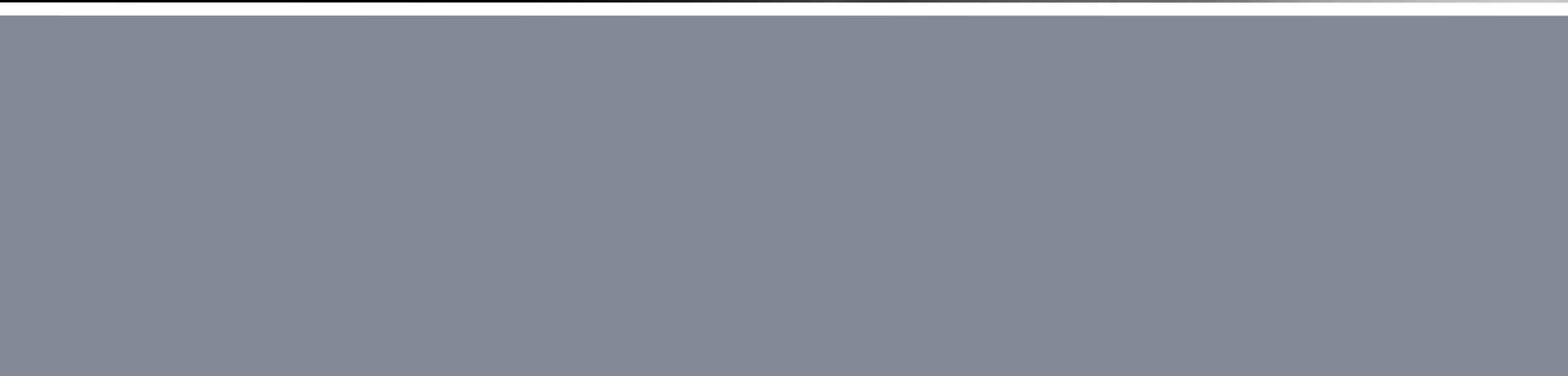
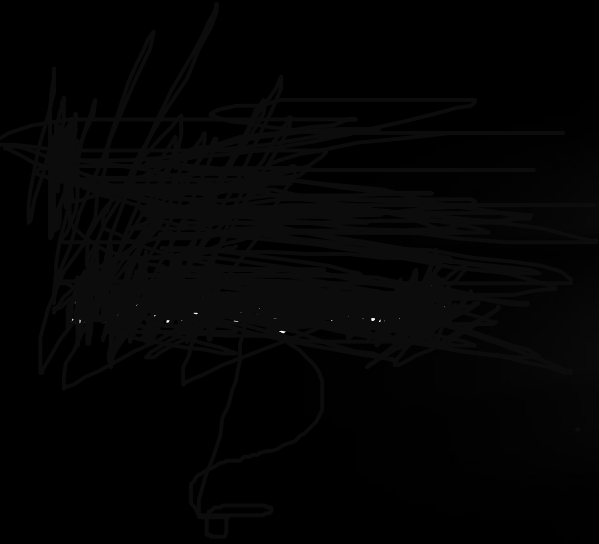


Information Systems



Outline

Definitions

Types of Information Systems

Information Systems Vs Information Technology

Expanding Roles of IS

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Enterprise Resource Planning

Information Systems Development

IS as Discipline

Information systems: Opportunities and Challenges

Conclusion

Definitions

Data

Raw facts such as an employee's name and number of hours worked in a week, inventory part numbers or sales orders.

Information

A collection of facts organized in such a way that they have additional value beyond the value of the facts themselves.

Data

\$35,000 12 Units
\$12,000 J. Jones
Western Region
\$100,000 100 Units
35 Units

Data
Processing

Information

Salesperson: J. Jones
Sales Territory:
Western Region
Current Sales: 147
Units = \$147,000

Definitions

Information Systems

An information system (IS) is typically considered to be a set of interrelated elements or components that collect (input), manipulate (processes), and disseminate (output) data and information and provide a feedback mechanism to meet an objective.

