Chapter MP3 script 30

The Role of Information Technology

In this recording we summarise the content of chapter 30 The Role of Information Technology. Studying this chapter should help you differentiate between the concepts of data, information and knowledge resources; Identify the role of information resources within the organization; discuss how information resources can be used to deliver value and help the organization compete; explain the roles of technology, people, structure, culture and processes in knowledge management; identify the various types of information system; identify ways the use of the Internet and Internet (Net) technologies can help the organization compete, create wealth and add value; explain what is meant by e-commerce and e-business; .

Introducing the chapter, the authors start with 1. Quality, as well as the management functions of coordination and control (chapter 28), decision-making (chapter 19), planning (chapter 16) and performance management (chapter 18), indeed all the major business functions (especially marketing, operations and finance to be discussed in part 3) and associated processes benefit from information systems (IS) and information technology (IT). Like quality, IS/IT is omnipresent and enables strategy, tactics and operations. It is extremely important, enabling organisations to be more effective and efficient, to differentiate products and services whilst reducing costs. It therefore helps them to compete and offer value for money whilst enhancing customer satisfaction. Through the use of IS/IT, companies can reach and break into markets world-wide, operate 24/7, enable and empower employees, share knowledge, integrate work activities, improve the quality of working life, enable time compression and time-based advantages, improve communication and enable team work – especially over time and space.
2. Clearly then, IT matters to the organisation as pointed out by Reynolds (2010). He believes that future business managers need to understand how information technology can be applied to improve the organisation. Similarly Cetindamar, Phaal and Probert (2010), argue that technology is a fundamental part of every organisation: when managed correctly it can deliver a decisive advantage over competitors. The authors focus in particular on developing operational efficiency and productivity – a matter we address in chapter 41. A goal of today's organization is having "the right information, in the right place, in the right format, at the right time – at the right cost". Additionally, exploiting an organisation's proprietary information as a strategic asset remains a significant contemporary challenge.

3. In this chapter we focus on information system resources (hardware, software, communication technologies, data and people) and information resources (data, information and knowledge). Systems theory (see chapter 9) is used to unite such resources. We will consider the hardware, software and processes and communication technologies that enable the capture of such resources, transfer and use in transformational activities. Various IT resources considered in this part of the book enable the free flow of information throughout the organisation in support of commerce, planning, decision-making, control and coordination. Finally we consider the role of Internet technologies as the "glue" and "conduit" for bundling resources together, making them available for work and value adding activities. We will argue that information system resources are strategically important resources, enabling and informing strategy, creating capabilities and competences when bundled with other resources..

The key concepts discussed within this chapter are:
Business information system - specific information system used to support business; Digital organization - an Organization where nearly all significant business processes and relationships with customers, suppliers, and employees are digitally enabled and key corporate assets are managed through digital means; Enterprise system - An information system that integrates information from all functional areas of an organization with the goal of providing a more whole or complete information resource for the organization; Information - data that has been processed (sorted, summarised, manipulated, filtered) so that it is meaningful to people; information system - A set of people, procedures, and resources that collects, transforms, and disseminates information in an organization - accepts data resources as input and processes them into information products as

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output.; Information technology - the hardware and software that are used to store, retrieve, and manipulate information; .

Other terms discussed include:
Customer relationship management (CRM); Data; Database; E-business; E-commerce; Functional business system; Internet; Intranet; Knowledge; Telecommunications; .

Summarising and concluding, the author(s) make the following comments - 36. Information resources include data, information, and knowledge. Data refers to raw facts and Information is the summarization of data. Technology and information/ knowledge represent 'hard' and 'soft' resources available to the organization. Unlike most resources which deplete when used, information and knowledge can be shared, and actually grow through application. It is now widely accepted that winning strategies are more often grounded in the accumulation and creative exploitation of intangibles that are more difficult to replicate. Computer-based Information Systems are used to support all roles at all levels of the organisation. They improve information access and (in the case of integrated systems) the flow of information within the whole organisation. Traditionally, the business functions acquired and developed computer-based Information Systems to help them meet their localised goals. A functional business information system is used to support a specific organisational activity. Businesses compete in two worlds: a physical and a virtual world. The latter has given rise to the world of electronic commerce (EC) and e-business (EB), a new focus of value creation. Much of the value created by e-business is due to the more effective use of information. Managers must now focus upon how their companies create value in both worlds alike. The effectiveness and efficiency of organizational information systems can be enhanced significantly by a move to Internet technologies. Internet technologies enable EC and EB. The Web provides the connective tissue for information flow within and between organizations anytime- anyplace. Interoperability of Web services permits the creation of enterprise-wide information-system architectures linking all the corporate core business systems to the firm's Web site. Information systems extend far beyond the boundaries of the organization to encompass vendors, customers and even competitors. The Internet has both created new industries and enabled the reconfiguration of existing industries. Whilst the Internet presents new opportunities it also intensifies competition. The Internet is an enabling technology - a powerful set of tools which rarely offers a direct competitive advantage. Internet technology, itself is not as a source of advantage because it is readily available to all. Competitive advantages arise from traditional strengths fortified through Internet technology - by tying a company's activities together in a more distinctive system..

We have now reached the end of the chapter 'The Role of Information Technology'.

There are a number of references for this chapter where further reading opportunities are identified for you.
Additionally, there are questions or activities to help develop and test your understanding of this chapter