

MANAGEMENT INFORMATION SYSTEM

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COURSE OUTLINES

- **Course Title**
 - Management Information Systems
- **Grading Policy**
 - Exam → 80%
 - Tutorial / Assignment → 20%
- **Textbook and Reference Materials**
 - Course Manual for Management Information Systems CIS302, University of Ibadan Distance Learning Centre
 - Management Information Systems (Managing The Digital Firm) by Kenneth C. Laudon(New York University), Jane P. Laudon(Azimuth Information Systems), Twelfth Edition
 - Management Information Systems, Sixth Edition, by Effy Oz
- **Course Duration**
 - 12 Weeks

COURSE OUTCOMES

Upon completion of Management Information Systems , you will be able to:

- Build a fundamental & theoretical foundation for Management Information Systems
- Investigate the major resources for information systems
- Understand and use methodology for systems analysis
- Review key factors in the management of information systems
- Explore the impact of developing technologies on MIS
- Recognize, evaluate & react responsibly to ethical dilemmas in the Management of Information Systems

BASIC CONCEPTS OF MIS

LEARNING OUTCOMES

When you have studied this session, you should be able to:

- define management
- discuss data and information
- describe information as an aid to decision making
- define a system

CONTENTS

- Management
- Data and Information
- System
- Information System
- Management Information System
- Advantages and Disadvantages of MIS

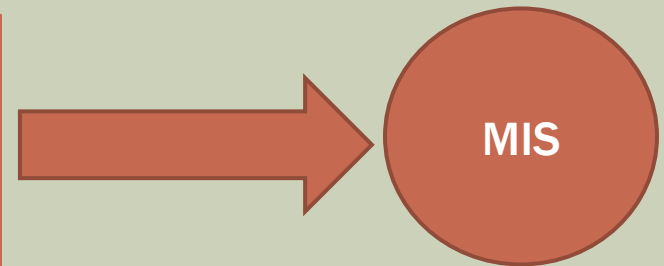
GOALS OF AN MIS

- Convert data from internal and external sources into information that can be used **to aid effective decision making.**
- Implement the organizational structure for the **purpose of managing the organization** in a better way
- Provide managers by capturing **the potential of the information system**
- **Control, organize and plan better**

MANAGEMENT

- Process or activities that describe what managers do in the operation for their organization plan, organize, initiate and control operations.
- Setting strategies and goals and selecting the best course of action to achieve the goals.
- **Plan**
- **Organize**
- **Control**

MIS is to facilitate decisions necessary for planning, organizing and controlling the work and operations of the business in order to achieve the specified goals of business.



MANAGEMENT (CONT.)

Plan

- setting strategies and goals
- selecting the best course of action to achieve the goals

Organize

- the necessary tasks for the operational plan
- set these tasks up into homogenous groups
- assign authority delegation

Control

- the performance standards
- avoiding deviation from standard

LEVELS OF MANAGERMENTS

- Top Level Management
- Middle Level Management
- Low Level Management

TOP LEVEL MANAGEMENT

- Board of directors, managing directors or executive committee members
- Set key objectives, policies and identifying factors essential for the development of the organization.
- Make appointments to the top position of the organization.
- Review the work of different personnel in various levels.

MIDDLE LEVEL MANAGEMENT

- Managers of various departments
- Follow the rules and policies formulated by the top level management.
- Motivate personnel for higher productivity.
- Collect detail analysis reports from the various departments.
- Mutual understand with other departments in the organization.
- Recommend to the top level management.

LOW LEVEL MANAGEMENT

- Supervisors, daily workers
- Issue orders and instructions to the workers
- Classify and assign jobs to the workers
- Arrange for the necessary tools, equipment, materials
- Inform the management about the problems of workers
- Maintain good human relations
- Build a high group morale among the workers

DATA AND INFORMATION

■ Data

- raw, plain facts, unorganized facts, symbols, figures, objects, events, etc.
- sequence of raw facts representing business transactions – **meaningless** without structure, random and useless

■ Information

- a processed, organized, structured data
- a more useful or intelligible form
- it is any thing that is communicated.
- supports managers in their decision making
- clusters of facts **meaningful and useful** to human beings

DATA AND INFORMATION (CONT.)

