

Unit 44: Business Information Technology Systems

Unit code	A/618/4934
Unit level	5
Credit value	15

Introduction

Information is the most valuable resource that an organisation possesses. The effective gathering, protection, analysis, processing and dissemination of information is vital to the success of any organisation. As globalisation and the 24-hour economy develops and increases, organisations must ensure that their information systems are reliable, efficient and able to cope with rapid change. This unit introduces students to the importance of information to organisations. They will examine how systems can be used to support core business functions and enable organisations to be more productive and competitive in the global marketplace.

The aim of this unit is to enhance students' understanding of contemporary business information technology (IT) systems and how organisations develop and continuously review their IT strategy in order to gain and maintain competitive advantage. Students will explore the areas of business that benefit from the support of IT systems and how organisations are using IT as a driver for business improvement.

By the end of this unit, students will be able to critically analyse the application of current and future technologies and suggest best solutions for an organisation.

Learning Outcomes

By the end of this unit a student will be able to:

- LO1 Analyse the role of different IT systems in support of organisational objectives
- LO2 Compare flexible and reliable IT systems that respond to organisational requirements in an organisational context
- LO3 Evaluate IT systems that support value-added change in organisations
- LO4 Recommend practical IT systems solutions to given organisational scenarios.

Essential Content

LO1 Analyse the role of different IT systems in support of organisational objectives

IT systems:

Definition of IT systems and categories of information systems, e.g. operational, tactical and strategic information systems.

Definition of information and data, sources of information, information requirements and the needs for information at different levels within an organisation.

Hardware and software for IT systems, e.g. operating systems, computer communications and networks, distributed computing.

Emerging digital technologies and use of digital devices, including:

- cloud computing for data storage, retrieval and transmission
- mobile devices for database management, stock management, goods tracking and customer service
- distributed ledger technology (DLT), e.g. blockchain for e-commerce.
- The transformational impact of 5G networks on IT systems for faster and efficient decision making.

The role of IT systems:

The role of IT in knowledge management, data management and customer service management.

Storing information and its importance with regard to security, accuracy and relevance.

The impact of IT systems and their contribution to decision making and solving business problems.

Capabilities and limitations of IT solutions.

The impact of IT systems on the functions and structure of organisations to support meeting organisational objectives.

LO2 **Compare flexible and reliable IT systems that respond to organisational requirements within an organisational context**

Types of IT systems:

Use of different types of IT systems and their roles in relation to meeting business objectives and improving operational efficiency:

- EOPS (End of Point Sales) for transaction processing
- CRM systems for customer relationship management, e.g. Salesforce
- Database management systems, use of data dashboards, data warehouses and data discovery tools for business intelligence, e.g. Datapine, Clear Analytics and Tableau Online
- Knowledge management systems (KMS), e.g. Microsoft Teams, Alfresco, Google for streamlining employee workflows, collaboration, sharing and disseminating data and information
- Enterprise Resource Planning (ERP) cloud solutions. e.g. Oracle for integrating different technologies and systems across the business.

Types of information and data:

Layers of information systems, e.g. services, integration, security and analytics.

Corporate database management systems, data management and characteristics of data within organisations.

Processing Big Data, data warehousing and online databases.

Types and flow of data and information in an organisation.

Cybersecurity measures for data protection and confidentiality.

Reliability of IT systems and data quality:

The importance of ensuring accurate and appropriate data collection.

Quality assurance and control measures used to ensure data quality on entry and after data collection.

LO3 **Evaluate IT systems that support value-added change in organisations**

Project management methodologies and strategies to create value and competitive advantage:

Project management methodology for achieving specific goals.

Value creation strategy, competitive advantage, make or buy decisions.

Cost and benefit analysis.

IT support for value-added change:

IT for improving knowledge in activities in the value chain, increasing quality, reducing costs.

New and existing approaches to improving IT position and impact on other business areas providing value-added services, e.g. solutions for providing real-time performance data, maintenance histories, organic systems for effective data management and cybersecurity solutions.

System development tools and techniques, e.g. Agile, Rapid Application Development (RAD), Scrum and Waterfall.

LO4 **Recommend practical IT systems solutions to given organisational scenarios.**

IT systems support for problem solving:

Problem solving using decision-making models, e.g. decision support, group decision, artificial intelligence and IT systems application.

The use of IT systems to support the storing and managing of data, information sharing, communication, security and gaining a competitive edge.

The use of IT systems for a seamless customer experience management,

Monitoring and evaluating IT systems:

Effective monitoring and evaluation of IT systems and their impact on organisations.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
LO1 Analyse the role of different IT systems in support of organisational objectives		D1 Justify the role and purpose of IT systems in different functions of an organisation, and their contribution to achieving organisational objectives.
P1 Analyse the use of IT systems in different functions of an organisation. P2 Examine how IT systems contribute to the achievement of objectives in a specific organisational context.	M1 Critically analyse how IT systems are applied in the different functions of an organisation and how they work together to achieve high performance.	
LO2 Compare different flexible and reliable IT systems that respond to organisational requirements in an organisational context		D2 Critically evaluate the choices that have been made in specific organisational examples to make recommendations.
P3 Compare different ways, in an organisational context, that IT systems store and process data for knowledge management, customer relationship management, data management and communication management.	M2 Evaluate the different ways that IT systems store and process data to meet organisational objectives, giving specific organisational examples.	
LO3 Evaluate IT systems that support value-added change in organisations		D3 Provide justified recommendations for improving IT systems in the support of value-added change in an organisational context.
P4 Evaluate how IT systems can be used to support value-added change for improving business operations, performance and sustainability.	M3 Critically evaluate advantages and disadvantages of different IT systems that support value-added change in an organisational context.	

Pass	Merit	Distinction
<p>LO4 Recommend practical IT systems solutions to given organisational scenarios.</p>		<p>D4 Evaluate how IT systems solutions support added future value and improve the workplace.</p>
<p>P5 Recommend practical IT systems solutions for organisational scenarios that cover a range of common business problems experienced in the workplace.</p>	<p>M4 Recommend practical IT systems solutions, giving potential consequences and benefits of their implementation.</p>	

Recommended Resources

Textbooks

BENYON-DAVIES, P. (2019) *Business Information Systems*. 3rd Ed. London: Palgrave Macmillan.

BOCIJ, P. (2018) *Business Information Systems: Technology, Development and Management for the E-Business*. 6th Ed. London: Prentice Hall.

LAUDON, K. C. and LAUDON J. P. (2019) *Management Information Systems*. 16th Ed. Harlow: Pearson.

TURBAN, E. et al (2018) *Information Technology for Management: Advancing Sustainable, Profitable Growth*. 11th Ed. Oxford: Wiley.

Websites

www.computerweekly.com

Computer Weekly

(Articles)

www.computer.org

Institute of Electrical and Electronics Engineers (IEEE) Computer Society

Publications

Technology news

(General reference)

Links

This unit links to the following related units:

Unit 15: Operations Management

Unit 26: Principles of Operations Management

Unit 36: Procurement and Supply Chain Management

Unit 43: Business Strategy