

Management Information System

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Week 1:
Information System in 21st Century

Learning Objectives

- Define **Information Systems (IS)** and **Management Information Systems (MIS)**.
- Identify the **key components** of an information system.
- Explain how **data becomes information** in organizations.
- Recognize **how information systems support modern digital organizations**.
- Describe **examples** of information systems used in everyday life and business.

Digital Life Today

How many digital systems did you interact with today before coming to class?



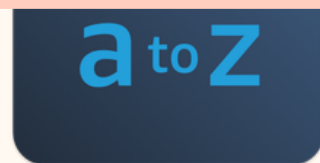


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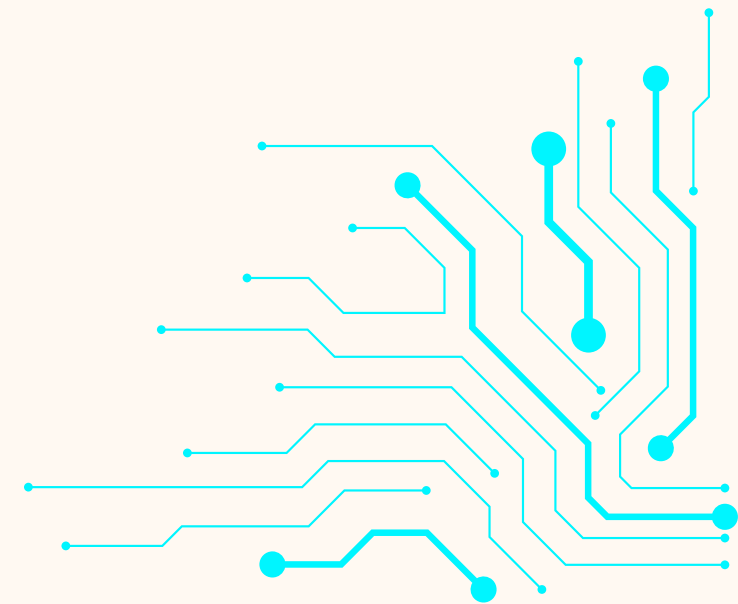
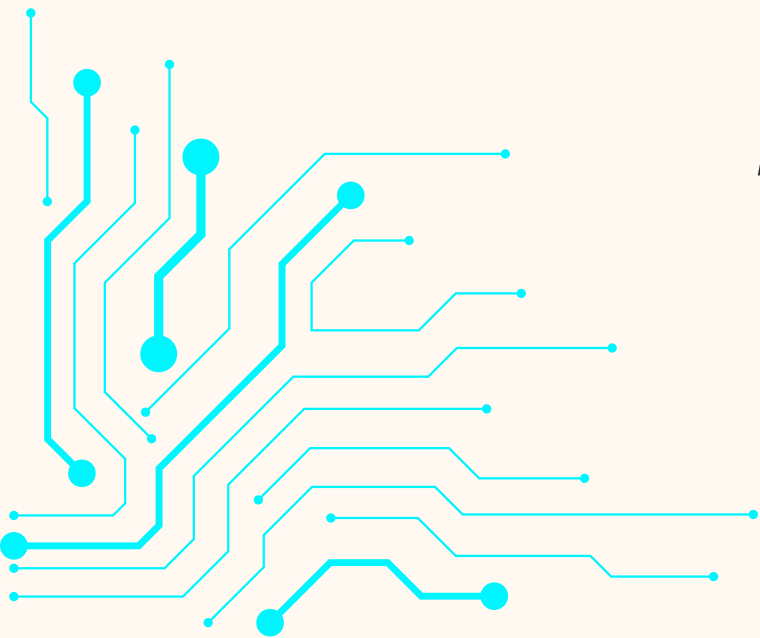
Behind every digital service you use,
there is an information system working to
collect, process, store, and deliver information.



