

ICT solutions for businesses (Plan A 2.3)

EUCIP CORE SYLLABUS 3.1

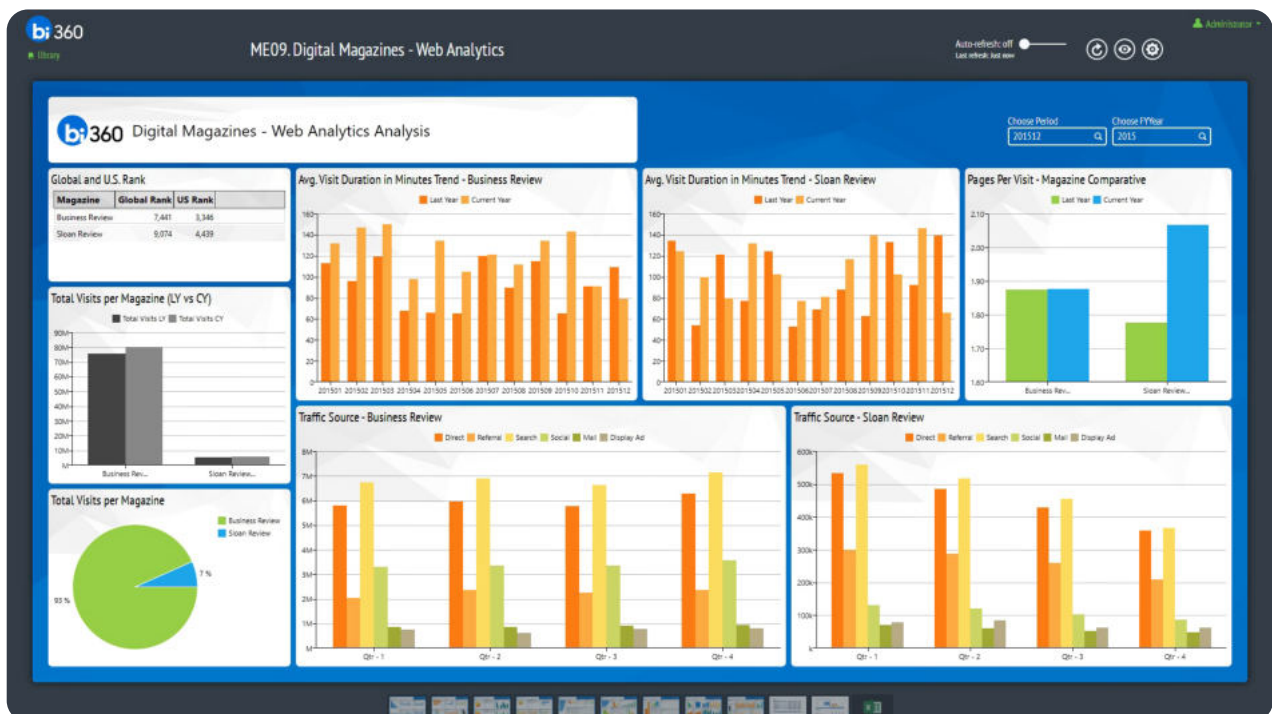
There are a series of ICT solutions for businesses which help the exchange of information and the management of transactions.

Here is a list of the most common:

- **Transaction Processing Systems (TPS)**
 - They help transactional interaction, which is the exchange of transaction entities whose basic function is that of altering the relationship between the participants. For example, one participant exchanges money for goods and becomes a customer. Transactional systems manage these changes of state, e.g. register a new customer, and record the information for storage in real time as in the case of the purchase of online tickets. Operational staff are assisted by the system when they have to capture and process transactional data such as point of sale, order entry system,

payment systems, customer relationship management, inventories, production planning and many other activities.

- **Process Control Systems** – They are used to monitor and control real time activities in factories especially when robots are used in the production cycle. These systems help to comply with government and industry regulations such as controlling gas emissions, temperatures, cooling systems, waste production, etc. They are also called **Real Time Systems** because the computer must process all data at high speed and make decisions in real time. Special devices called **Programmable Logic Controllers**, together with other devices located in strategic places inside the plant, are connected to the production network in order to control the whole production process.



An example of a dashboard

- **Distributed Control Systems (DCS)**
 - They are an implementation of the previous category and their function is to control and coordinate the production process to ensure the synchronisation of all the activities within acceptable safety limits. In the case of malfunction of a component of the system, an automatic switch will activate another component.
- **Planning Systems or Management Information Systems (MIS)** – These systems provide the information necessary to manage an organisation. Planning systems are generally used to improve communication inside the organisation or provide a system for collecting and recording information.
- **Automation Systems** – They are systems which control different industrial machines.
- **Decision Support Systems** – They are interactive and flexible computer tools to deal with semi-structured problems. For example, a basic type of software which belongs to this category is a spreadsheet. Decision Support Systems can be divided into two broad categories: Executive Information Systems (EIS) and Business Intelligence.
- **Executive Information Systems** are GUI based and help senior executives to analyse trends, compare data and monitor performance.
- **Business Intelligence** is used to collate information from different systems and includes both digital Dashboards and Balanced Scorecards. **Dashboards** transform the information into charts or maps, while **Balanced Scorecards** are used to chart the progress of strategic goals.

1 After studying the previous page, cover it and try this test. You have to choose the right answer for each question.

1. A transactional interaction...
 - a. is an online sale.
 - b. changes the relationship between participants.
 - c. stores data.
 - d. is an exchange of transactional entities.
2. These systems guarantee real time feedback.
 - a. Decision support system and transactional processing systems.
 - b. Decision support system and process control system.
 - c. Transactional processing systems and process control systems.
 - d. Managing information systems and decision support systems.
3. This system is used to control gas emissions and temperatures.
 - a. Automation System
 - b. Planning System
 - c. Transaction Processing System
 - d. Process Control System
4. This system is mainly used by senior executives.
 - a. Management Information System
 - b. Transaction Processing System
 - c. Decision Support System
 - d. Process Control System.

5. A spreadsheet is an example of...
 - a. a Planning System.
 - b. a Decision Support System.
 - c. a Transaction Processing System.
 - d. an Automation System.

6. These systems are used in industry.
 - a. Transaction Processing Systems and Process Control Systems
 - b. Process Control Systems and Automation Systems.
 - c. Process Control Systems and Planning Systems.
 - d. Decision Support Systems and Automation Systems.

7. This system aims at improving communication.
 - a. Management Systems
 - b. Transaction Processing Systems
 - c. Decision Support Systems
 - d. Process Control Systems

8. A balanced scorecard is...
 - a. the same as a dashboard.
 - b. used to chart strategic goals.
 - c. used to collate information from different sources.
 - d. used by operational personnel.