


Week 7

Information System In Enterprise

DBA 303

Business Information System

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Learning Outcome

- **At the end of the lecture, student should be able:**
 - To identify and differentiate the major types of systems in a business and explain the role played by the key system applications in a business.
 - To demonstrate how information systems support the major business functions of sales and marketing, manufacturing and production, finance and accounting, and human resources.

Information System (IS)

- Computer-Based Information Systems (CBIS)
 - It is an information system that is composed of hardware, software, database, telecommunication, people and procedures that are configured to collect, manipulate, store, and process data into information.
 - Technology infrastructure
 - A CBIS that consists of the shared IS resources that form the foundation of the information systems.

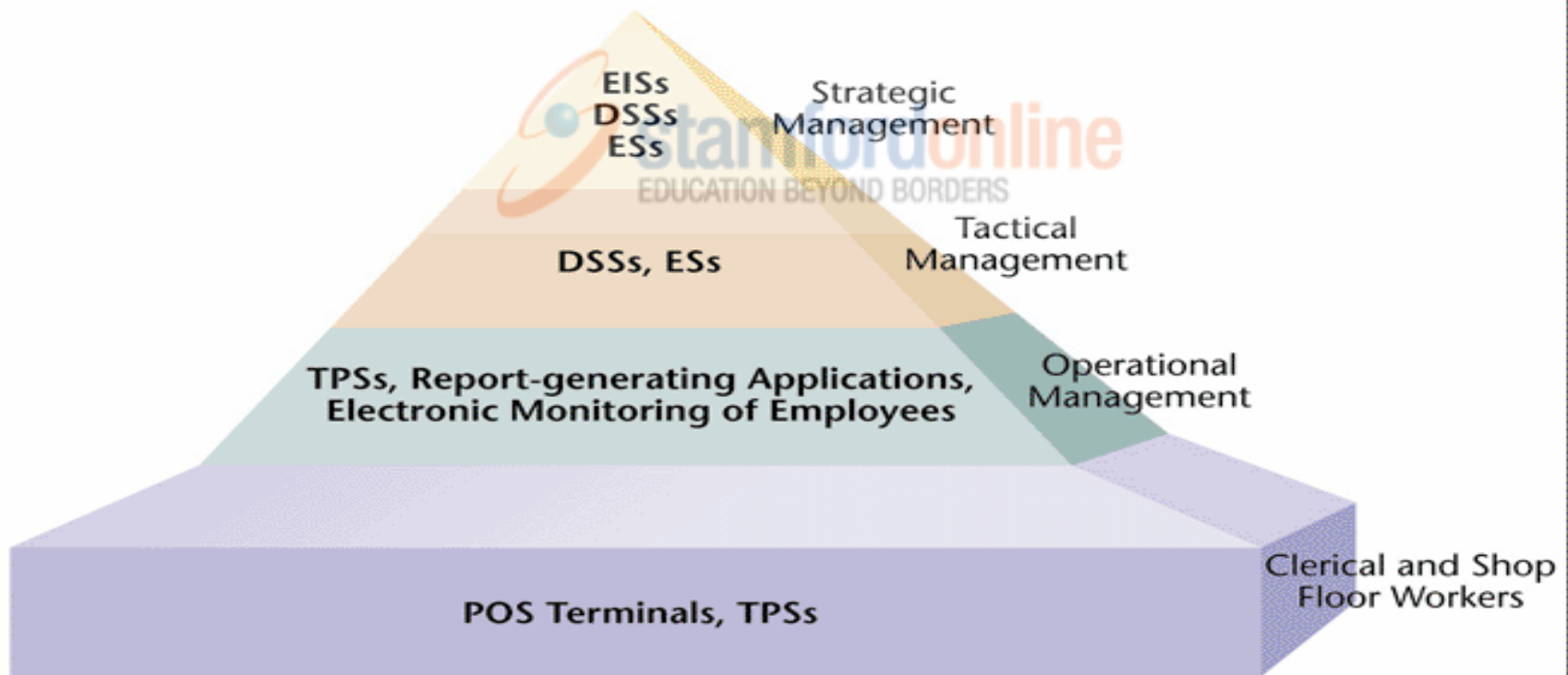
Types of Information Systems

- Basic types of IS:
 1. Transaction Processing Systems
 2. Knowledge Work Systems & Office Automation System
 3. Management Information Systems
 4. Decision Support Systems
 5. Executive Support Systems

Managers and Their Information Systems

FIGURE 9.13

Types of information systems typically used at different levels of an organization's hierarchy



Transaction Processing System (TPS)

- A transaction is a business activity or event. Transactions include buying a product such as a shirt at a department store.
- The information system that records and helps manage these transactions is known as an operational information system, or a transaction processing system (TPS).
- The most basic business systems that serves the operational level of the organization.

TPS (Continued)

- Captures and processes raw materials for information
- Records and helps manage the business transactions
- Clerical workers use TPS for routine responsibilities
- Operation managers use TPS for ad-hoc reports
- Provides information on past transactions, and performs routine record-keeping functions to provide information for operational management personnel who manage the day-to-day activities of an organization.
- Example: Payroll system, order entry, or inventory control.

TPS (Continued)

Essentially, these systems record historic information and they represent simple automation of manual system.

- The automated ticket issuing machine, or the one operated by the assistant at the ticket office at a train station are examples of transaction processing systems.
- Checkout systems at retail outlet. They record details of items purchased, produce the total due and maintain a record of each sale.
- Other systems such as payroll system, order entry, or inventory control.



Knowledge Work System (KWS) and Office Automation System (OAS)

- Serves the information needs at the knowledge level of the organization. Knowledge work systems aid knowledge workers, whereas office systems primarily aid data workers.
- OAS helps knowledge workers manage the preparation, storage, retrieval, reproduction, and communication of information within and among business offices.
- In other words, Knowledge Work Systems aid knowledge workers, whereas Office Automation Systems primarily aid data workers.



Management Information System (MIS)

- Serves the management level of the organization, providing managers with reports or with online access to the organization current performance
- Produces management information in the form of predefined reports, aiming to assist planning at middle management level
- The purpose of an MIS is to provide information to managers for use in problem solving, control and decision making. They are used for situations that recur and are highly structured where the information requirements are known in advance.

MIS (Continued)

- Often, a TPS feeds information to MIS. For example, an MIS can use the sales information gathered by an order entry TPS over several years to forecast the sales for the following year.
- Management Information Systems are used in all areas of activity, including planning, marketing, finance, manufacturing, human resources, and project management.
- An MIS provides information in the form of management reports and online retrieval.

Decision Support System (DSS)

- A DSS is an interactive information system that helps users solve semi-structured or unstructured management problems.
- Serves the strategic level of organizations. DSS helps managers make decisions that are unique, rapidly changing and not easily specified in advance.
- A system that supports a single manager or a relatively small group of managers working as a problem-solving team in the solution of a semi-structured problem by providing information or making suggestions concerning specific decisions.

Executive Information System (EIS)

- Provides timely, concise information about organization to top managers
- Caters specifically to the special information needs of executives, such as managerial planning, monitoring and analysis
- Serves the strategic level of the organization -- address non-routine decisions requiring judgment, evaluation and insight because there is no agree-on procedure for arriving at a solution

EIS (continued)

- Provides internal as well as external information
 - Economic indices
 - Stock and commodity prices
 - Industry trends

