2.51 Marketing

Learning Outcomes

You should be able to:

- discuss the difference between needs and wants in relation to a product;
- discuss and analyse new or improved products, considering:
  - growth in consumer demand (market/demand pull); and
  - advances in technology which stimulate new design (technology push)
- analyse and draw conclusions of market research from the following data sources:
  - interviews;
  - surveys;
  - questionnaires; and
  - the internet;
- discuss the life cycle of a product and identify features associated with each of the following:
  - inception;
  - introduction;
  - growth;
  - maturity; and
  - decline;
- analyse the life cycle curve of a product.

Needs and wants in relation to a product.

Throughout history, objects have been designed to satisfy our basic needs, while others have been made to fulfil our wants or desires. Objects ranging from those that provide for our basic needs for warmth and shelter, growing food and maintaining health, to products that are luxuries, enhance our well being or provide status. We all have products that we need and some products that we want.

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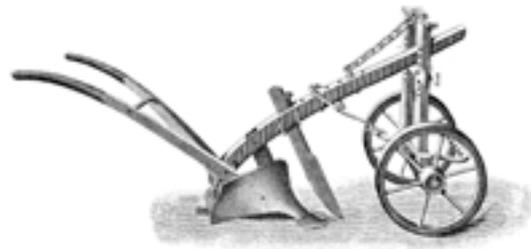
The need for food has forced the development of ploughs.

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Desire for entertainment in the home has promoted the development of televisions.

Problems that we encounter in our daily lives, or work, are often solved by a technology product. Technology makes a difference by simplifying tasks, making tasks less strenuous, speeding tasks up or automating tasks.

The definition of 'need' depends on circumstances, your wealth and the society that you live in.

Washing machines or kettles are a product that consumers have grown accustomed to in prosperous societies. To such an extent that they are now considered as a basic need. In less affluent countries, boiling water over an open fire or washing clothes in a river are still common place. The idea of a kettle or washing machine is just a dream or desire.

Technology products are being developed that help people with the most challenging of needs or those who are in poverty or hostile environments. Technology is beginning to improve the lives of those in the developing world with electricity, running water, food production and health.

Solar panels are a technology which has revolutionised the lives of the poorest rural communities in third world countries.


© Getty Images

Communities without mains electricity are able to charge phones and lamps. Inhabitants can study and work later in the night and communicate with medical centres and other essential services.

Market Pull Factors

Pull Factors can be both needs and wants that consumers require from products. When there is enough demand (pull) then manufacturers attempt to develop products that will solve or meet those needs or wants.

For example, people have always desired to communicate over long distances. The telegram was developed, then later followed the landline telephone, and now we have the mobile phone.

The needs of people with difficulties such as motion, sight and hearing are pull factors that have always existed. With computer processing and smart materials, the technology is advancing enough to help people with such difficult needs further than before.
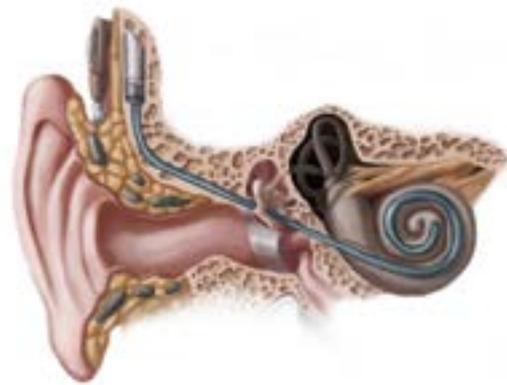
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The Cochlear Implant shown is an example of technology solving a need.

An external microphone and processor transmits a signal down a wire to the inner ear by-passing damaged areas. The inner ear is stimulated with electrical signals and the brain processes the signals as hearing.

See Youtube Clip: How a cochlear implant works by advance bionics
https://youtu.be/zeg4qTnYOpw

Technology Push

Manufacturers spend millions of pounds on research and development of new technologies. When the development has been completed and a viable product is manufactured the company will 'push' the product out to the consumers through marketing and sales.

Examples of this type of development are the 3D television or fingerprint security on mobile phones. These features are 'pushed' onto the customer as the 'must-have' feature. Some pushed products become very desirable as consumers want them. Other technologies might not be accepted by consumers or an alternative technology might be adopted.

