Management Information Systems

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Aims

- Understand where information systems can add value to a company
- To enable you to effectively manage an information system

THIS IS A BUSINESS MODULE!
NOT A COMPUTING MODULE!

Foundation Concepts

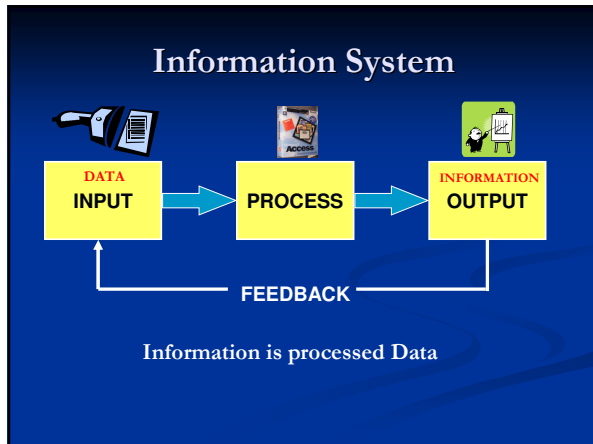
What is an Information System?

1. Does an information system have to have a computer?
2. Think of 3 examples of an information system
3. There are 3 essential elements to any information system, what are they?
4. How do you know if an information system is effective?

What is an Information System?

1. Does an information system have to have a computer? NO
2. Think of 3 examples of an information system Supermarket till, shipping company & address database
3. There are 3 essential elements to any information system, what are they? Input – Processing - Output
4. How do you know if an information system is effective? Return On Investment (ROI)

So Why Use A Computer?

- A PC can manipulate data much faster than a human.
- They are cheaper than human labour
- They do not make mistakes
- Data can easily be moved or copied in a PC

Information System

DATA
INPUT → **PROCESS** → INFORMATION **OUTPUT**

FEEDBACK

Information is processed Data

Exercise 1

1. What is the input for this system?
2. How is the data processed?
3. How is this output?
4. What information is produced?
5. What are the benefits of this system?
6. How could it be improved? (feedback)

Inputs

- Keyboard
- Mouse
- Touch Screen
- Optical character recognition e.g. Bar code reader
- Pen-based input e.g. electronic organiser
- Digital scanner / camera
- Audio input
- Sensors (e.g. moisture sensors for farmers)
- Magnetic ink character recognition (Cheques for some banks)

Common forms of Processing

- Accounting reports
- Stock control reports
- Graph generation
- Address books & mail merges
- E-commerce
- Despatch lists

Output

- Computer screen
- Printer
- CD-ROM / Disc / DVD
- Speaker (Audio)
- Webpage

Benefits

- Does the system add value to the customer?
- Does the system reduce costs?
- Does the system reduce errors?
- Does the system assist decision making?
- Does the system increase worker knowledge?

Feedback

- Is the information accurate?
- Is the information useful?
- Does it tell us everything we need to know?
- Is it timely?

Roles of IS

- Support Business Processes and Operations
- Support Business Decision Making
- Support strategies for Competitive Advantage

Exercise 2: In groups think about how Information Systems could provide an advantage in these areas?

Roles of IS

- Support Business Processes and Operations
  Accounts / Stock management / VISA
- Support Business Decision Making
  Market research / annual sales figures / CRM
- Support strategies for Competitive Advantage
  Innovation / JIT / e-commerce

Three Key Marketing Models

- **Porters 5 Forces** – Shows company relationships with each other
- **Product Strategies** – Shows what your company can do to compete effectively
- **Value Chain** – Shows ways that you can make your company competitive
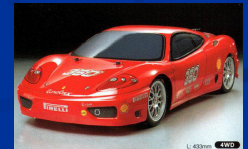
Porters 5 Forces

- Potential Entrants
- Suppliers
- Industry Competitors
- Buyers
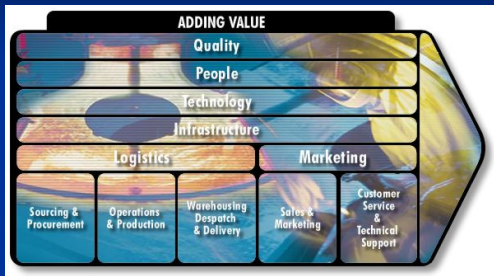- Substitutes
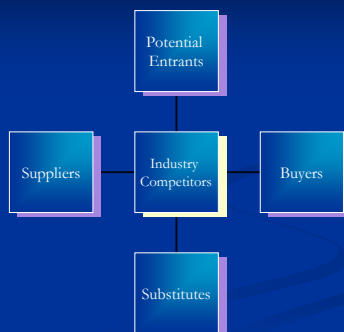
Product Strategies

Better

Cheaper

Different

Faster

Value Chain

Main MIS Strategies

- Cost Leadership
- Differentiation
- Innovation
- Growth
- Alliances

Exercise 3: For each strategy think how MIS can provide an advantage and think of companies that use this strategy

Other Strategies

- Lock in customers and suppliers – e.g. automated stock systems
- Switching costs – Provide IT to your customers
- Barriers to entry – High IT costs to enter field
- Leverage investments in IT - Use existing IT for new purposes

Summary – Lesson 1

- An Information System has:
  Input – Processing – Output
- Benefits – 5 Key benefits of MIS
- Feedback – Important to improve an MIS
- Main types of MIS system: Operations, decision making and competitive advantage
- Three key marketing models