• Learning Objectives

– On completion of this unit students should:

– Have an awareness and understanding of the nature, role and contribution of information, information systems (IS), and information technology (IT) in business environment.

– Appreciate and understand major contemporary issues in the management of the IS/IT function.

– Have awareness of the role of IS/IT in the creation of long-term business strategy.

– Appreciate the importance and implications of the Internet and Electronic Commerce in contemporary organisations.

• Method of teaching

• The subject will comprise 13 x 3-hour classes held in a three hour block during each week throughout the teaching semester.

• A blend of formal lectures, case learning, group based exercises and general class discussions.

• On occasions, guest lecturers may be used.

• Methods of Assessment

– The weighting for each piece of assessed work are:

  1. Web sites evaluation (individual assignment) 5%
  2. Written report on web sites evaluation and comparison 5%
  3. Case study – syndicate presentation 1 5%
  4. Case study – syndicate presentation 2 5%
  5. Syndicate Project – written group report 20%
  6. Presentation to be given towards the end of the semester 10%
  7. End-of-semester examination 50%

100%

• Web sites evaluation (individual assignment)

• Students are required to evaluate and compare web sites of 2 well-known companies/organisations in the same industry (banks, car manufacturers, wineries, wholesale/retail, airlines, banks, education, travel agents, wineries, etc.) using a tool MCIL (Management Center International Ltd.) instrument.
• Before the evaluation of the web sites students are required to record their opinion about the image of the companies whose web sites they will be evaluating, on a scale from 1 to 10. One indicates extremely poor image and 10 indicates extremely good image. Students are also required to record their opinion about the image of the companies, after evaluating their web sites, again on a scale from 1 to 10.

• Written report should compare the effectiveness of web sites, and highlight the areas that require attention for each web site.

• Check list with the recorded scores for each evaluating criteria to be attached as an appendix. Report should be kept brief (no more than 2 pages).

• Case study (syndicate-based)

• Students will be presented with a case study of a major information systems failure that raises questions concerning IT project management, information systems planning, and IT risk management.

• Working in syndicates of 5 or 6, students will be asked to represent one of the parties involved in the development of the system, and to develop an analysis of the failure from the perspective of that role. There are three roles in the case study, and there will be two groups of three syndicates in each class.

• Syndicates will be required to make two presentations, one in week 5 and the other in week 6. In the first presentation, students will present their analysis of the case from the selected perspective. In the subsequent presentation (week 6), syndicates will present a revised analysis, taking into account, and responding to where appropriate, the presentations by the two other syndicates in their group.

• Each presentation will be scheduled for a maximum of 10 minutes, with 5 minutes for questions. Each presentation is worth 5 marks.
• Syndicate based assignment
  • The major assignment task in this semester will be to investigate and then compare the literature analysis on a topic, with the current practices.
  • In the first instance, working in syndicates of five or six, students will research literature about challenges, critical success factors and benefits of electronic commerce. Literature should include at least 20 references, 7 of which should be articles from refereed journals/conferences.

• In the second instance, each syndicate will have to conduct interviews with a person sufficiently senior in the organisation to be able to comment on many of the issues in a business/commerce area in a selected organisation, as well as to perform document analysis (if available).
  • A transcribed copy of the interview must be submitted along with the paper.
  • Note: We cannot help find access to an organisation for a syndicate. It is the responsibility of the syndicate to find access.

• You should compare the literature analysis with the current practice. Does current practice match theory? Is the ‘real world’ ahead or behind what the literature tells us?

• Write a paper (up to 2500 words). You will need to make sure that the current practice section refers back to the literature as this would show how you match literature to the real world. The overall requirements are:

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<tr>
<th>Words</th>
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<tbody>
<tr>
<td>Abstract</td>
</tr>
<tr>
<td>Introduction/ background</td>
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<tr>
<td>Literature review</td>
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<tr>
<td>Current practice</td>
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<tr>
<td>Comparison of literature and current practices</td>
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<tr>
<td>Conclusion</td>
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<td>References</td>
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• Each syndicate is to present the summary of the paper in a short presentation (20 minutes), followed by 5 minutes for questions and answers.

• On the day of presentation, syndicate members will need to provide their classmates and the lecturer a handout of their slide presentation.

• If your syndicate is unable to obtain access to an organization, you are to prepare, on a group basis, a detailed proposal for funding, developing and successfully marketing the IT-based product or service.

