

Management Information in Business

Module Introduction and Overview

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1 Introduction to the Module

To many, *information* has become a strategic asset that any organisation should acquire, maintain and use. Information is now seen as a key to corporate growth and sustainability. Therefore, talking about information becomes part of the day-to-day job of managers at different levels. Important investments are made to automate the management of information – in other words, to make information electronic and facilitate its flow, exchange and storage. With information, employees are continuously encouraged to discover and seize opportunities to attract clients, increase sales and maintain a company's strategic position. Nowadays it is also customers who demand access to electronic information, in their computers, tablets or mobile phones.

The use of information requires careful thinking about how it can provide value to businesses and customers. Many investments can easily become a liability if they are not made with care and sensitivity, and most importantly by considering the possibilities and limitations that information can offer together with the abilities of managers and customers to make strategic use of it in their daily work.

This module therefore seeks to address three issues:

- the great potential of information and communication technologies (ICTs) to support the management of information and thus contribute to organisational transformation, improvement and sustained success
- the reasons behind the widespread failure of information-based systems and technologies to achieve that potential
- the possibilities of, and constraints on, closing the gap between what information and technologies offer together, and what they can actually deliver to organisations.

This module is directed to managers who are responsible for or taking part in projects that bring competitive advantages through the use of information and associated technologies. We will often term them as 'information managers'. Within this group we also include managers who perform activities of strategic planning, information-systems design and implementation, the contracting of information and technology services from third parties or people who lead projects to develop and implement software applications.

The module objectives are to:

- explain the latest developments in information and communication technologies (ICTs) and information systems (IS)
- analyse why computerised information systems fail so frequently with reference to the role of information, knowledge, decision making and types of IS

- clarify the basic features of different types of software applications and related ICTs that support information systems, as well as their capabilities, benefits and costs (financial and non-financial)
- demonstrate different ways in which information systems and the software applications that compose them can be better planned, developed and maintained
- offer systems thinking as a way to bring together different issues (technical and non-technical) to be considered in the adequate planning, development and implementation of IS.

In covering these components, the following central messages appear throughout the module units:

- Information can support and enhance corporate strategy if a vision of an organisation as an e-business or networked organisation is continuously informing any technological investment.
- Technology is not enough. Management of information requires an information system (IS) – a set of processes, people and technologies which together support organisational activity through the provision of electronic information.
- Introducing a new IS requires a degree of organisational change, which could bring more benefits to the organisation but may also mean an increased risk of system and technology failure.
- Following from the above, not every organisation should undertake radical changes; this depends on a number of aspects that make an organisation what it is and what people (customers included) value about it.
- Therefore, successful management of information and information systems requires continuous alignment between strategies, people who are to manage information systems, and the technologies that allow for the electronic flow and storage of information. Information managers need to be sensitive to organisational, cultural and personal aspects that will inevitably influence how information is used by people.
- Systems thinking can help information managers continuously align their ideas with the possibilities given by ICTs and the organisational requirements to offer value through the provision of electronic information.

2 The Module Author

Dr José-Rodrigo Córdoba-Pachón (MA, PhD, MBCS) is Senior Lecturer in Information Technology at Royal Holloway, University of London. His research interests are in applied systems thinking related to information systems problems in organisations. He has an MA (with Distinction) and a PhD in Management from the University of Hull in the UK, and a computer science undergraduate engineering degree from Universidad de los Andes

in Bogotá, Colombia. Prior to his studies in the UK, José-Rodrigo worked as a software programmer, business analyst and project manager for Fundación Social, a financial group in Colombia. At the Royal Holloway he lectures on a number of modules on information technology management at undergraduate and postgraduate levels. His latest books include *Systems Practice in the Information Society* (Routledge) and *Systems Thinking and E-participation: ICT in the Governance of Society* (co-edited with Alejandro Ochoa-Arias; IGI Global).

3 Study Resources

This study guide is your main learning resource for the module as it directs your study through eight study units. Each unit has recommended reading either from the key texts or from supplementary readings.



Key texts

In addition to the study guide, you will be assigned chapters in the following key texts.

Chaffey D (2015) *Digital Business and E-Commerce Management*. 6th Edition. Pearson.

Córdoba-Pachón J-R (2010) *Systems Practice in the Information Society*. Routledge.

