

Tesco: use of IT and information systems - Introduction to MIS

Case duration (Min): **45-60**

Management Information Systems (MIS)

Introduction to MIS**Business functions and supply chains****Worldwide****Case summary:**

Students should determine what constitutes IT and IS (their different forms and categories); who and how they can help organizations (different benefits at the strategic - competitive advantage and enabling goal attainment, tactical and operational levels)

The case investigates Tesco's use of IT/IS

Learning objectives:

Identify the role of information resources within the organization

Case problem:

How can technology (IT) as a part of the broader information system be used to help organizations?

Grocery Stores

Company

Tesco

www.tesco.com

Founded in 1919 in London, Tesco plc is a British-based international grocery and general merchandising retail chain. With revenues of £60 billion (2009), it is the largest British retailer by both global sales and domestic market share, with profits exceeding £3 billion. With almost 500,000 Employees (2009) and over 4000 stores Tesco is currently the third largest global retailer. Originally specialising in food and drink, it has diversified into areas such as clothing, consumer electronics, financial services, telecoms; home, health and car insurance, Internet services, and software.

Tesco's UK stores are divided into six formats, differentiated by size and the range of products sold: Tesco Extra stores are larger, mainly out-of-town hypermarkets that stock nearly all of Tesco's product ranges; Tesco superstores are standard large supermarkets, stocking groceries and a much smaller range of non-food goods than Extra stores; Tesco Metro stores are sized between Tesco superstores and Tesco Express stores. They are mainly located in city centres and on the high streets of small towns; Tesco Express stores are neighbourhood convenience shops, stocking mainly food; One Stop stores are the only category which does not include the word Tesco in its name. These are the very smallest stores. In addition, Tesco has a banking arm called Tesco Personal Finance; operates as an ISP, mobile phone, home phone and VoIP businesses; sells petrol and diesel at their own petrol stations; and offers a loyalty card-scheme to customers. Customers can collect one Clubcard point for every £1 they spend in a Tesco store, Tesco Petrol or Tesco.com. Tesco has operated on the internet since 1994 and was the first retailer in the world to offer a robust home shopping service in 1996. Tesco.com was formally launched in 2000.

In common with most other large retailers, Tesco draws goods from suppliers into regional distribution centres, for preparation and onward delivery to stores. Tesco is extending this logistic practice to cover collection from suppliers (factory gate pricing) and the input to suppliers, in a drive to reduce costs and improve reliability. Radio-frequency identification (RFID) technology is taking an increasing role in the distribution process.

Tesco's international expansion strategy has responded to the need to be sensitive to local expectations in other countries by entering into joint ventures with local partners. Tesco operates in the following markets: China, Czech Republic, Hungary, India, Japan, Malaysia, Poland, Republic of Ireland, Slovakia, South Korea, Thailand, Turkey, UK, and USA.

The business is dependent on efficient Information Technology (IT) systems. Any significant failure in the IT processes of their retail operations (e.g. barcode scanning or supply chain logistics) impacts ability to trade. Tesco recognise the essential role that IT plays across the Group in allowing efficient trade and achievement of commercial advantage through implementing IT innovations which improve the shopping trip for customers and make life easier for employees. The company has extensive controls in place to maintain the integrity and efficiency of IT infrastructure and share world-class systems across International operations to ensure consistency of delivery.

Pre class activities...

- 1 In groups or individually, research Tesco: its strategy, key facts, operations; supply chain; products and services and infrastructure in order to gain a high level understanding of the company. You should bring your research to class and be prepared to present or discuss your findings. **>60**

First, if you are taking a taught management course then consult with your tutor and ensure that the case has not been scheduled into a teaching class or tutorial. If it has not:

1. Play/ read the media associated with the case. You may need to access the Internet and enter a URL to locate any video clips.
2. Attempt the Case study questions.

Consider attempting the case study as a group exercise; you could form a study group with fellow students.

3. Check the suggested answers - remember these are suggestions only and there are often many possible answers. Discuss questions and answers with other students.

4. If you feel your answer(s) were weak then consider reading the relevant suggested readings again (also see the case study suggested references).

Title/ Media type

URL/ Media description

Tesco CIO Colin Cobain

<http://videos.silicon.com/60416901.htm>

Film

In this exclusive interview (2007) Tesco's group IT Director, Colin Cobain, talks about the supermarket giant's move to standard global systems and processes, reveals plans to cut IT energy consumption and gives an update on trials of radio frequency ID tags to track goods through the supply chain.

A variety of IS/IT concepts and themes are discussed in the video: Information systems and technology supporting the company strategy; delivering business benefits, enabling e-commerce; making the supply chain more efficient; storing data; managing the IT team and using systems in a responsible way.

NOTES:

Case study questions...

Action	Pre/During/After class
1 TESCO - WHAT KIND OF BUSINESS IS IT AND WHY IS IT PERFORMING SO WELL? TESCO - what kind of business is it and why is it performing so well?	During
2 TESCO: USE OF IT AND INFORMATION SYSTEMS In groups, brainstorm as many examples of how IT and IS may be used to help the company operate and achieve its objectives.	During
3 CHALLENGES Discuss the challenges faced by the CIO - which are the most important and why?	During
4 SYSTEM USERS Identify the users of TESCO IS and IT - prepare a table with the first column showing the technology or system used and then create a column for each stakeholder and indicate whether a stakeholder uses a particular system/ technology by placing a tick in the relevant part of the table	During
5 MIS What is an MIS? You should define MIS and discuss the component parts. Use the five component framework to describe/ better understand a selection of systems identified earlier.	During
6 IS/ MIS PURPOSE Summarise the main purposes of information systems in organizations	During
7 EVALUATE TESCO'S' SYSTEMS Which of Tesco's systems are most likely to confer a competitive advantage for the company?	During

Answers...