Open System

Close System



Types of Information Systems

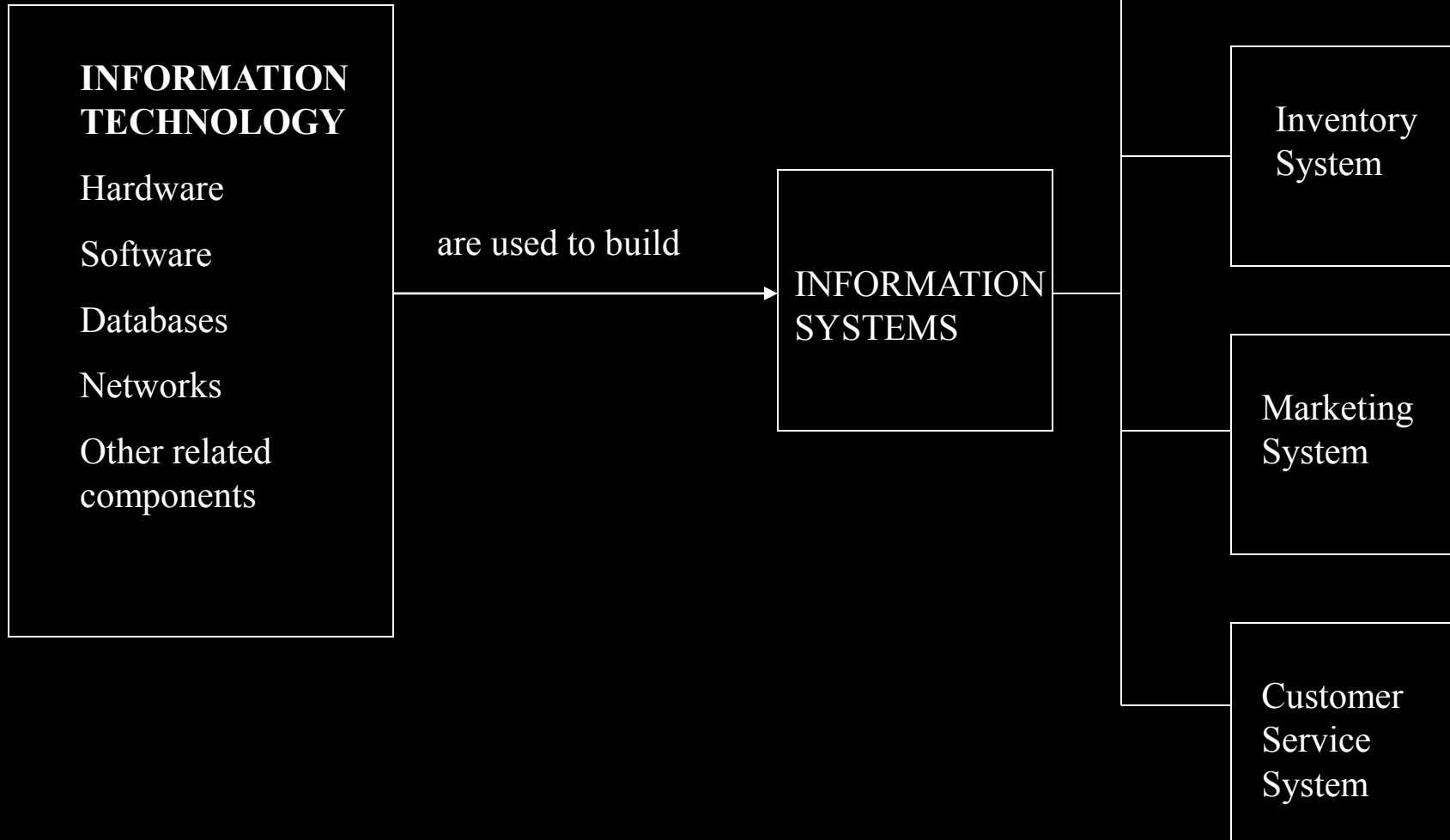
1. Informal Information System
2. Formal Information System

Computer-based Information System

An Information System is an organized combination of people, hardware, software, communication networks and the data resources that collects, transforms and disseminates information in a organization.