Digital Business and E-Commerce Management is authored by Dave Chaffey, a leading practitioner in the field. It is a practical text which provides an overview of how organisations can enter the 'online' world and make the best of it. Its coverage is extensive, though in some chapters too technical or too commercial (marketing oriented). The key message of the book is that organisations should become digital businesses (sometimes referred to as 'e-businesses'), and in doing so they need to carefully plan their projects or initiatives. We will focus on the strategic aspects of a digital business and how they can help you and your organisation adequately plan and implement initiatives to use information to your advantage. The book has three main parts: fundamentals, strategy and applications, and implementation. We will cover several chapters in each part. We will leave out material which is too oriented to marketing or electronic commerce or that is too technical. *So please bear in mind that we will not cover all the content from the chapters.*

Systems Practice in the Information Society is written by José-Rodrigo Córdoba-Pachón (module author). The book provides conceptual foundations of systems thinking for the practice of management in the context of the information society. We will use this book to look at how systems thinking can help you become more aware of the diversity of issues (technical and non-technical) that need to be addressed if Information Systems are to deliver value to your organisation. Using ideas of systems-thinking, the book offers several examples of human-centred information systems planning, design and

evaluation. This book aims to complement rather than replace existing knowledge to plan and implement information systems in organisations.

While the study guide will guide you to the specific pages in each key text that are relevant to the unit's topic, you are strongly encouraged to read beyond the required pages and explore the key texts in detail.

Module readings

Module readings comprise a mixture of case studies and analyses of computerised information systems in public sector organisations from around the world. Through them you will learn about a wide variety of experiences and research on public sector information that you can use in your assignments and exam.

4 Module Overview

The module consists of eight 'units' of work, each with its own core text, set readings and exercises:

Unit 1 An Introduction to Information Systems

- 1.1 Information in Organisations
- 1.2 Defining Information Systems – The Process Model
- 1.3 E-Commerce and Digital Business
- 1.4 Systems and Systems Thinking
- 1.5 Analysing Information Systems' Case Studies
- 1.6 Conclusion

Unit 2 Information and Communication Technologies in the Network Society Era

- 2.1 Introduction
- 2.2 The Network Society
- 2.3 Communication and Networks
- 2.4 Software Applications
- 2.5 Conclusion

Unit 3 The Digital Business Environment and Digital Business Strategies

- 3.1 Introduction
- 3.2 The Art of War
- 3.3 Planning for a Digital Business
- 3.4 Environmental Scanning
- 3.5 Conclusion

Unit 4 People and Information in Networked Organisations

- 4.1 Introduction
- 4.2 Knowledge at Work
- 4.3 Defining Organisations
- 4.4 Management Roles and Management Information

- 4.5 The Role of People in Information Systems
- 4.6 The Impact of Computerised Information Systems on Organisations
- 4.7 Managing Change in Organisations
- 4.8 Conclusion

Unit 5 Types of Information Systems

- 5.1 Introduction
- 5.2 Types of Information Systems
- 5.3 Basic Data-Gathering Systems (BDS)
- 5.4 Information Systems in Action
- 5.5 Management Information Systems (MIS)
- 5.6 Decision Support Systems (DSS)
- 5.7 Executive Information Systems (EIS)
- 5.8 Enterprise Resource Planning Systems (ERP)
- 5.9 The Rise of Social Media
- 5.10 Conclusion

Unit 6 Planning Information Systems

- 6.1 Introduction
- 6.2 Revisiting the Information Society
- 6.3 Managing Transformations
- 6.4 Engagements
- 6.5 Unintended Consequences
- 6.6 A Final Consideration
- 6.7 Conclusion

Unit 7 Information Systems Development

- 7.1 Introduction
- 7.2 IS Planning Revisited
- 7.3 Types of IS Development
- 7.4 The System Development Lifecycle
- 7.5 Information Systems Projects
- 7.6 Systems Analysis
- 7.7 System Design
- 7.8 System Implementation
- 7.9 System Support
- 7.10 Conclusion

Unit 8 E-Procurement and Customer Relationship Management (CRM)

- 8.1 Introduction
- 8.2 Revisiting the Supply and Sell Sides of the Networked Organisation
- 8.3 Systemic Thinking in the Supply Chain
- 8.4 Supply-Side Strategies – E-Procurement
- 8.5 Approaches to E-Procurement
- 8.6 Sell-Side Applications – Customer Relationship Management (CRM)
- 8.7 Online CRM
- 8.8 Social Media and CRM Strategy
- 8.9 Failed CRM
- 8.10 Conclusion

5 Learning Outcomes

When you have completed all your work on this module, you will be able to:

- describe, define and handle confidently at a managerial level the latest information technology- and information systems-related terms
- analyse actual and potential roles of information systems within and outside your organisation
- diagnose the causes of computerised information systems success or failure
- make an effective contribution towards effective development and management of information systems in your workplace.