COMM113: BUSINESS DRIVEN INFORMATION SYSTEMS

CHAPTER 1: COMPETING IN THE INFORMATION AGE

1.1 INFORMATION SYSTEMS IN THE BUSINESS

Information technology (IT)

- Concerned with the use of **technology** in managing and processing **information**
- Can be important for business success & innovation

Information systems (IS)

- Combination of **IT** (hardware & software), **infrastructure**, **processes/procedures** and **people** organised to facilitate *planning, control, coordination and decision-making* in a business
- e.g. company payroll system, library loaning system, home budget spreadsheet

Describe the information age and the differences among data, information, business intelligence and knowledge.

Information age – where facts are widely available to anyone who can access a computer/technology

Data	Information	Business intelligence	Knowledge
Raw facts that describe the characteristics of an event or object	Data that been *processed* so it is useful in a context	Info collected from sources that analyses patterns, trends & relationships for strategic decision-making	Skills, experience & expertise that creates a person's intellectual resources
E.g. sales data, series of symbols or words	E.g. sales forecast, bank statements	E.g. supplier, customer, partners	

Data can be processed into *information* via…

- ***Rearranging/sorting***; items grouped together or placed in an order
- ***Aggregating***; summarising data (e.g. totals)
- ***Performing calculations***; e.g. number of hours x hourly rate = gross pay
- ***Displaying***; showing data in the form of graphs etc.

Characteristics of quality information → <u>time</u> (timeliness, frequency), <u>content</u> (accuracy, relevance, conciseness, scope), <u>form</u> (clarity, detail, order, presentation), additional (source, reliability, appropriateness)

Data
E.g. vanilla x22, chocolate x30, strawberry x20

Information
E.g. graphs of icecream sold today

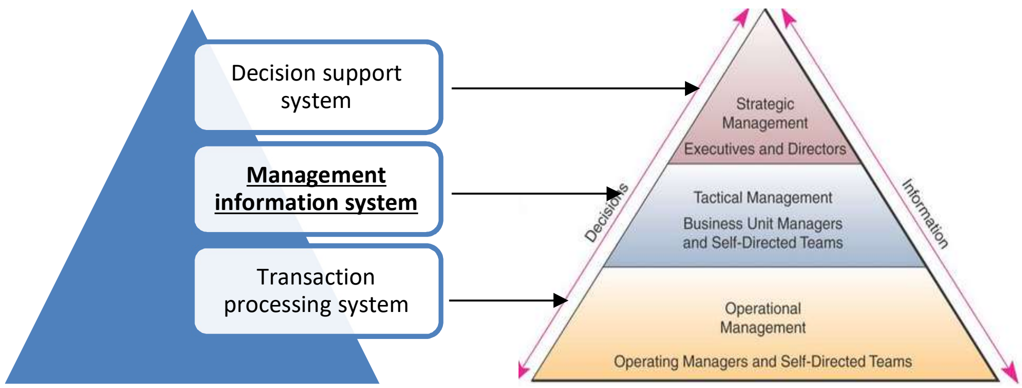
Knowledge
E.g. chocolate is most popular so we need to order more

<u>Data is processed into information which is combined with *context, experience and understanding* to form knowledge and therefore used for decision-making.</u>

Explain systems thinking and how management information systems enable business communications.

Systems thinking – way of monitoring the entire system by viewing inputs being processed/transformed to produce outputs. It provides a complete view of how operations work together to create a product/service.

Management information systems – name for the business function covering the application of people, technology and procedures (collectively called IT) to solve business problems



1.2 BUSINESS STRATEGY P26

Explain why competitive advantages are temporary

Competitive advantage – a feature of a product or service on which customers place a greater value than they do on their competitors