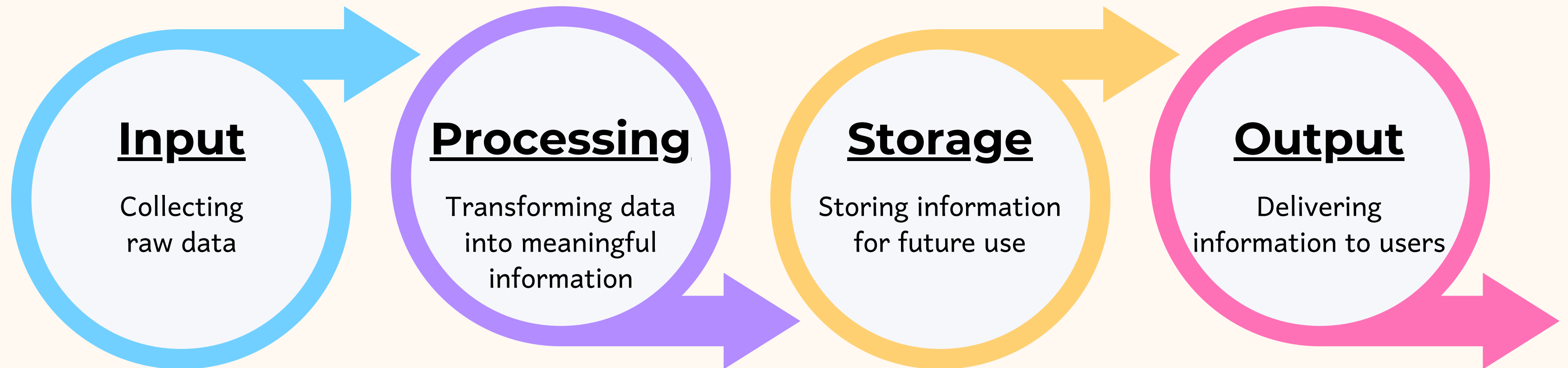
Definition

An Information Systems is a combination of technology, people, and processes that work together to collect, processes, stores, and distributes data to produce useful information that supports operations, decision-making, and control in an organization.

Information Systems focus on what is happening in the organization.



Key Activities:



Data, Information, and Knowledge



Data

- Raw facts
- Unprocessed symbols
- No context

Examples:

- 2026-03-03
- 150
- Product ID #A145



Information

- Processed and meaningful
- Organized for purpose

Examples:

- 150 units of Product A sold today



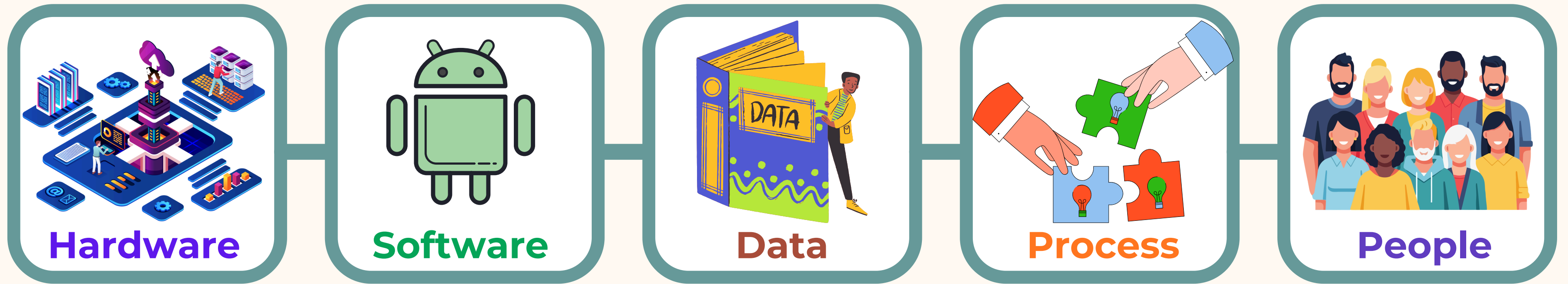
Knowledge

- Actionable decision insight
- Experience + interpretation

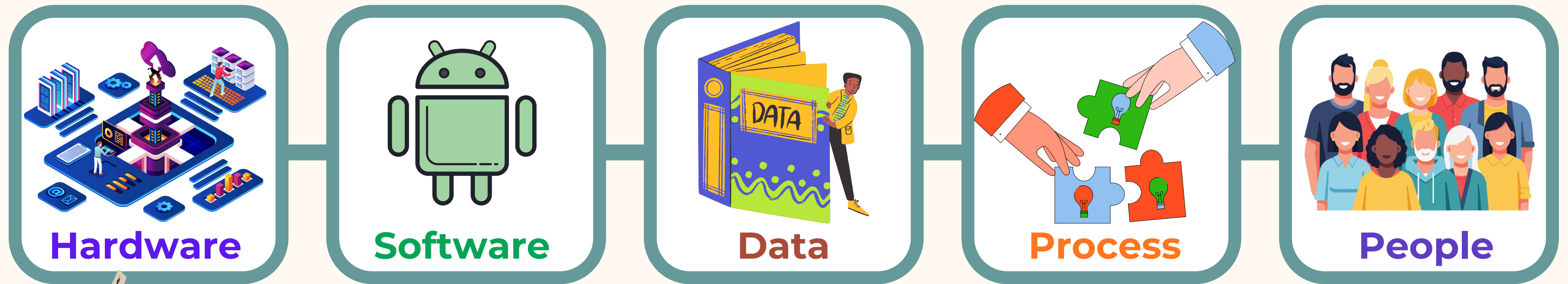
Examples:

- Sales spike due to promotional campaign

Major Components of An Information System



Major Components of An Information System



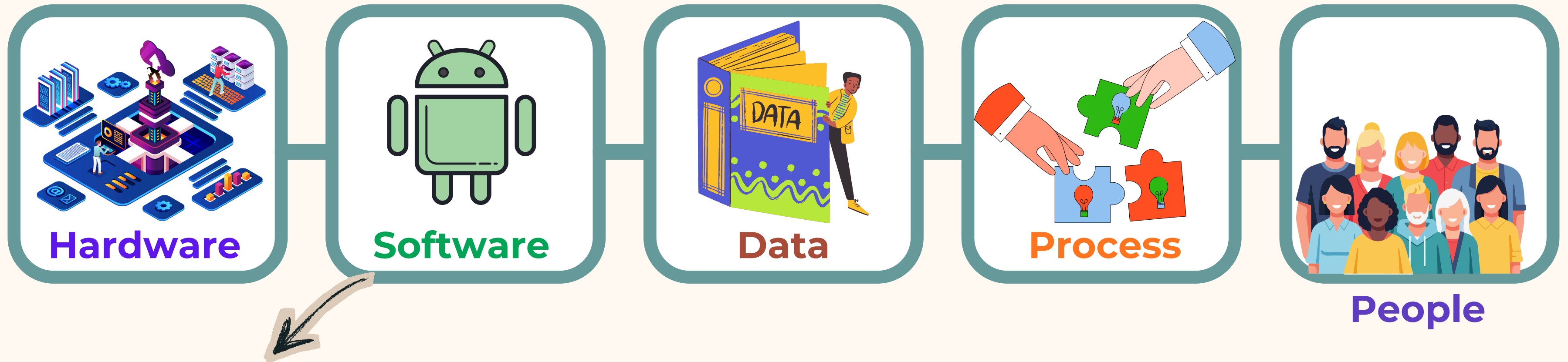
Hardware:

Physical devices used in computing.

Examples:

- computers, servers, smartphones, network equipment

Major Components of An Information System



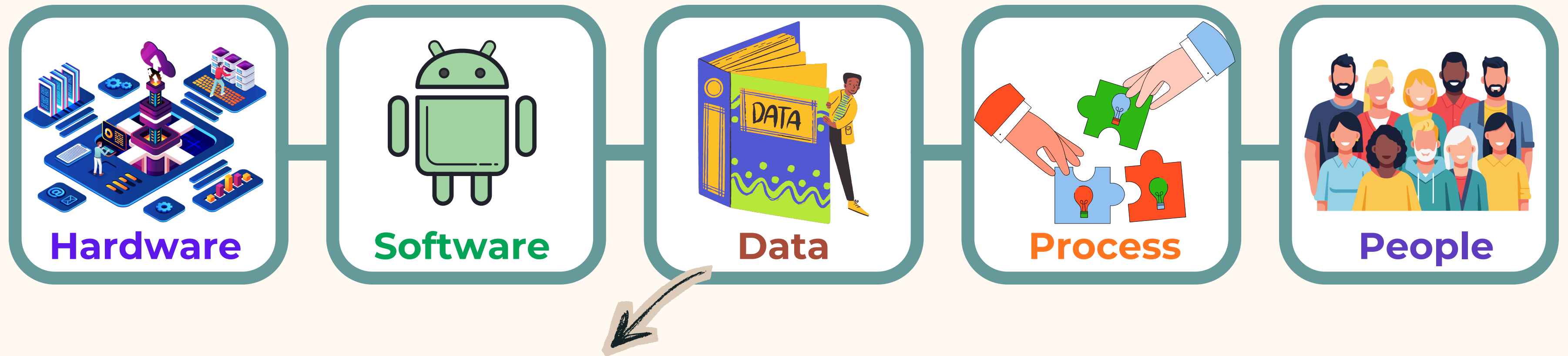
Software:

Programs that control hardware and process data.

Examples:

- accounting software, enterprise systems, mobile applications

Major Components of An Information System



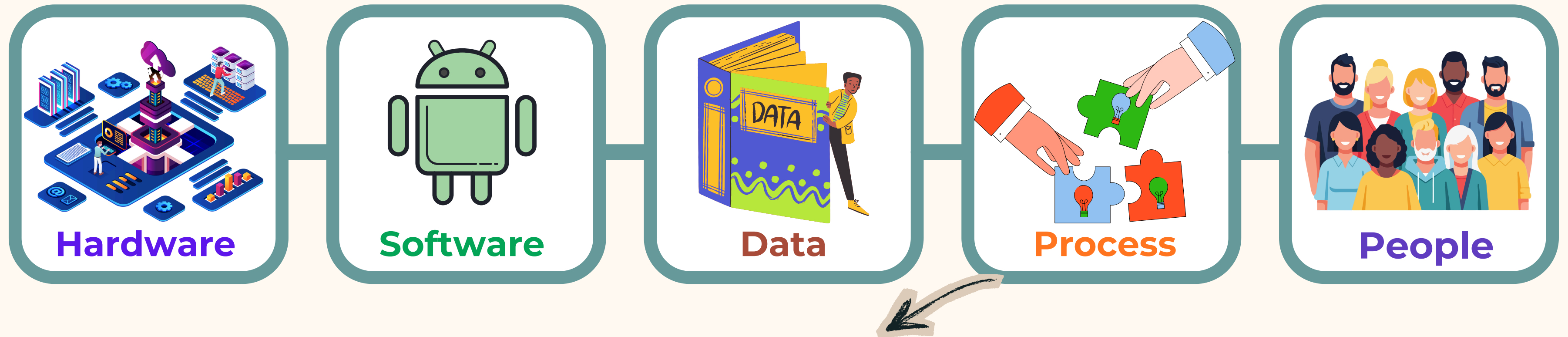
Data:

The raw material used by the system.

Examples:

- customer records, sales transactions, product inventory

Major Components of An Information System



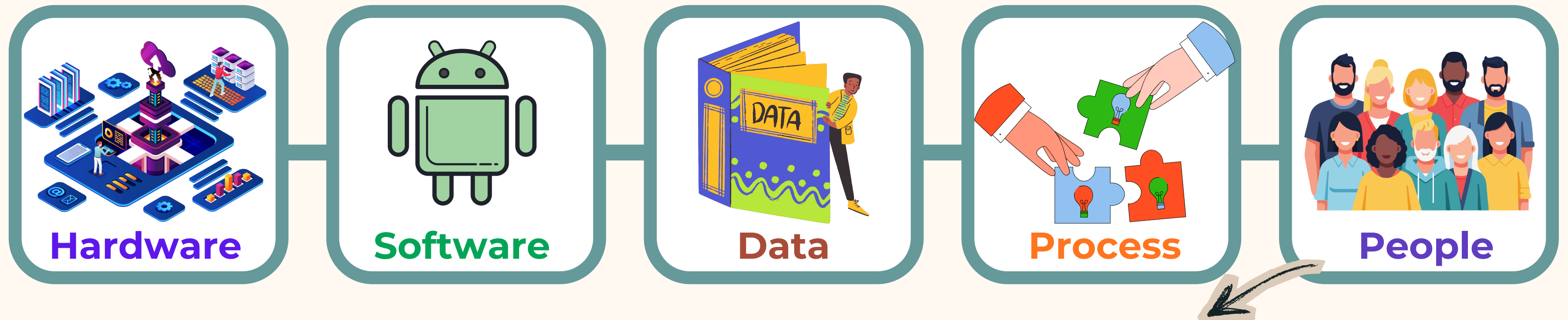
Processes:

Procedures that define how tasks are performed

Examples:

- order processing, payroll procedures, customer service workflows

Major Components of An Information System



People

People who design, manage, and use information systems.

Examples:

- managers, employees, system analysts, customers

Definition

Management Information Systems (MIS):

Management Information System is flow-processing procedures based on computer data, and integrated with other procedures in order to provide information in a timely and effective manner to support decision-making and other management functions.

BERISHA - SHAQIRI, 2014

Definition

Management Information Systems (MIS):

A type of Information System specifically designed to support managers by providing summarized, structured information for decision-making.

MIS focuses on what should be done next based on the information.

Purpose of MIS

“To Distribute Information – Making Good Decision”

The primary purpose of a management information system, or MIS, is to assist managers in making strategic, tactical and operational decisions in an efficient and productive manner.

(Reference.com, 2020)

Definition

A type of information system that provides managers with information needed for:

Planning

Decision-making

**Monitoring &
control**

Information System vs Management Information System

Information System

- Broad concept.
- Supports operations and activities.
- Used by employees, customers, and organizations.

VS

Management Information System

- Specific type of information system
- Focuses on management needs
- Supports managerial decision-making



**Every Management Information System is an Information System,
but not every Information System is a Management Information System.**

Information System Transforming Business

- Organizations use computers and information systems to **reduce costs** and **gain a competitive advantage** in the market place.
- Organizations do not invest in information systems just because they are modern. They invest because **systems help them survive and compete.**

MIS, Cost Reduction & Competitive Advantage

Organizations use MIS to:

- Reduce operational costs
- Increase efficiency
- Improve accuracy
- Respond faster to market changes

Example:

Online shopping platforms reduce:

- Staff cost
- Physical store cost
- Transaction time

MIS in Modern Digital Organizations

MIS supports modern organizations by:

- Providing real-time information
- Supporting decision-making
- Improving efficiency
- Enabling data-driven strategies





Can you think of a business that failed because it did not adapt to technology?

Example: Blockbuster

- Once the largest movie rental company with thousands of physical stores.
- Customers rented DVDs and VHS tapes from stores.
- As technology advanced, **Netflix** introduced online DVD rental and later **movie streaming**.
- **Problem:** Blockbuster relied heavily on its physical store model and was slow to invest in digital streaming technology.
- **Result:**
 - Many customers switched to streaming platforms.
 - Blockbuster eventually filed for bankruptcy in 2010.



Source: <https://cinemags.org/wp-content/uploads/2022/01/Blockbuster.jpg>



Source: <https://screencrush.com/last-blockbuster-video-store/>

We are now in **information age!**

Information Age:

The information age is the present time when computers and the Internet allow people to easily access vast amounts of information, while also creating challenges such as privacy issues and misinformation.

Reference: EBSCO <https://www.ebsco.com/research-starters/information-technology/information-age-digital-age>



