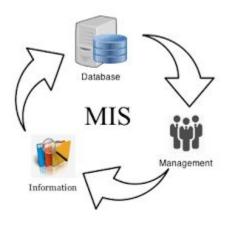
Management Information System

ECCILO 7013

What Is MIS?

Management information system or MIS is a set of procedures that provides essential data and information to the management for making an informed decision.



The Management information system involves:

- Collection of appropriate data from various reliable sources.
- Processing of such data to extract the relevant and useful information.
- Delivering this information to the respective department.

Why MIS Is Important For Businesses?

The corporate environment is dynamic involving uncertainties and risks. These uncertainties and risks drive business organizations to take complicated decision to survive in the market.

The primary goal of any organization is to improve its profitability and sustain in the long run. Hence, any business establishment cannot afford to ignore the importance of MIS.

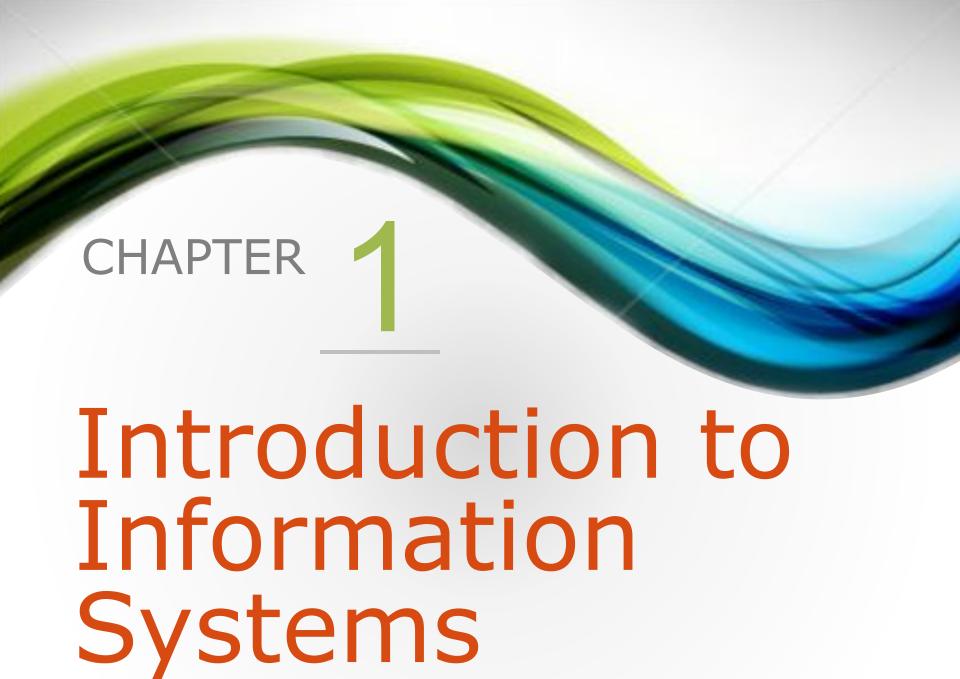
Management information system report plays a crucial role in improving performance, productivity, and profitability of the organization.

Information Technology (IT): any

computer-based tool that people use to work with information and to support the information and information-processing needs of an organization.

Information System (IS): collects, processes, stores, analyzes, and disseminates information for a specific purpose.

Informed User: A person knowledgeable about information systems and information technology



- 1. Why Should I Study Information Systems?
- 2. Overview of Computer-Based Information Systems
- 3. How Does IT Impact Organizations?
- 4. Importance of Information Systems to Society



- 1. Identify the reasons why being an informed user of information systems is important in today's world.
- 2. Describe the various types of computer-based information systems in an organization.
- 3. Discuss ways in which information technology can affect managers and non-managerial workers.

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4. Identify positive and negative societal effects of the increased use of information technology.

1.1 Why Should I Study Information Systems

- The Informed
 User You!
- IT Offers Career
 Opportunities
- Managing
 Information Resources

Reasons Why You Should Be An Informed User...

- You will benefit more from your organization's IT applications because you will understand what is "behind" those applications.
- 2. Your input can enhance your organization's IT applications.
- As you enter the workforce you can assist in selecting the IT applications your organization will use.

Reasons Why You Should Be An Informed User (con't)...

- You will aware of both new information technologies and rapid developments in existing technologies.
- 2. You will understand how using IT can improve your organization's performance.
- 3. If you are entrepreneurial minded, you can use IT to start your own business.

