

BUSINESS INFORMATION SYSTEM

Lecture 1

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Objectives

- **Understand Data, Information and Knowledge**
- **Understand Business information System**



Importance of IT

- **IT** serves as the backbone of Business Information Systems, improve decision-making, enhance customer relationships, and drive innovation in today's digital age.
- Emerging technologies such as artificial intelligence (AI), machine learning (ML), Internet of Things (IoT), and blockchain offer new opportunities for optimizing processes, developing innovative products/services, and entering new markets ahead of competitors.



Data & Information

- Usually, the terms “**data**” and “**information**” are used interchangeably. However, there is a subtle difference between the two.
- In a nutshell, **data** can be a number, symbol, character, word, codes, graphs, etc. On the other hand, **information** is data put into context. **Information** is utilized by humans in some significant way (such as to make decisions, forecasts etc.).
- A **basic example of information** would be a computer. A computer uses programming scripts, formulas, or software applications to turn **data** into **information**.
- **Knowledge**- Ability to perform certain tasks by combining data with own information and experience.

Data	Information
Data is unorganized and unrefined facts	Information comprises processed, organized data presented in a meaningful context
Data is an individual unit that contains raw materials which do not carry any specific meaning.	Information is a group of data that collectively carries a logical meaning.
Data doesn't depend on information.	Information depends on data.
It is measured in bits and bytes.	Information is measured in meaningful units like time, quantity, etc.
Raw data alone is insufficient for decision making	Information is sufficient for decision making
An example of data is a student's test score	The average score of a class is the information derived from the given data.





Data processes



- Data that is formally handled in a business may undergo complex processing prior to presentation and use as information.

➤ **The types of basic process are:**

- **Classification of data;**
- **Rearranging/sorting data;**
- **Summarizing/aggregating data;**
- **Performing calculations on data;**
- **Selection of data.**

Data processes

Table 1.1 Examples of types of data process

<i>Type of data process</i>	<i>Example</i>
Classification of data	Transaction data may be classified as invoice data, payment data, order data
Rearranging/sorting data	Data on employees may be ordered according to ascending employee number
Summarizing/aggregating data	Data on the performance of various departments may be aggregated to arrive at a summary of performance
Performing calculations on data	Data on the total hours worked by an employee may be multiplied by the hourly wage rates to arrive at a gross wage
Selection of data	Total yearly turnover data on customers may be used to select high-spending customers for special treatment by sales personnel



The idea of a system

- In Business Information Systems (BIS), **a system** refers to an interconnected set of components working together to achieve a specific goal or function within an organization.
- These components can include **hardware, software, data, procedures, and people**.
- Systems in BIS can range from basic data processing systems to complex enterprise-wide platforms like Enterprise Resource Planning (ERP) systems, Customer Relationship Management (CRM) systems, and Decision Support Systems (DSS).



Example of a System

- An **Online Booking System** for a hotel chain is a comprehensive Business Information System (BIS) designed to facilitate the reservation process for both customers and hotel staff.
- This system consists of **hardware, software, data, procedures,** and **people** working together seamlessly.
- Customers can access the online platform to browse room availability, select dates, make reservations, and process payments.



Example of a System

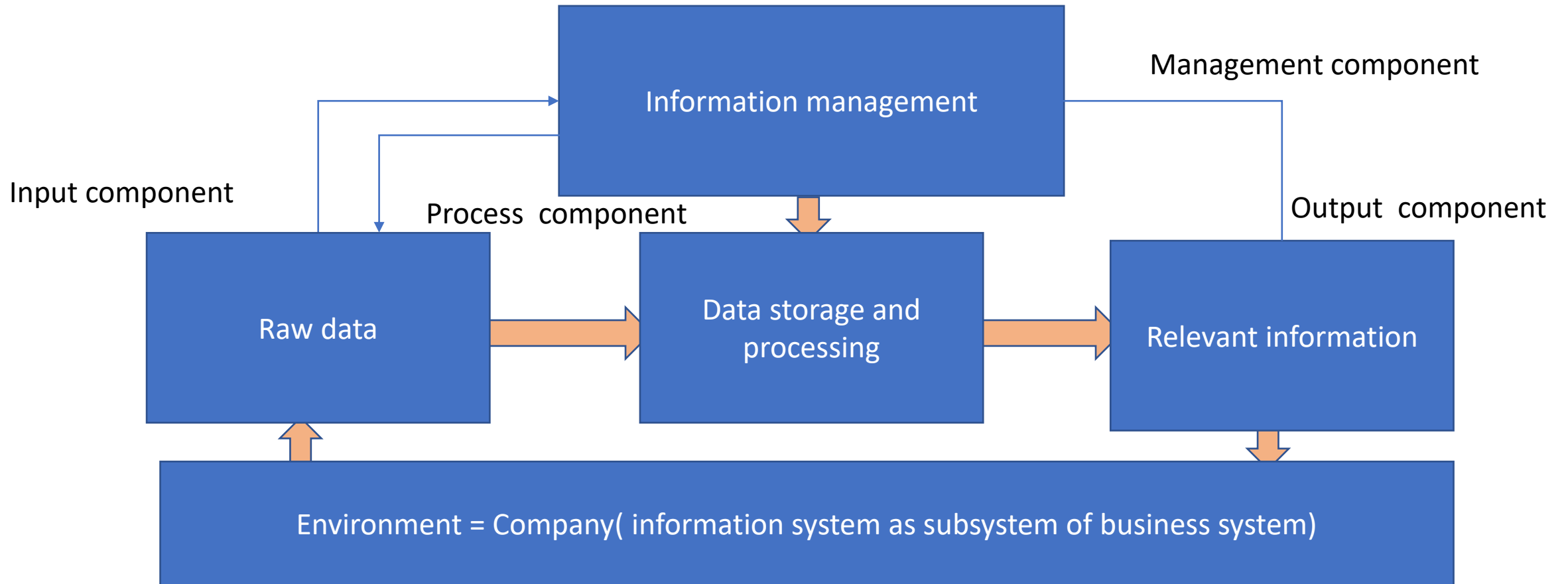
- Meanwhile, hotel staff utilize the system to manage bookings, update room availability, handle cancellations, and assist customers with inquiries.
- The system stores essential data such as customer profiles, reservation details, and pricing information in databases.