INFORMATION SYSTEM

(1) A set of people, procedures, and resources that collects, transforms, and disseminates information in an organization. (2) A system that accepts data resources as input and processes them into information products as output.

INFORMATION TECHNOLOGY

Extends beyond computing to include telecommunications, office equipment and more automated procedures of work. The impact of information technology will involve new patterns of work organisation.

MANAGEMENT INFORMATION SYSTEM (MIS)

A computer based information system used for planning, control, decision-making or problem-solving.

PROCESS

set of interrelated or interacting activities which transforms inputs into outputs

SYSTEM

A set of elements that acts as a single, goal-oriented entity.

SUPPLY CHAIN

All of the activities related to the acceptance of an order from a customer and its fulfilment. In its extended format, it also includes connections with suppliers, customers, and other business partners

BUSINESS FUNCTION

A related group of business processes that support some aspects of the mission of an enterprise.

INFORMATION

Data that have been shaped into a form that is meaningful and useful to human beings.

Question/ Answer

1 TESCO - what kind of business is it and why is it performing so well?

TESCO - what kind of business is it and why is it performing so well?

General discussion (see company information associated with this handout)

2 TESCO: use of IT and information systems

In groups, brainstorm as many examples of how IT and IS may be used to help the company operate and achieve its objectives.

Students should be encouraged to group examples according to whether they are operational, tactical or strategic, used by employees, customers, managers or supply chain partners.

A non-exhaustive list may include: RFID systems , CCTV surveillance; order-processing systems, scheduling systems, hand-held devices , Financials, HR software; communications technology to connect stores; e-commerce and e-business systems; supply chain systems, information systems (IS) used in Tesco to support their loyalty card, car insurance policy quoting system, Tesco has used electronic data interchange with its major suppliers, chip and PIN system, Tesco Personal Finance (TPF) for loan application handling, food labelling system , workforce scheduling system; computer systems are used in a variety of ways in the modern, large supermarket, from stock control to maintaining temperatures in fridges and freezers; computers are used to control the stock and are connected to the checkouts, Located at each checkout is an ELECTRONIC POINT OF SALE (EPOS) till. This EPOS till comprises a keyboard, a digital display, a scanner which reads bar codes, a set of scales, a printer, a credit / debit card reader and a till drawer. Each till also has its own base to which all of the above is attached. It is the base unit which is connected by cables to the branch computer in the supermarket's system office. A branch computer sends the details of every individual sale to the main computer at the Head Office. Stores are also big users of email. The company also uses computers for staff recruitment. Potential applicants complete an application form over the Internet which is vetted by Head Office. Other systems include Pay@Pump petrol system; CRM etc.

3 Challenges

Discuss the challenges faced by the CIO - which are the most important and why?

Standardisation and integration (Tesco's global standardisation strategy began five years ago) - paves way for global expansion; Tesco plans to centralise IT applications across its stores worldwide. Tesco plans to centralise its Oracle Financials software, used for invoicing, its PeopleSoft HR software, and Terradata Management Information Systems, used for measuring budgeting targets.

Maintaining the confidentiality, integrity and availability of systems and data

Ensuring systems are used ethically and responsibly

Ensuring the systems strategy is aligned with the corporate and other business strategies

Recruiting and maintaining the IT/IS team and systems

Aligning systems with processes

Managing systems in a cost effective manner

4 System users

Identify the users of TESCO IS and IT - prepare a table with the first column showing the technology or system used and then create a column for each stakeholder and indicate whether a stakeholder uses a particular system/ technology by placing a tick in the relevant part of the table

Identify (brainstorm) the users of TESCO IS and IT - prepare a table with the first column showing the technology or system used and then create a column for each stakeholder and indicate whether a stakeholder uses a particular system/ technology by placing a cross in the relevant part of the table

For example:

	CUSTOMER / PROSPECT	SUPPLIER	OPERATIONAL EMPLOYEE	MANAGER
HR SOFTWARE			X	X
SUPPLY CHAIN SYSTEMS		X	X	X
LOYALTY CARD	X		X	X
INSURANCE POLICY QUOTING SYSTEM	X		X	X

PORTER AND MILLAR'S FIVE FORCES MODEL.

Porter and Millar's five forces model is for analysing the different competitive forces which impact on an organisation. The five forces are: rivalry between existing competitors, threat of new entrants, threat of substitutes, the power of buyers and the power of suppliers.

5 MIS

What is an MIS? You should define MIS and discuss the component parts.

Use the five component framework to describe/ better understand a selection of systems identified earlier.

"A computer based information system used for planning, control, decision-making or problem-solving."

The component parts are those of an IS: hardware, Software (programs), Data, Procedures and People

6 IS/ MIS Purpose

Summarise the main purposes of information systems in organizations

To gain competitive advantage (there may be a discussion about sustainable advantages)

To solve problems (forecasting, planning, control, coordination)

To support decision making

7 Evaluate Tesco's systems

Which of Tesco's systems are most likely to confer a competitive advantage for the company?

Advantages are normally evaluated in terms of whether they reduce costs, differentiate the product or service to give additional customer benefits or enable the company to focus on particular customer needs. Advantages are typically evaluated against the companies goals and helping with their attainment.

Competitive advantage may also be considered in relation to Porter's five forces - for example, raising barriers to entry etc

Case study references

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Cole, G A. and Kelly, P P. (2011) 'Management Theory and Practice', Ed. 7. Cengage EMEA.

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Morley, D. and Parker, C. (2004) 'Understanding Computers: Today and Tomorrow', Ed. 10. Thomson Course Technology.

Porter, M E. and Millar, V E. (1985) 'How information gives you a competitive advantage.', Harvard Business Review, July-August 63, p. 149 - 174.