• Note that your prospective venture capitalist is much more concerned with the return on their capital invested than the ‘cleverness’ of your technology or the ‘brilliance’ of your product/service concept.
• Consequently, you should structure the style and presentation of your proposal in the manner that you regard as being most conducive to ensuring it achieves its intended aim.

• This option is only available to students who have made a reasonable effort to find a suitable organization to talk to before you are allowed to prepare the proposal. Before you are allowed to document your efforts in locating a suitable organization.

• Requirements regarding the length of the proposal, as well as a summary of the proposal (in a short presentation) are very similar to the requirements for written paper above (more information regarding this possibility will be given in a due course, most likely in week 5).

• End of Semester Examination

• A three-hour examination will be conducted during the examination period (October 25 – November 12) at a date to be announced.

• More about the individual assignment

• The web address of the evaluation tool:

  • http://www.mcil.co.uk/review/7-site-review-homepage.htm

• The checklist (available on the tool’s web site) is best used in a comparative way.

• Therefore it is suggested that you record the scores concerning your chosen comparison website in the first column and use the next column to score up the other relevant website.

Adding up the total of the scores for each section for each column, will give a very rough indication of the effectiveness of each website.
• You will only need to do 1 main site plus 1 comparative site.

• From the results you will be able to see how your website compares with your chosen comparison site and highlight the areas that require attention.

• The checklist invites you to consider a website under ten different sets of criteria.

• Not all these criteria may be relevant to your website and some of the issues may also not be directly applicable to your particular website.

• Where this is the case you should tailor the checklist to suit your own exact requirements.

Score each Website issue out of 10 where 0 is not available at all, 1 is extremely poorly represented and 10 is extremely well represented.

• Some of these issues cannot be properly addressed with a single visit to the website and thus sufficient time should be put aside to complete the comparative review.

• Approximately a half a day is required to complete the evaluation and comparison of two sites.

• A further period of time is required to see how long it takes to receive information that has been requested etc.
Introduction

- IT – All forms of technology used to create, store, exchange and use information
- IS – The combination of technology (the what), people (the who), and process (the how) that an organisation uses to produce and manage information

The Internet
- A global system of interconnected computer networks

WWW
- A graphical hypertext environment that operates within the Internet, contains a collection of distributed documents, referred to as "pages", and allows easy sharing of data using a standard interface

EC
- Any transaction completed over a computer-mediated network that involves the transfer of ownership or rights to use goods or services

EB
- Any process that an organization conducts over a computer-mediated network.

A map of the territory

- Why do business managers need to understand and participate in the information decisions
  - Need to know the capability of organisations to use information
  - E-business success – understood the power of information +a sound business vision
  - Did not have a clue how to built web site
• Why do they need to understand basic fundamentals about using and managing information?

• IS must be managed as a critical resource
  – Money invested – ROI
  – Business (not IT) manager, makes the decisions

• IS enable change in the way people work together
  – Business manager, benefits of using new technology and the cost of changing existing behaviour

• IS integrate with almost every aspect of business

• IS help simplify organisational activities
  – Moving goods
  – Inventory
  – Communicating with suppliers, etc.

• IS enable business opportunities and new strategies

• Technological changes
  – Managers to evaluate the opportunity
  – Articulate business strategy

• IS used for competitive advantage

• IS must support business goals

• IS support organisational systems
  – Building informational instead of transactional web site – disaster
  – Misalignment of the resources
  – Computers – no training provided

• Supporting role of IS

• IS must support organisational systems
  – Misalignment of the resources
  – Computers – no training provided
<table>
<thead>
<tr>
<th><strong>Skills for effective participation in IT decisions</strong></th>
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<tbody>
<tr>
<td>Creativity</td>
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<tr>
<td>Focus on business solutions</td>
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<tr>
<td>Communication</td>
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<td>Project management</td>
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<td>Analytical skills, etc.</td>
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**The importance of IS management**

- IT used in space exploration, weapon systems, medicine, entertainment, etc.