IT Offers Career Opportunities



- Chief Information Officer (CIO)
- Substantial Demand for IT Staff
 - Programmers
 - Business Analysts
 - System Analysts
 - Designers
- \$115,000 is the median salary for IS Managers (US Dept of Labor)

Managing Information Resources

- Managing information systems (IS) is difficult and complex
- Contributing Factors:
 - Strategic value of IS's
 - Acquiring, operating, and maintaining IS's is very expensive
 - Evolution of the MIS Function

Evolution of the MIS Function....

Traditional Functions of the MIS Department:

- Managing systems development and systems project management
- Managing computer operations, including the computer center
- Staffing, training, and developing IS skills
 Providing technical services
- Infrastructure planning, development, and control

New (Consultative) Functions of the MIS Department

- Initiating and designing specific strategic information systems
- Incorporating the Internet and electronic commerce into the business
- Managing system integration including the Internet, intranets, and extranets
- Educating the non-MIS managers about IT
- Educating the MIS staff about the business
- Partnering with business-unit executives
- Managing outsourcing
- Proactively using business and technical knowledge to seed innovative ideas about IT
- Creating business alliances with business partners

'S ABOUT BUSINESS 1.1

Information Technology Supports Students in Georgia

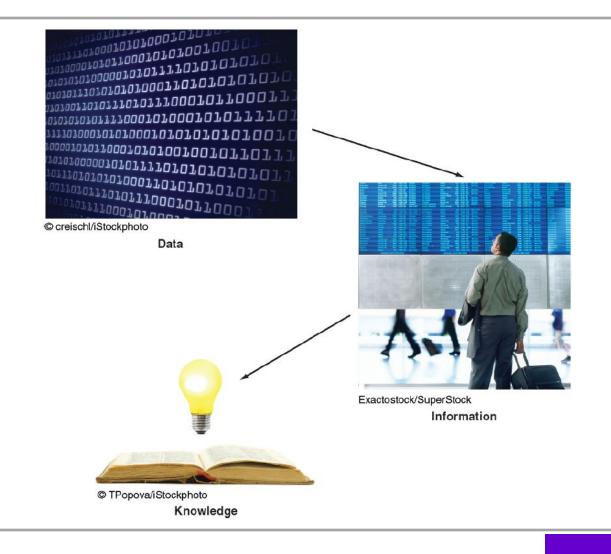
- Describe how the University System of Georgia manages its information resources vis-à-vis the individual universities in the system.
- 2. What are the advantages of central management of information systems in the University System of Georgia?
- 3. What are the disadvantages of central management of information systems in the University System of Georgia?

1.2 Overview of Computer-Based IS's

- Data Information Knowledge
- Computer-Based Information System (CBIS)

 Types of Computer-Based Information Systems (CBIS)

Data-Information-Knowledge



Data-Information-Knowledge

Data Items: an elementary description of things, events, activities, and transactions that are recorded, classified, and stored but are not organized to convey any specific meaning.Eg.

Information: refers to data that have been organized so that they have meaning and value to the recipient.Eg.

Knowledge: consists of data and/or information that have been organized and processed to convey understanding, experience, accumulated learning, and expertise as they apply to a current business problem.Eg.

Computer based information Systems

Computer-based information system (CBIS) is an information system that uses computer technology to perform some or all of its intended tasks. Although not all information systems are computerized, today most are. For this reason the term "information system" is typically used synonymously with "computer-based information system."