Data: 20

Information: 20 miles

Knowledge: 20 miles is a far distance.

**Wisdom: It is difficult to walk but
vehicle transport is okay.**

TRANSFORMATION OF DATA TO INFORMATION

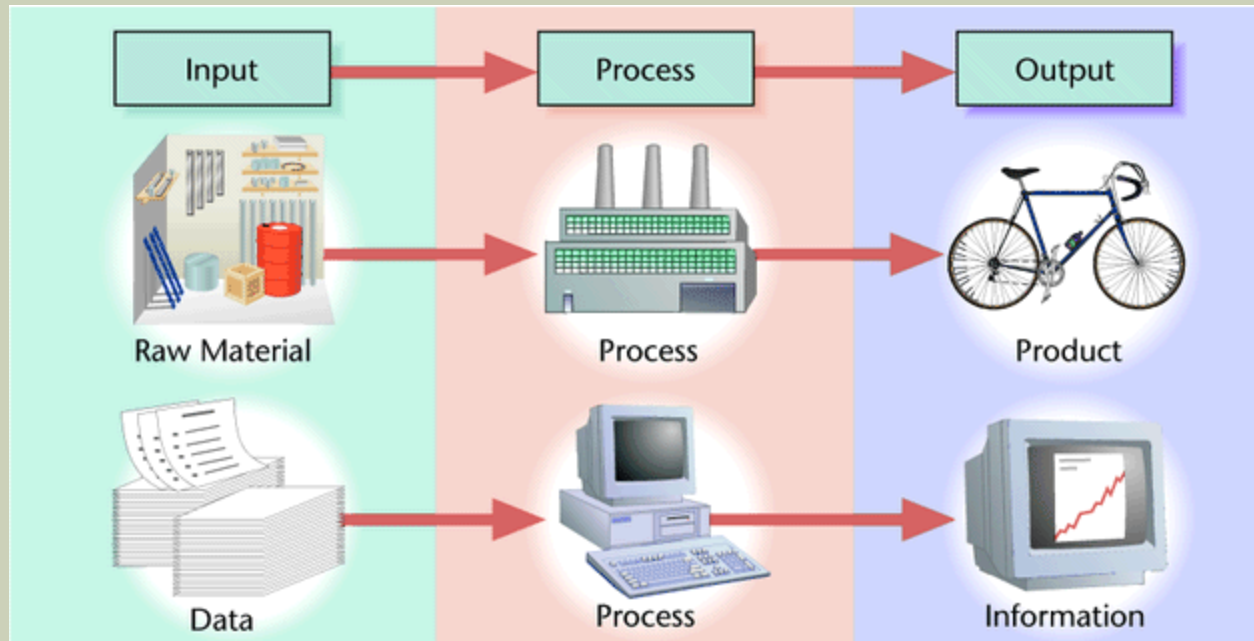