- Prime use of IT is in managing organisations

**The complexities of managing technology**

- Shift from IS executives toward a collaborative effort
- IS shift from application delivery to system integration
- The Internet – borderless – emerging common interfaces

**History**

- In late 1950’s and early 1960’s IT did not support information work at all
- Late 1960’s various technologies existed but were completely independent
- In 1970’s pressure toward integrated management

**The organisational environment**

- External – forcing companies to compete
- Internal – affecting operation and management

**The external organisational environment**

- The quality imperative
- Concern for the environment
- Consumers computing
- Deregulation
- Crossing industry boundaries
- Globalisation
- Shorter product and service development cycle
• The internal organisational environment
  – Growth of business teams
  – Anytime, anywhere information work
  – Outsourcing and strategic alliances
  – The demise of the hierarchy

• The technology environment
  • Hardware trends
    – Portable laptops faster, more memory
    – Mobile technology
    – Wireless technology

• Software trends
  – In house
    – Purchased software
    – Open systems movements
    – Different products work together – interoperate
  • Data trends
    – Managing data in a centralised environment
    – Data warehousing
    – Data mining

• Communication trends
  – Timesharing systems
  – The Internet
  – Networking
  – Wireless communication

• The mission of IS
  • Early days - paper work era
    – Number of transactions processed per day
    – Number of program codes written per week
  • Latter – MIS era
    – Get the right info to the right person at the right time

• Today
  – “To improve the performance of people in organizations through the use of information technology”
    – From McNurlin and Sprague
Four major IS activities

- Business requirements identification
- Systems and information architecture
- Systems development and maintenance
- Computer operations

Added Value

- Impact
- Cost
- Efficiency

Impact

Cost

Efficiency

IT Knowledge

Balance of Expertise Required

Business

A Reengineered Accident Management System

- Have accident
- Report accident
- Tow truck arrives
- Vehicle to repairer
- Exit
- Database

An Accident Management System

- Have accident
- Select Tow truck
- Negotiate price
- Tow truck arrives
- Exit
- Get vehicle to repairer
- Advise insurance

IT strategic importance

- “IT influences the structure and operations of organizations more profoundly than any other technology ever has”

Drivers of strategic use of IT

- To obtain and maintain CA
- Intra and extra organizational linking
- To maintain decentralized operations with effective central coordination
- To develop flexible and responsive infrastructure
- To capitalize on critical business information

Competitive forces

Threats of substitute products/services

Bargaining power of customers

Rivalry among existing competitors

Bargaining power of suppliers

Threat of new entrants
Porter’s Value Chain Model

- Accounting, Finance, Management Support
- Human Resource Management
- Technology Development/Product Development
- Procurement
- Information Technology
- Sales and Marketing
- Service
- Operations
- Inbound Logistics
- Operations Outbound
- Logistics
- Sales and Marketing
- Service

Strategic trusts
- Differentiation
- Cost
- Innovation
- Growth
- Alliance
- Time

Historic function-based systems structure

The Process of Reengineering
- Develop business vision and process objectives
- Identify processes to be redesigned
- Understand and measure existing processes
- Identify IT levels
- Develop and design a prototype of the process
- Implement the new process

Redesigned Process Structures

CIO
- Chief Information Officer (CIO)
- IS Manager
- IT Manager
• Report to:
  – CFO
  – Executive VPs
  – Fewer than 20% to CEO
• Must closely communicate with top executives
• Be an integral part of the executive management team to be effective

CIO Role
• Responsible for:
  – Developing IT management maturity
  – Evaluating technology features
  – Finding better ways of doing business
  – Good relationship between IT/IS department and the rest of the company/organisation
  – Getting the IT/IS department views and suggestions heard at board meetings
  – Staff
  – Training users’ etc.

CIO’s performance is measured by:
• Success in applying IT cost effectively
• Achieving corporate goals/objectives
• Bringing value to the firm
• Ability to develop and implement plans that balance
  – Opportunities,
  – Expectations
  – Risks

Scenarios
• Very unnoticed when everything is OK
• Very noticeable when that is not the case!
• Required skills:
  – Business Skills (as any manager)
  – IT skills (depend on the task)

The Role of the CEO
• Needs to recognise IT as a strategic resource
• Must know enough about it to ask the right questions and know if the proper answers are being given
• Needs to involve the CIO in management deliberations and strategising
  (Bill Gates, 1999)

IS/IT Department structure

• Responsible for:
  – Developing IT management maturity
  – Evaluating technology features
  – Finding better ways of doing business
  – Good relationship between IT/IS department and the rest of the company/organisation
  – Getting the IT/IS department views and suggestions heard at board meetings
  – Staff
  – Training users’ etc.