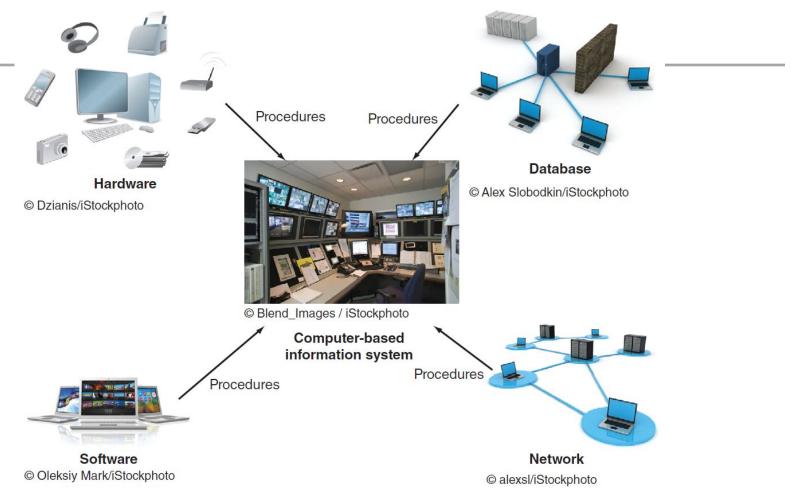
Components of a CBIS

- Hardware
- Software
- Database
- Network
- Procedures
- People

Components of a CBIS

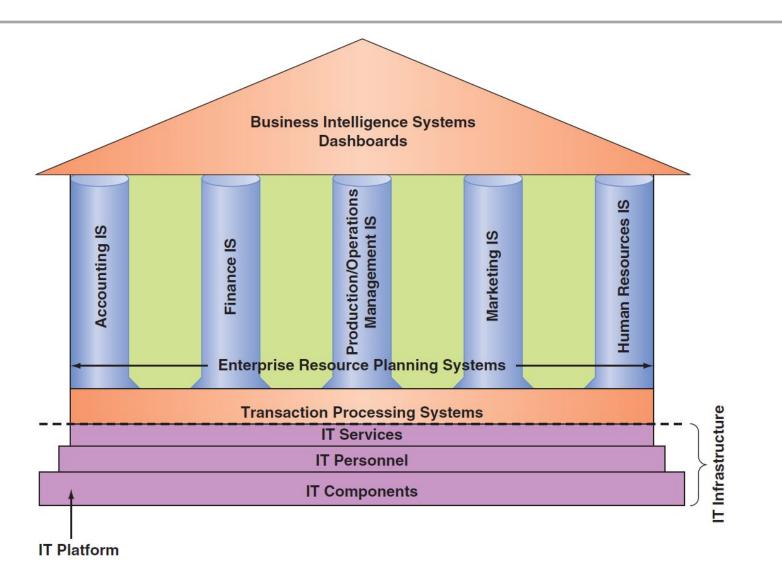
- Hardware: consists of devices such as the processor, monitor, keyboard, and printer.
- Software: a program or collection of programs that enable the hardware to process data.
- Database: a collection of related files or tables containing data.
- Network: a connecting system (wireline or wireless) that permits different computers to share resources.
- Procedures: are the instructions for combining the above components to process information and generate the desired output.
- People: individuals who use the hardware and software, interface with it, or utilize its output.

Computer based information Systems



These components are integrated to form the wide variety of information systems found within an organization.

Information Technology within the Organisation



IT Infrastructure

- IT components of hardware, software, networks (wireline and wireless), and databases form the information technology platform.
- IT personnel use these components to develop information systems, oversee security and risk, and manage data. These activities cumulatively are called information technology services.
- The IT components plus IT services comprise the organization's information technology infrastructure.
- At the top of the pyramid are the various organizational information systems.

Capabilities of Computer-Based Information Systems (CBIS)

- 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.

Types of Computer Based Information Systems (CBIS)

 Breadth of Support for Information Systems (IS):

Information systems support parts of organizations, others support entire organizations, and still others support groups of organizations.

Support for Organizational Employees:

Information systems that typically support particular employees within the organization.

Breadth of Support for Information Systems (IS)

- Functional Area Information Systems (FAIS)
- Enterprise Resource Planning Systems (ERP)
- Transaction Processing Systems (TPS)
- Interorganizational Information Systems (IOS)
- E-Commerce Systems

Functional Area Information Systems (FAIS): a collection of application programs in a single department or functional area. Eg. Finance IS, Marketing IS etc.

Enterprise Resource Planning (ERP): systems are designed to correct a lack of communication among the functional area IS.

Transaction Processing System (TPS): systems that support the monitoring, collection, storage, and processing of data from the organization's basic business transactions, each of which generates data.

Interorganizational Information systems (IOSs): Information systems that connect two or more organizations.

Electronic Commerce (e-commerce) Systems: an interorganizational information system that enable organizations to conduct transactions, called business-to-business (B2B) electronic commerce, and customers to conduct transactions with businesses, called business-to-consumer (B2C) electronic commerce.