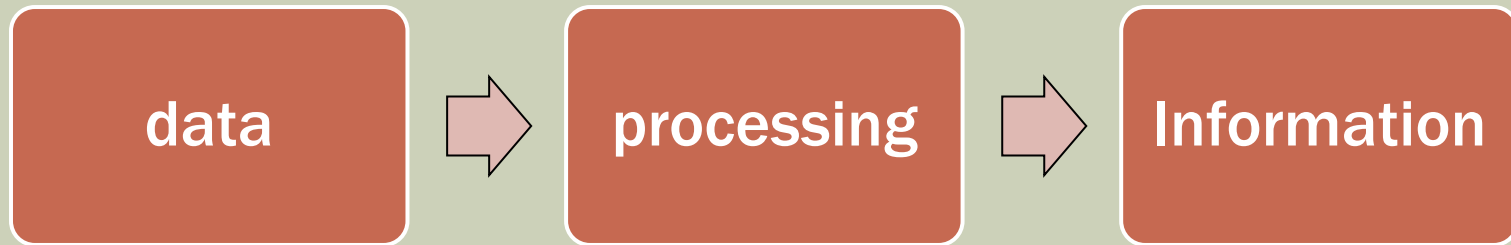
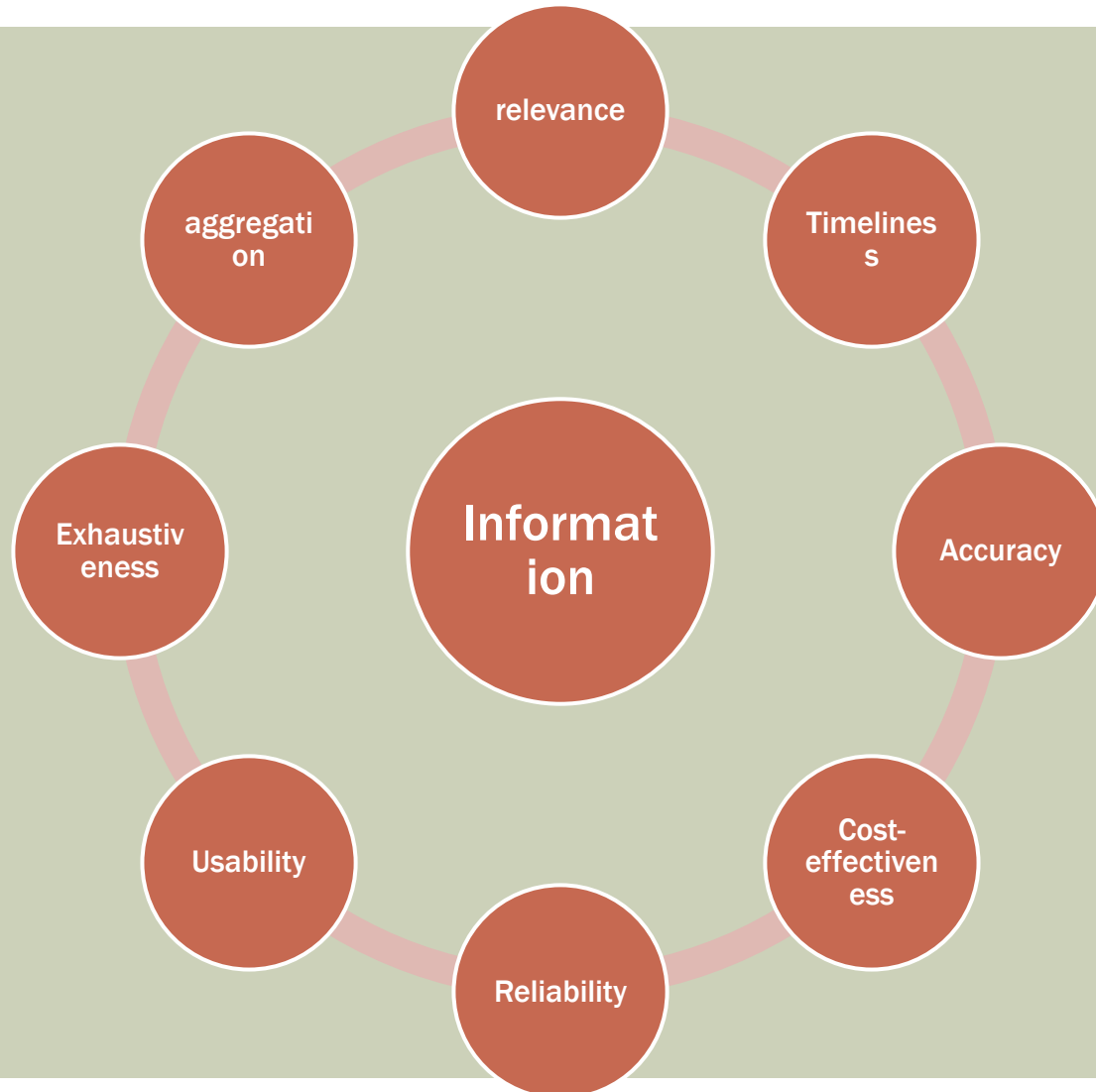


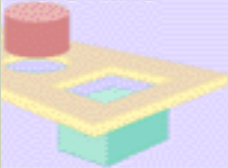
Figure: Input-Process-Output (Source: Sousa and O)

CHARACTERISTICS OF INFORMATION



CHARACTERISTICS OF INFORMATION (CONT.)