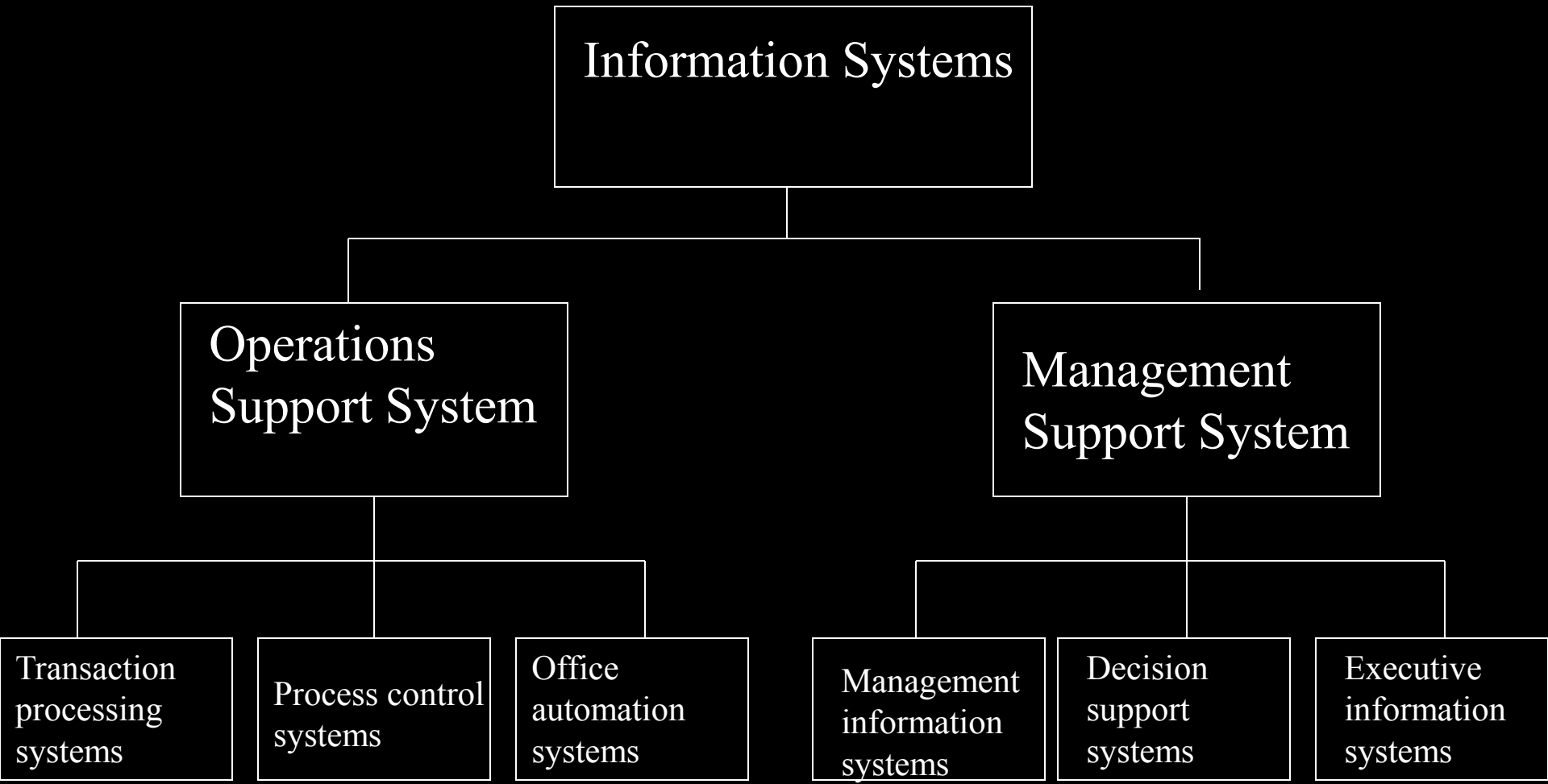
IS Vs IT



Expanding Roles of IS

- 1. Data Processing: 1950s-1960s**
- 2. Management Reporting: 1960s-1970s**
- 3. Decision support: 1970s-1980s**
- 4. Strategic and End User Support: 1980s-1990s**
- 5. Global Internetworking: 1990s-2000s**

Classification of IS



1. Operations support systems process data generated by business operations

Major categories are:

- i) Transaction processing systems
- ii) Process control systems
- iii) Office automation systems

2. Management Support Systems provide information and support needed for effective decision making by managers

Major categories are

- i) Management Information System
- ii) Decision Support Systems
- iii) Executive Information System

1. Operations Support System

i) Transaction processing systems

- Process business exchanges
- Maintain records about the exchanges
- Handle routine, yet critical, tasks
- Perform simple calculations

ii) **Process control systems** monitor and control industrial processes.

iii) **Office automation systems** automate office procedures and enhance office communications and productivity.

2. Management support systems provide information and support needed for effective decision making by managers

Major categories are:

i) Management information systems

- ❖ Routine information for routine decisions
- ❖ Operational efficiency
- ❖ Use transaction data as main input
- ❖ Databases integrate MIS in different functional areas

ii) Decision Support System

- Interactive support for non-routine decisions or problems
- End-users are more involved in creating a DSS than an MIS

iii) Executive information systems

provide critical information tailored to the information needs of executives

Other categories

a) Expert systems

b) End user computing systems

c) Business information systems

d) Strategic information systems

a) Expert Systems are knowledge-based systems that provides expert advice and act as expert consultants to the users

b) End user computing systems support the direct, hands on use of computers by end users for operational and managerial applications

c) Business information systems support the operational and managerial applications of the basic business functions of a firm

d) Strategic information systems provide a firm which strategic products, services, and capabilities for competitive advantage

Challenges

1. Workforce downsizing
2. Information overload
3. Employee mistrust
4. Difficult to built
5. Security breaches

Opportunities

1. Enhanced global competitiveness
2. Capture market opportunities
3. Support corporate strategy
4. Enhance worker productivity
5. Improve quality of goods and services

Information Assurance

It is the practice of assuring information and managing risks related to the use, processing, storage, and transmission of information or data and the systems and processes used for those purposes.

Information assurance includes protection of the integrity, availability, authenticity, non-repudiation and confidentiality of user data.

It uses physical, technical and administrative controls to accomplish these tasks.

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While focused predominantly on information in digital form, the full range of IA encompasses not only digital but also analog or physical form.

These protections apply to data in transit, both physical and electronic forms as well as data at rest in various types of physical and electronic storage facilities. Information assurance as a field has grown from the practice of information security