Figure 1.5: IS that function among multiple organizations

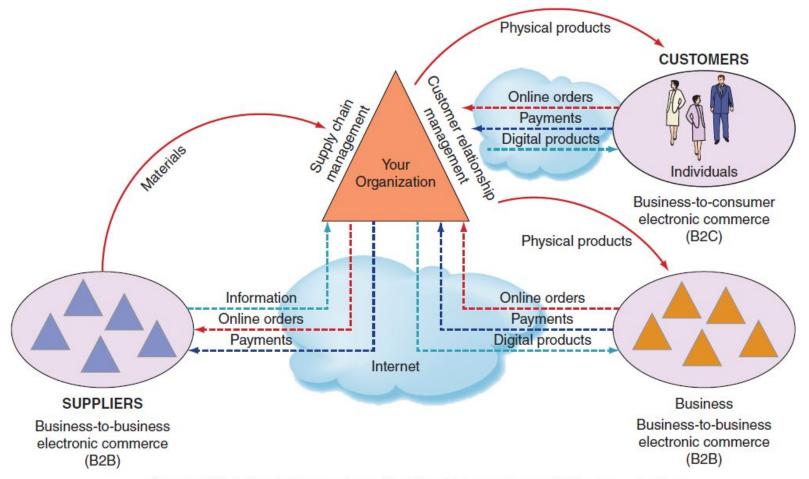


Figure 1.5 Information systems that function among multiple organizations.

Support for Organizational Employees

Information systems that typically support particular employees within the organization. They are:

- Knowledge Workers
- Office Automation Systems (OASs)
- Business Intelligence (BI) Systems
- Expert Systems (ES)
- Dashboards

Knowledge Workers: professional employees that are experts in a particular subject area (e.g., financial and marketing analysts, engineers, lawyers, and accountants.).

Office Automation Systems (OASs): typically support the clerical staff, lower and middle managers, and knowledge workers (e.g., word processing and desktop publishing software).

Business Intelligence (BI) Systems: systems that provide computer-based support for complex, nonroutine decisions, primarily for middle managers and knowledge workers.

Expert Systems (ES): systems that attempt to duplicate the work of human experts by applying reasoning capabilities, knowledge, and expertise within a specific domain.

Dashboards: a special form of IS that support all managers of the organization by providing rapid access to timely information and direct access to structured information in the form of reports.

Table 1.4

Types of Organizational Information Systems

Type of System	Function	Example
Functional area IS	Supports the activities within specific functional area.	System for processing payroll
Transaction processing system	Processes transaction data from business events.	Walmart checkout point-of-sale terminal
Enterprise resource planning	Integrates all functional areas of the organization.	Oracle, SAP system
Office automation system	Supports daily work activities of individuals and groups.	Microsoft® Office
Management information system	Produces reports summarized from transaction data, usually in one functional area.	Report on total sales for each customer
Decision support system	Provides access to data and analysis tools.	"What-if" analysis of changes in budget
Expert system	Mimics human expert in a particular area and makes decisions.	Credit card approval analysis
Executive dashboard	Presents structured, summarized information about aspects of business important to executives.	Status of sales by product
Supply chain management system	Manages flows of products, services, and information among organizations.	Walmart Retail Link system connecting suppliers to Walmart
Electronic commerce system	Enables transactions among organizations and between organizations and customers.	www.dell.com

1.3 How Does IT Impact Organizations?

- IT Reduces the Number of Middle Managers
- IT Change's the Manager's Job
- Will IT Eliminate Jobs?
- IT Impacts Employees at Work

IT Impacts Employees at Work

- IT Impacts Employees' Health and Safety
- IT Provides Opportunities for People with Disabilities

Robotic Page turner:

https://www.youtube.com/watch?v=xiE6l_cz9pw

Hospital-bedside video trip to the zoo:

https://www.youtube.com/watch?v=MG9oN4hJUQ0

Figure 1.6: Ergonomic products protect computer users.



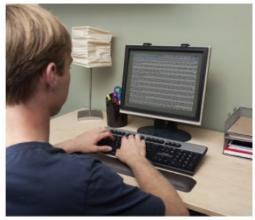
Media Bakery

(a)



Media Bakery

(b)



Media Bakery

(c)



Media Bakery

(d)

1.4 Importance of IS to Society

- IT Affects Our Quality of Life
- The Robot Revolution is Here Now
- Improvements in Healthcare

Virtual reality for brain surgeries:

https://www.youtube.com/watch?v=tZvY1a-0rpg

'S ABOUT BUSINESS 1.2

Different Types of Robots

- 1. Discuss some disadvantages of (a) telepresence robots, (b) autonomous cars, and (c) drones.
- 2. Would you be willing to ride in an autonomous car? Why or why not?
- 3. Which occupations are most at risk from a widespread adoption of autonomous cars? Support your answer.
- 4. Debate the privacy issues associated with domestic use of drones by law enforcement agencies.

'S ABOUT BUSINESS 1.3

Getting Kids in Shape

1. Why is Zamzee using games to help kids lose weight?



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In your opinion, would Zamzee be as successful for adult weight loss? Why or why not?