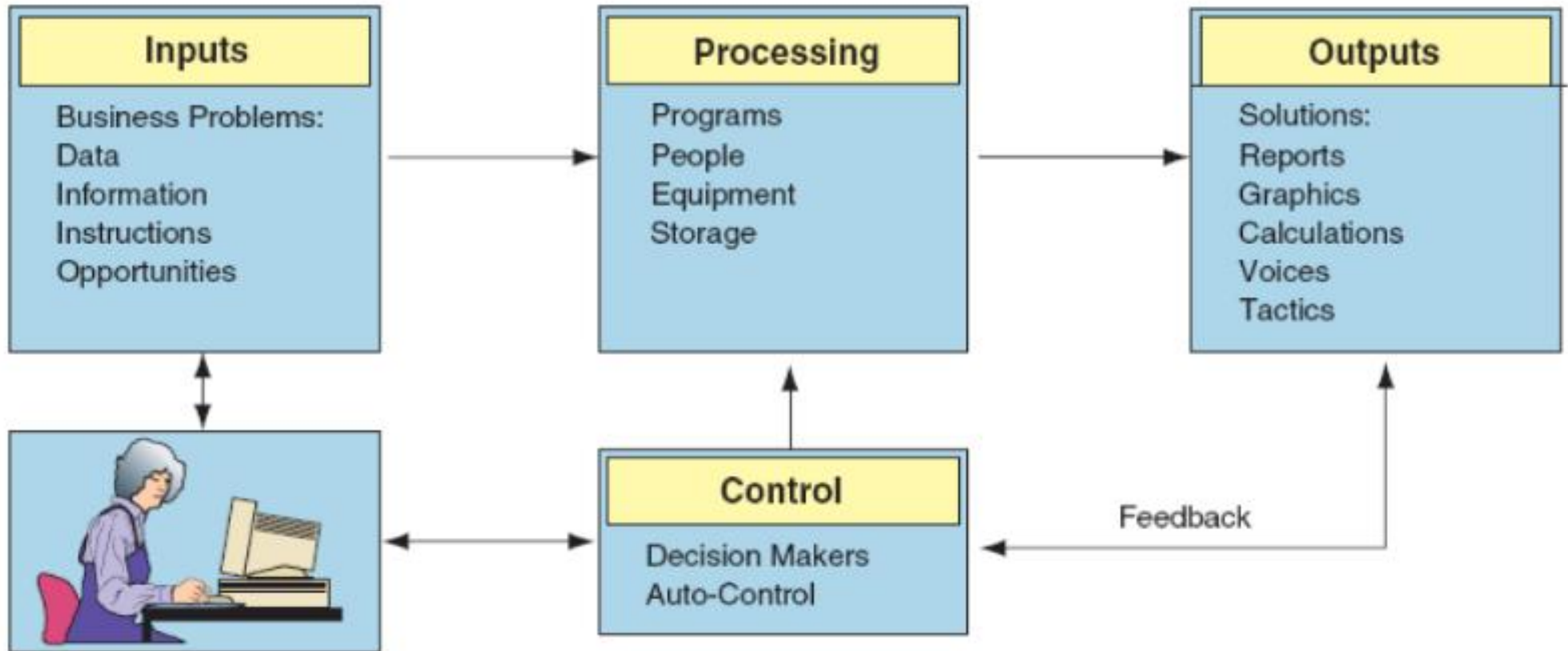
Role of Information Systems in Business Today / Need of Information Systems

Through the adoption of information systems, companies can make use of sophisticated and comprehensive databases that can contain all imaginable pieces of data about the company.

There are six major goals for company using IS in their business.

1. Operational Excellence
2. New Products, Services, and Business Models
3. Customer/Supplier Intimacy
4. Improved Decision Making
5. Competitive Advantage
6. Day-to-Day Survival

Information System Activities/Functioning



Information System Activities/Functioning ... cntd...

1. Input of Data Resources
2. Processing of Data into Information
3. Output of Information Products
4. Storage of Data Resources
5. Control of System Performance

Example:

Input	Optical scanning of bar-coded tags on merchandise.
Processing	Calculating employee pay, taxes and other payroll deductions.
Output	Producing reports and displays about sales performance.
Storage	Maintaining records on customers, employees and products.
Control	Generating audible signals to indicate proper entry of sales data.

Capabilities of Information System

1. Provide Fast and Accurate Transaction Processing
2. Provide Large-Capacity, Fast Access Storage
3. Provide Fast Communications (Machine to Machine, Human to Human)
4. Reduced Information Overload
5. Span Boundaries
6. Provide Support for Decision-making
7. Provide a Competitive Weapon