❑ Business information system

Business information systems provide information that organizations use to manage themselves efficiently and effectively, typically using computer systems and technology. Primary components of business information systems include hardware, software, data, procedures (design, development, and documentation) and people.



BUSINESS INFORMATION SYSTEM

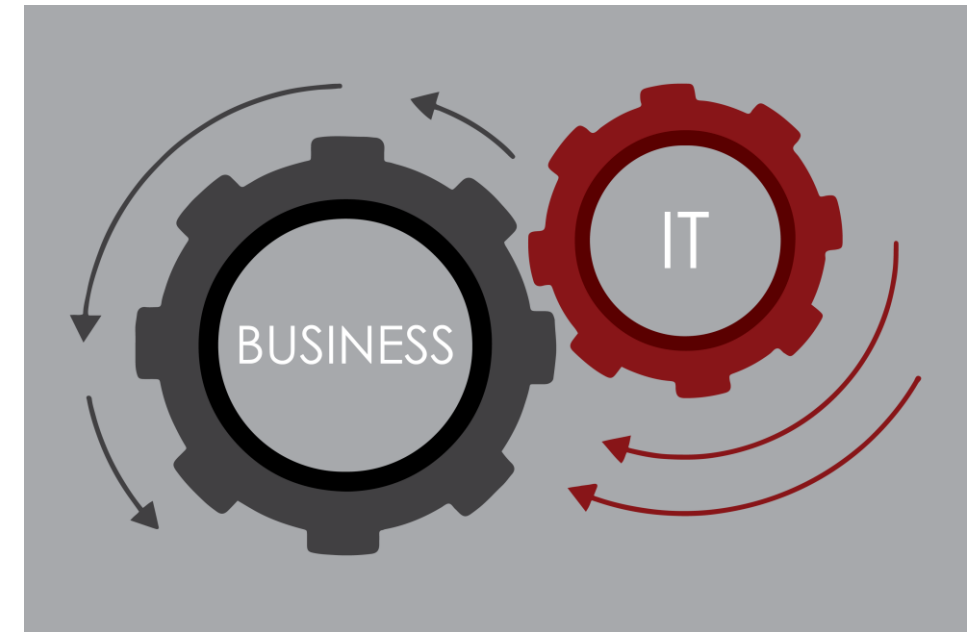


“What does ‘business and IT alignment’ really mean?”

"business and IT alignment" refers to ensuring that technology initiatives and investments support and align with the strategic goals and needs of the organization. It involves close collaboration between business leaders and IT professionals to leverage technology effectively for business success.



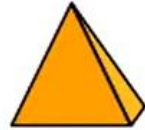
- For an **organization** to be successful in doing this, it must view **IT** as an instrument which enables business success. **IT systems and IT management** must be considered to be just as business-critical as the business applications are. When IT aligns with business goals, it pursues IT solutions that will enable the business to meet those goals from an IT perspective. In true business-IT alignment, the business and IT organization work together to achieve the business goals, as opposed to fighting against each other with conflicting goals and objectives.



BUSINESS INFORMATION SYSTEM

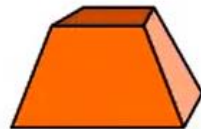


STRATEGIC



Long term decisions, on group level, often based on unstructured information, what if analysis

TACTICAL



Mid long term decisions, identify execution plans for group decisions, project management

OPERATIONAL



Daily operations and decision, based on structured information, immediate results



*Thank you
for Listening!*