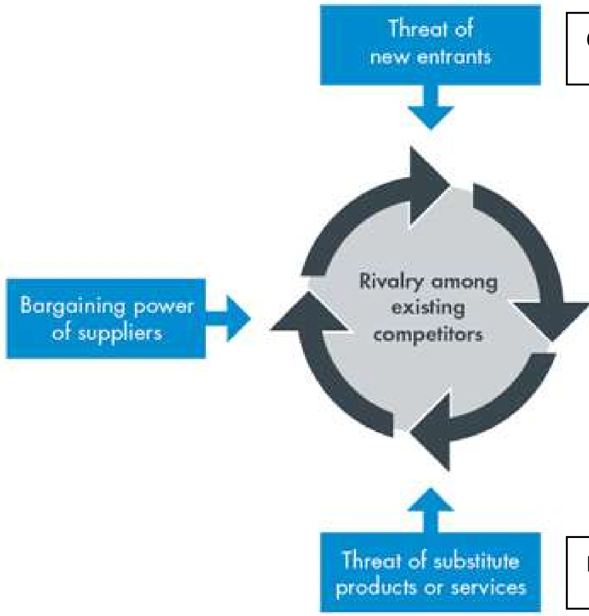
- Such advantages are temporary because competitors find ways to duplicate and better these ‘advantages’, especially with the acquiring of new technology and copying of business operations. E.g. early 2000s with iPod, iPad and iTunes

Describe Porter’s Five Forces Model

- This model is used to help combat competitive forces in the marketplace e.g. new market entrants, substitute products

Five Forces helps to evaluate industry attractiveness and it comprises of 5 different forces;

1. **Buyer power** – buyers have many sellers to choose from, e.g. milk
2. **Supplier power** – has influence over the price/quality of materials, resources or a product
3. **Threat of substitute products or services** – high when there are many product alternatives
4. **Threat of new entrants** – high when it is easy for new competitors to enter a market
5. **Rivalry among existing competitors** – high when competition is fierce in a market, e.g. technology



Competitors

Suppliers vs buyers

New market entrants

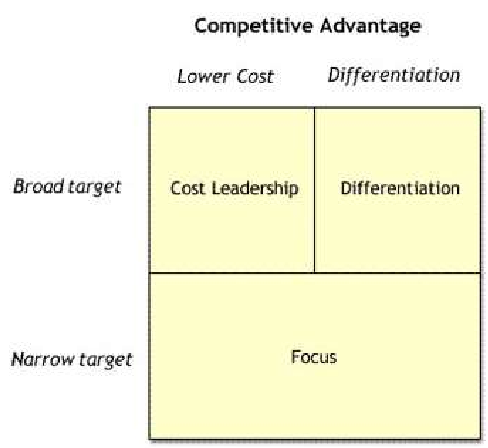
Porter's 5 forces are brought together to…

- Look at the **competitive forces** shaping an industry
- Highlight **business strategies** that help it remain competitive
- Identify potential **opportunities**
- Create **competitive advantage** while deterring potential rivals

Compare Porter's 3 generic strategies

An organisation can follow one of Porter's 3 generic strategies when entering a new market;

1. **Broad cost leadership**
2. **Broad differentiation**
3. **Focused strategy** (to reach a niche market)



Examples:

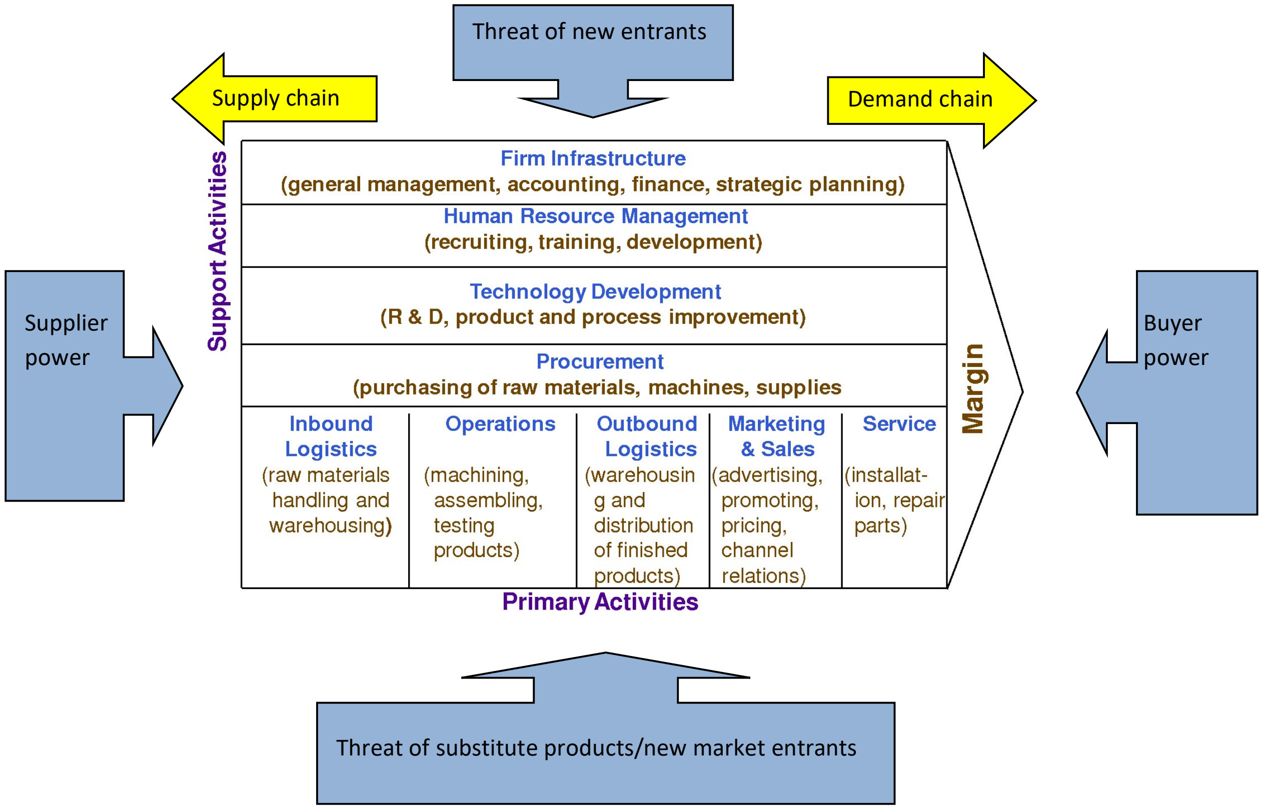
Cost leadership	Differentiation	Focused strategy
- Hyundai - Kia - Lenovo - Kmart, Target	- Audi - Hummer - Apple	High quality car brands

Demonstrate how a company can add value by using Porter's value chain analysis

Value chain analysis – once an organisation chooses its strategy, it can use tools such as the value chain analysis to determine the success or failure of its chosen strategy

Value creation is the result of effective business processes and efficient value chains.

- **Business process** – a standardised set of activities that accomplish a specific task
- **Value chain** – views an organisation as a series of processes, each of which adds value to the product or service



- To identify **competitive advantages**, Porter created value chain analysis, which views a firm as a series of business processes that each add value to the product/service.
- The goal of value chain analysis is to identify processes in which the firm can **add value** for the customer and create a competitive **advantage** for itself, with a *cost advantage or differentiation*.
- The value chain groups a firm's activities into 2 categories;
  - <u>Primary value activities</u> – acquire raw materials and manufacture, deliver, market, sell and provide after-sale services
  - <u>Support value activities</u> – include firm infrastructure, HR management, technology development and procurement

CHAPTER 4: DECISIONS AND PROCESSES

4.1 DECISION-MAKING SYSTEMS

Explain the importance of decision making for managers at each of the 3 primary organisation levels

People must be able to:

- Analyse large amounts of information
- Make decisions quickly
- Apply sophisticated analysis techniques
- Protect the corporate asset of organisational information

Decision-making essentials

OPERATIONAL – employees develop, control and maintain core business activities required to run the **day-to-day operations**

Decision-making process

1) Problem identification

2) Data collection i.e. who, what, why, when, how

3) Solution generation

4) Solution test - feasibility, suitability & acceptability

5) Solution selection

6) Solution implementation

MANAGERIAL – employees are **continuously evaluating company operations** to hone the firm's abilities to identity, adapt to and leverage **change**

STRATEGIC – managers develop overall business **strategies, goals and objectives** as part of the company's strategic plan

Define critical success factors (CSFs) and key performance indicators (KPIs) and explain how managers use them to measure the success of MIS projects

Critical success factors – crucial steps that companies perform to achieve their goals and objectives and implement their strategies. Examples of CSF;

- Create high-quality products
- Retain competitive advantages
- Reduce product costs
- Increase customer satisfaction
- Hire and retain the best business professionals

Key performance indicators – the quantifiable metrics a company uses to evaluate progress towards critical success factors. Examples of KPIs;

- Employee turnover rate
- Number of product returns
- Number of new customers
- Average customer spending