What's New in MIS

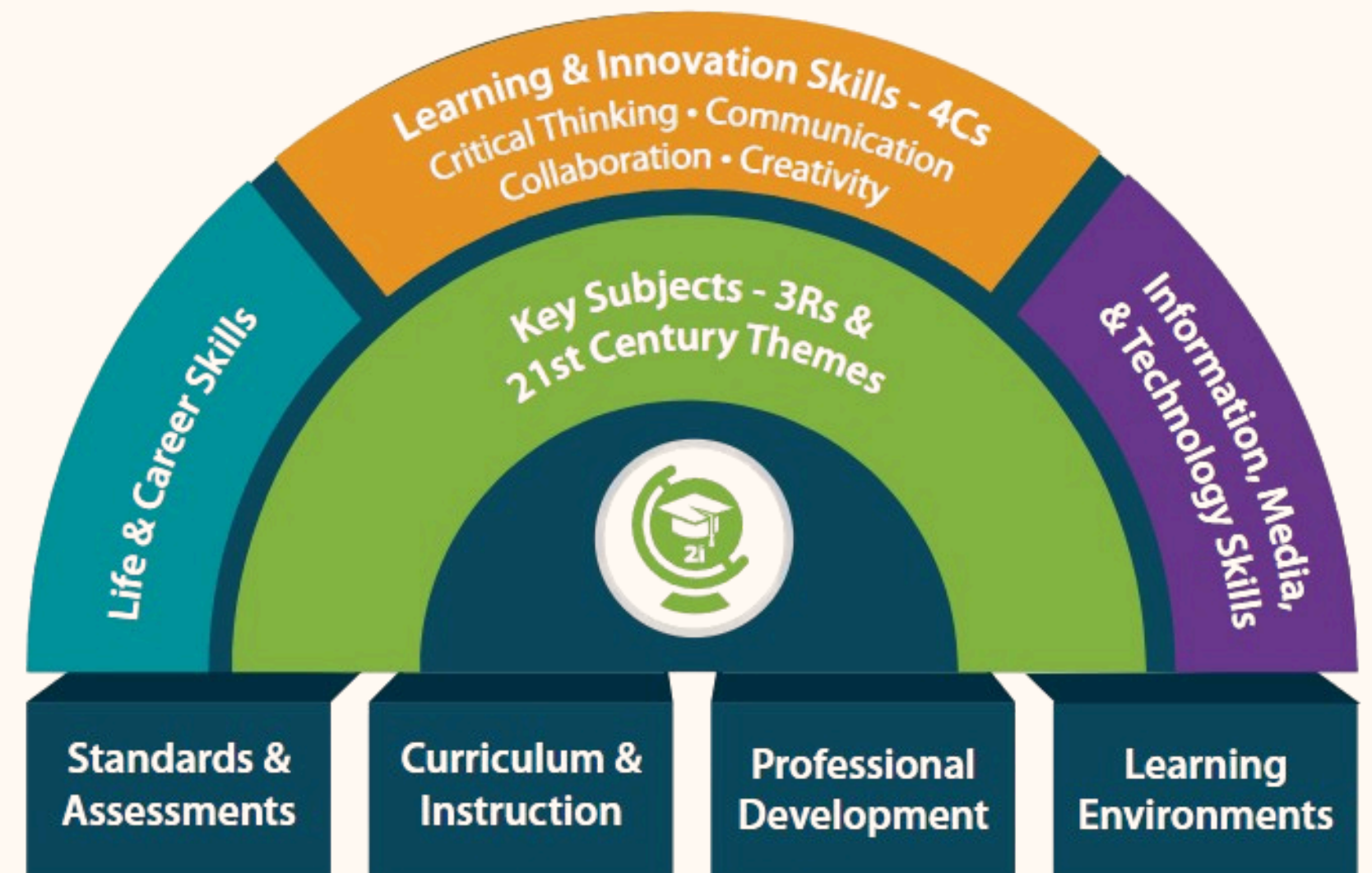
- IT Innovation
- New business model
- E-commerce Expansion
- Management Changes
- Changes in Firms and Organizations

Knowledge Needed in the 21st Century Workplace

In the 21st century, workers need two types of knowledge to be competitive in workplace:

- Computer Literacy
- Information Literacy;
 - including Business Intelligence (BI)

***Technology can give information,
but only humans can give meaning.***



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Source: Framework For 21st Century Learning https://static.battelleforkids.org/documents/p21/p21_framework_brief.pdf

What skill do I need to improve to be more competitive in the digital workplace?