Relevant



Information must pertain to the problem at hand. For example, the total number of years of education may not be relevant to a person's qualifications for a new job. Relevant information might be that the person has so many years of education in mechanical engineering, and so many years of experience. The information must also be presented in a way that helps a person understand it in a specific context.

Complete



Partial information is often worse than no information. For example, marketing data about household incomes may lead to bad decisions if not accompanied by vital information on the consumption habits of the targeted population.

Accurate



Erroneous information may lead to disastrous decisions. For example, an inaccurate record of a patient's reaction to penicillin may lead a doctor to harm the patient while believing that she is helping him.

Current



Decisions are often based upon the latest information available, but what was a fact yesterday may no longer be one today. For example, a short-term investment decision to purchase a stock today based on yesterday's stock prices may be a costly mistake if the stock's price has risen in the interim.

Economical



In a business setting, the cost of obtaining information must be considered as one cost element involved in any decision. For example, demand for a new product must be researched to reduce risk of marketing failure, but if market research is too expensive, the cost of obtaining the information may diminish profit from sales.

VALUE OF INFORMATION

- Related to those **who** use it, **when** it is used, and in **what situation** it is used.
- The realistic value or revealed value of information
 - The measured difference in performance due to informational factors
- Attempt to perform a multi-attribute analysis or derive an overall subjective value.
- Reflects people's comprehensive impression of information and willing to pay for specific information

INFORMATION AS AN AID TO DECISION MAKING

The process of decision making can be described as comprising four steps: **intelligence, design, choice, and review**

■ **The Intelligence Stage**

- collection, classification, processing, and presentation of data relating to the organization and its environment.

■ **The Decision/Design Stage**

- the decision maker outlines alternative solutions
- Each alternative can also be examined for technological, behavioural, and economic feasibility.

