Information Management

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Data, Information & Intelligent

Data is defined as facts or figures, or information that's stored in or used by a computer

Information is a stimulus that has meaning in some context for its receiver.
When information is entered into and stored in a computer, it is generally referred to as data. After processing (such as formatting and printing), output data can again be perceived as information

Intelligence has been defined in many different ways such as in terms of one's capacity for logic, abstract thought, understanding, self-awareness, communication, learning, emotional knowledge, memory, planning, creativity and problem solving

IT and IS

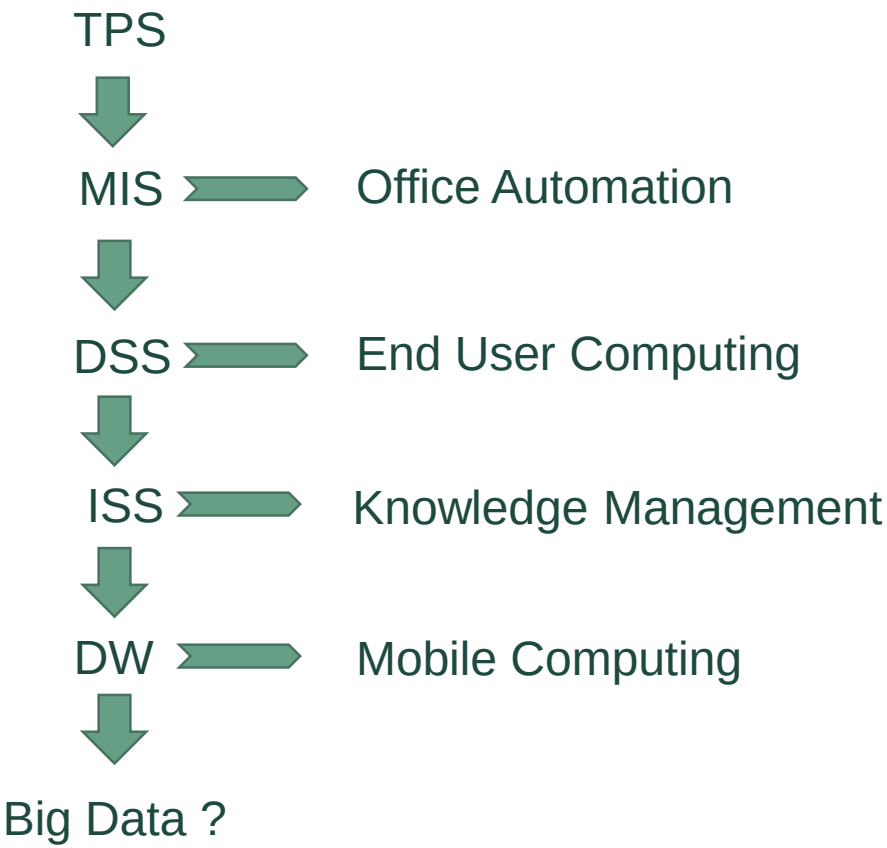
Information technology (IT) is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data, often in the context of a business or other enterprise

An information system (IS) is a system composed of people and computers that processes or interprets information. The term is also sometimes used in more restricted senses to refer to only the software used to run a computerized database or to refer to only a computer system

The Importance of IS

- To control the creation and growth of records
- To reduce operating costs
- To improve efficiency and productivity
- To assimilate new records management technologies
- To ensure regulatory compliance
- To minimize litigation risks
- To safeguard vital information
- To support better management decision making
- To preserve the corporate memory
- To foster professionalism in running the business

Evolution of IS



General Kinds of IS

- Operational-level systems
  Support operational managers by monitoring the day-to-day‘s elementary activities and transactions of the organization. e.g. TPS.
- Knowledge-level systems
  Support knowledge and data workers in designing products, distributing information, and coping with paperwork in an organization. e.g. KWS, OAS
- Management-level systems
  Support the monitoring, controlling, decision-making, and administrative activities of middle managers. e.g. MIS, DSS
- Strategic-level systems
  Support long-range planning activities of senior management. e.g. ESS

TPS (Transaction Processing Systems)

Computerized system that performs and records the daily routine transactions necessary to conduct the business
These systems serve the operational level of the organization

- TYPE: Operational-level
- INPUTS: transactions, events
- PROCESSING: updating
- OUTPUTS: detailed reports
- USERS: operations personnel, supervisors
- DECISION-MAKING: highly structured

EXAMPLE: payroll, accounts payable, etc

MIS

Information system at the management level of an organization that serves the functions of planning, controlling, and decision making by providing routine summary and exception reports.

- TYPE: Management-level
- INPUTS: high volume data
- PROCESSING: simple models
- OUTPUTS: summary reports
- USERS: middle managers
- DECISION-MAKING: structured to semi-structured

EXAMPLE: annual budgeting

Office Automation

Computer system, such as word processing, electronic mail system, and scheduling system, that is designed to increase the productivity of data workers in the office

- TYPE: Knowledge-level
- INPUTS: documents, schedules
- PROCESSING: document management, scheduling, communication
- OUTPUTS: documents; schedules
- USERS: clerical workers

EXAMPLE: document imaging system

KWS (Knowledge Working Systems)

Information system that aids knowledge workers in the creation and integration of new knowledge in the organization

- TYPE: Knowledge-level
- INPUTS: design specifications
- PROCESSING: modelling
- OUTPUTS: designs, graphics
- USERS: technical staff; professional

EXAMPLE: Engineering workstations

DSS (Decision Support Systems)

Information system at the management level of an organization that combines data and sophisticated analytical models or data analysis tools to support semi-structured and unstructured decision making

- TYPE: Management-level
- INPUTS: low volume data
- PROCESSING: simulations, analysis
- OUTPUTS: decision analysis
- USERS: professionals, staff managers
- DECISION-MAKING: semi-structured

EXAMPLE: sales region analysis

ESS (Executive Support System)

Information system at the strategic level of an organization that address unstructured decision making through advanced graphics and communications.

TYPE: Strategic level
- INPUTS: aggregate data; internal and external
- PROCESSING: interactive
- OUTPUTS: projections
- USERS: senior managers
- DECISION-MAKING: highly unstructured

EXAMPLE: 5 year operating plan

Classification of IS by Organization Structure

- Departmental Information Systems
- Enterprise Information System
- Inter-organizational Systems

Classification of IS by Functional Area

- The accounting information system
- The finance information system
- The manufacturing (operations, production) information system
- The marketing information system
- The human resources information system

Thank You !

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