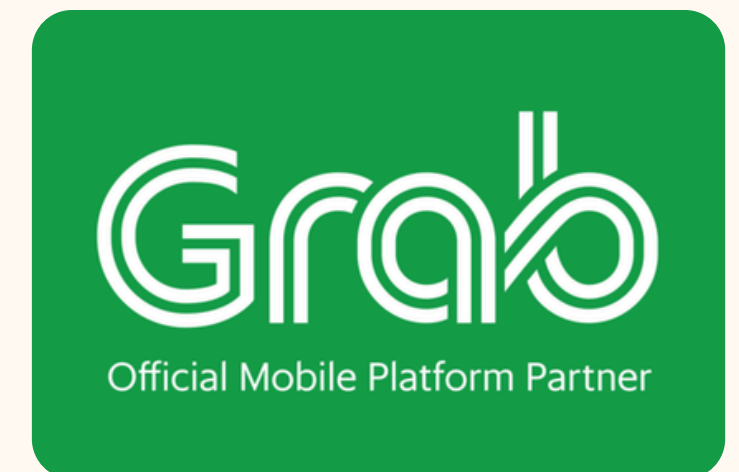


Mini Case: Ride Hailing Platform

- **A ride-hailing company collects location and trip data.**

When a customer opens the app and requests a ride, the system immediately collects several types of data:

- customer location
 - destination
 - time of request
 - payment method
 - driver availability nearby
- **The system assigns drivers automatically**
 - All ride data is stored in the company's databases.
 - **Managers analyze demand patterns**
 - peak demand hours
 - high-traffic locations
 - driver supply shortages
 - customer behavior



Mini Case: Ride Hailing Platform

- **Using this information, the company can make decisions.**

Such as:

- adjusting surge pricing
- recruiting more drivers in high-demand areas
- optimizing routes
- improving customer service.



MIS is not just technology,
MIS is about **decision**.

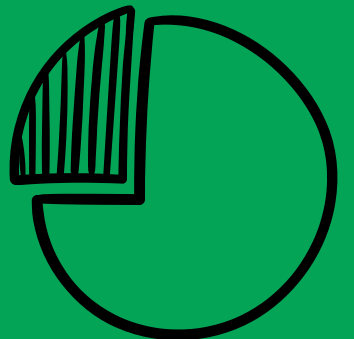
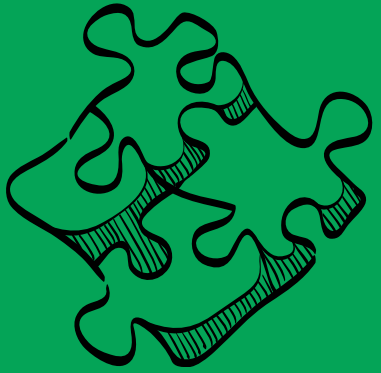
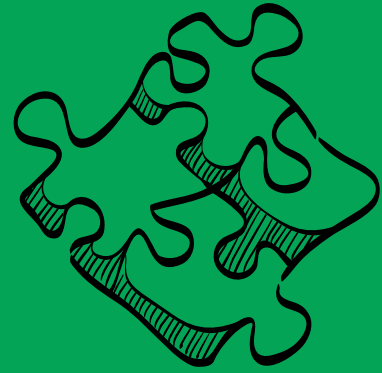
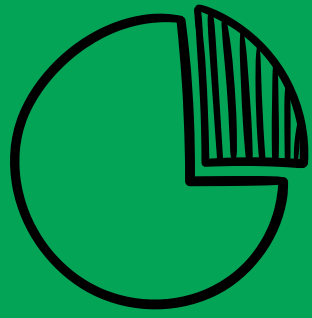
MIS supports managers, organizations, and strategy

Summary of Today's Topic:

1. We live in the **Information Age**, where digital technologies enable fast access to vast information.
2. **Information Systems (IS)** combine **technology, people, processes, and data** to collect, process, store, and distribute information.
3. **Management Information Systems (MIS)** are designed to support **managers in decision-making**.
4. Organizations use information systems to **increase efficiency, reduce costs, and gain competitive advantage**.
5. Companies that fail to adapt to technology may struggle, as seen in **Blockbuster**, while digital platforms like **Gojek and Grab** show how MIS supports modern business.
6. In the **21st-century workplace**, professionals need ICT **literacy, information literacy, and critical thinking**

What's Next:

Types of information systems used in organizations and how they support different levels of management.



Thankyou!

- Information System in 21st Century -

Reference:

- Afërdita Berisha - Shaqiri, 2014, Management Information System And Decision-Making. International Journal of Interdisciplinary Research Vol 1 Issue 4
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