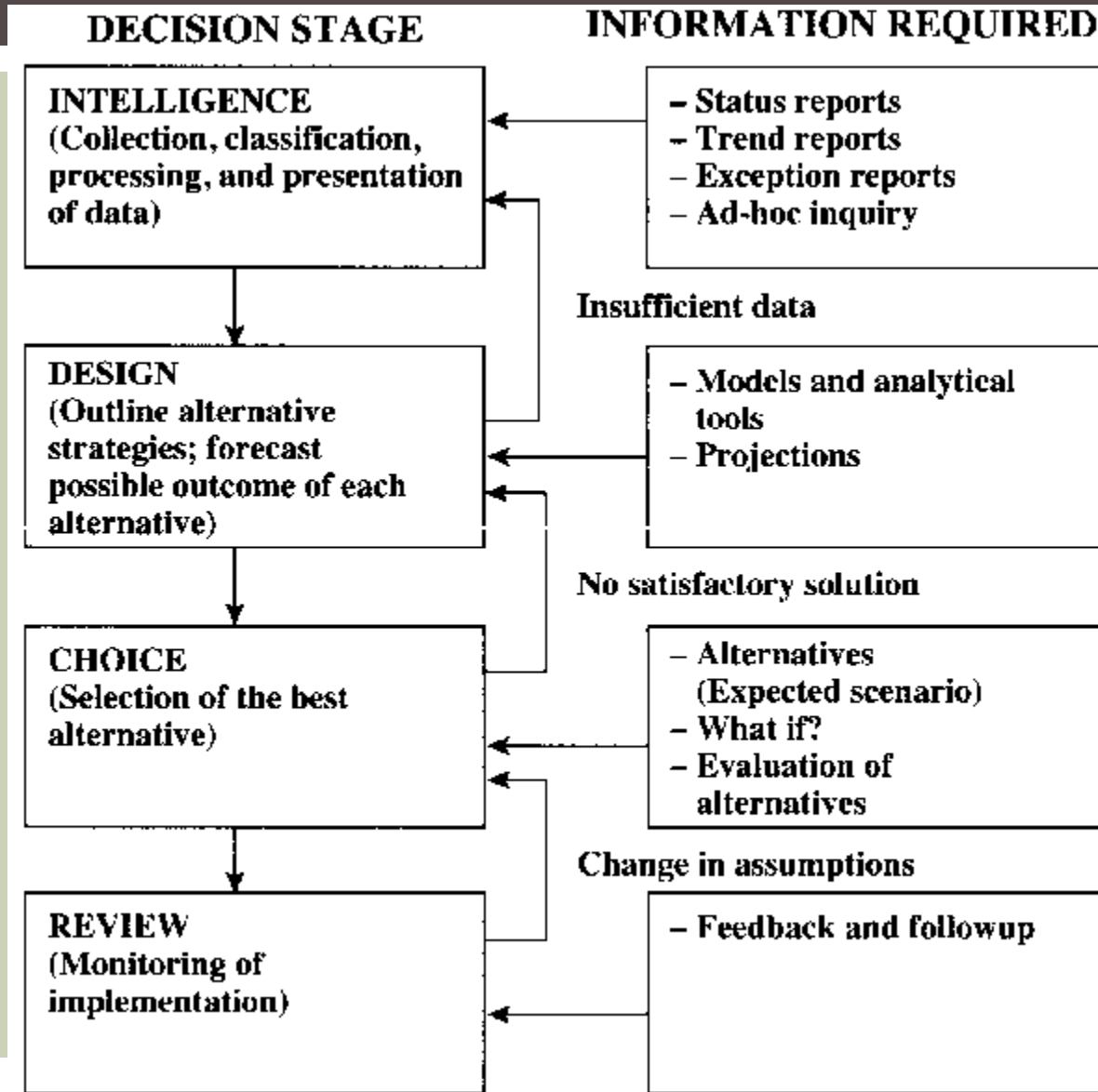
■ **The Choice Stage**

- the decision maker must select one of the alternatives that will best contribute to the goals of the organization.

■ **The Review Stage**

- past choices can be subjected to review during implementation and monitoring to enable the manager to learn from mistakes.

ROLE OF INFORMATION IN THE DECISION PROCESS



(Source: Babu et al.)

SYSTEM

- A set of elements joined together **for a common objective**.
- A subsystem is a part of a larger system with which one is concerned.
- **Optimizing the output of the organization** by connecting the operating subsystems through the medium of information exchange.

INFORMATION SYSTEM

- Integrated components processing, storing and disseminating information in an organization.
- Become the foundation of business models and processes
- The distribution of knowledge
- Examples of IS
 - File systems, databases, e-mail servers / clients
 - e-commerce
 - SAP, student records

INFORMATION SYSTEM COMPONENTS

- *Inputs*: raw data
- *Processing*: conversion of inputs to outputs
- *Outputs*: information used to make decisions
- *Feedback/assessment*: outputs used to improve system performance

INFORMATION SYSTEMS IN BUSINESS

Several trends have made the use of information systems (ISs) very important in business:

- The power of computers has grown
- The capacity of data storage devices has grown
- The variety and ingenuity of computer programs have increased.
- Quick and reliable communication lines and access to the Internet and the Web have become widely available and affordable.
- The fast growth of the Internet has opened opportunities and encouraged competition in global markets.
- An increasing proportion of the global workforce is computer literate.

WHAT IS MANAGEMENT INFORMATION SYSTEM (MIS)?

- Management Information System
 - A combination of computers and people that is used **to provide information to aid in making decisions and managing a firm.**
- The MIS is a system that supports the decisionmaking function of the organization.
- An organization with a well-defined information system will have **a competitive advantage** over organization with poor MIS and no MIS.

MIS is a system that supports the decisionmaking function of the organization.

MIS COMPONENTS

1 Hardware: various input and output devices

2 Software: Computer programs

MIS

3 Data: facts and figures

4 Procedures: sets of rules or guidelines

5 People: the people that are needed to run the system

FUNCTIONS OF MIS

To provide connectivity

- provides managers with better connectivity with the rest of the organization

To improve efficiency

- helps managers to conduct their tasks with greater ease and with better efficiency

To improve decision-making

- helps management by providing background information on a variety of issues

EXAMPLES OF MIS

- Customer relationship management system
- University information management system
- Human resource management systems
- Enterprise resource planning system
- Office automation systems
- Supply chain management system

WHY NEEDS MIS?

- To control the creation and growth of records
- To reduce operating costs
- To improve efficiency and productivity

CHARACTERISTICS OF MIS

- **Subsystem Concept**
- **Common Database**
- **Management Oriented**
- **Integrated**
- **Need-Based**
- **Flexibility**
- **Strategic planning**
- **Feedback System**

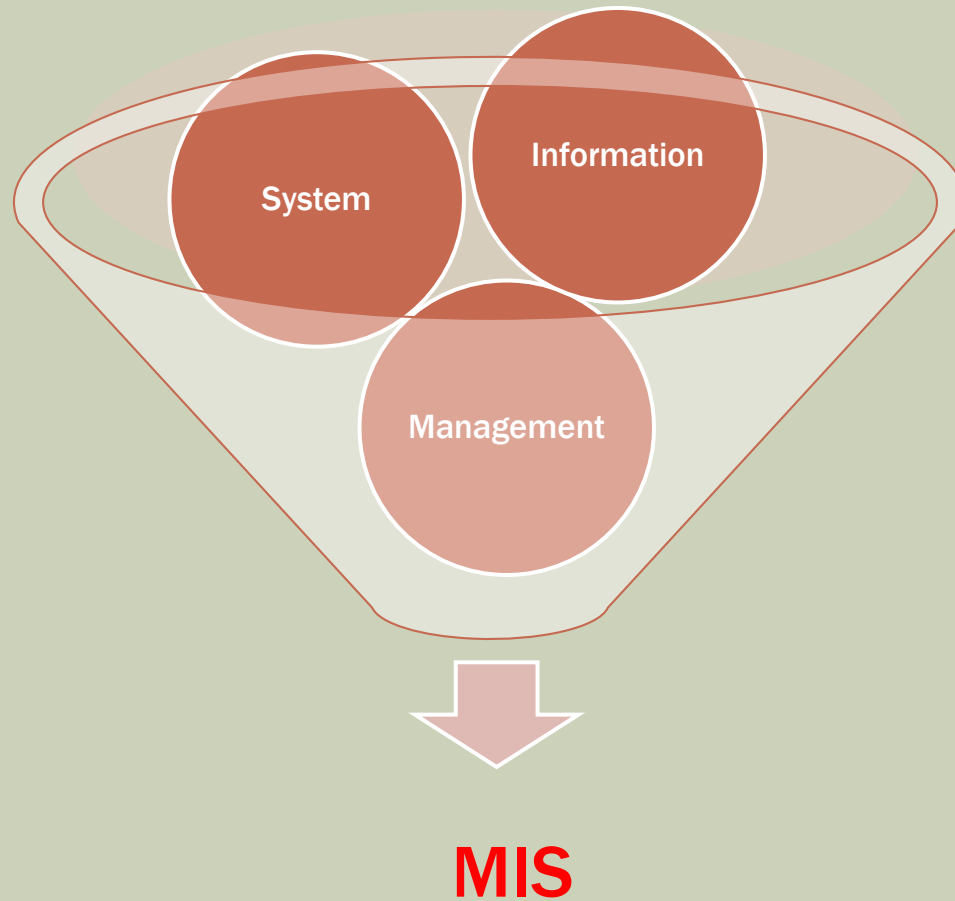
ADVANTAGES OF MIS

- Promotes quality of products
- Facilitates planning
- Minimizes information overload
- Makes better communication
- Encourages Decentralization
- Brings Co-ordination
- Makes control easier
- Improves data security
- Provides better decision-making
- Strengthens a company's competitive advantage

DISADVANTAGES OF MIS

- Constant monitoring
- Expensive to set up and maintain
- Complexity of the system
- Based on quantitative data and not quality data
- Lack of flexibility to update itself
- Lack of professionals

SUMMARY



ASSESSMENT

SAQ 1

Setting goals is not always relevant in management, true or false?

SAQ 2

1. Can you point out the characteristics of good information?
2. What will you use to measure the value of information?

SAQ 3

1. How will you define a system?
2. What is the central goal of MIS?

**Next Week Lecture: Information Systems,
Organizations, and Strategy**

THANK YOU.