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Smartphone fingerprint security is technology that was 'pushed' out to consumers.

Fingerprint security has become very popular as people realize its effectiveness as a security feature.

Past Paper Questions

The development of new or improved products is often influenced by market pull or technology push.

(i)   Explain what is meant by market pull and technology push.

_____

_____

_____

_____

_____

(ii) With reference to a specific product explain how its development has been influenced by market pull.

_____

_____

_____

_____

(iii) With reference to a specific product explain how its development has been influenced by technology push.

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Market research

Market research asks prospective customers what they want to buy and why. A manufacturer will not risk the expense of developing a new product unless they know it has a good chance of being purchased by a large number of people and making profit.

Market research asks a small sample of people what they want from a product. If the sample of people is carefully chosen they should reflect the views and purchasing habits of the market as a whole.

Interviews

Interviews can be one-to-one or in discussion groups, and ask people directly a number of questions about what they like or dislike about a product. The interviews are normally recorded or videoed so it can be reviewed later. Interviews can be used to review an existing product, review developed ideas, prototypes and mock-ups. This is an expensive and time consuming method of surveying people. The controlled manner in which they are asked produces qualitative, trust worthy results.

Survey

Surveys can be a brief interview, asking only a few questions about a subject. This can provide a quick and simple method of data creation which can be used to guide product development. A survey can also look at the type of people a company want as a customer and helps them try to understand their purchasing habits and preferences.

Questionnaires

Questionnaires are used to gain information from a larger number of people. The answers create statistical results that are used to inform the design of a product. Questionnaires are a quantitive approach to research and produce a large number of results. However, results could be full of errors due to the lack of guidance and control from an interviewer. Questionnaires can be undertaken via paper, telephone, or on the internet.

Internet

The internet can be used to discover a wide variety of information to guide research. Images, statistics, companies journals, government data, etc. all help to refine the understanding of the customer, and fine-tune the design or product development. All can be accessed via the internet.

Interviewing a group on creative ideas.

Below is a simple survey which asks potential customers which locomotive they would be most interested in. This information could be useful for future designs, ordering or marketing.

Prestige Series Model Locomotives	*Please indicate your preferred option by checking one box for each*		
	Very Interested	Moderatly Interested	Least Interested
STR: eep-Mk4	☐	☐	☐
MD: Midwest-6	☐	☐	☐
Texas: freight 212	☐	☐	☐
Amtrax: NYC02	☐	☐	☐
Amtrax: NYC17	☐	☐	☐

Revision Questions

1. Why would a company undertake market research when it is so costly and time consuming?

   _____

   _____

   _____

2. How can market research influence a product design?

   _____

   _____

   _____

3. Explain the advantages and disadvantages of questionnaires and interviews as market research methods.

   _____

   _____

   _____

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   _____

Life cycle of a product

A product goes through a life cycle. The product is born when it is created. It grows as it starts to sell. It matures as lots of people purchase it and declines as people move to other products.

Inception

Inception is the beginning of the life of a product. Research and development, materials, supplies, processes, machines and factories have to be set up and ready for market. This is an expensive time for the company. The product is not making any money because it is not for sale.

Introduction

Introduction is where a product is first sold. This is also expensive time as the marketing is expensive, with very little return from the very few sales. The factories are ironing out any teething problems with the production line or any faults with the product.
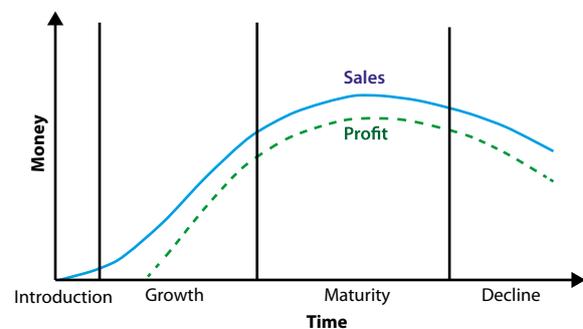
Growth

Sales increase, people hear more positive feedback, more marketing can be paid for by sales. This is the money making stage for the manufacturer. The production line is running at full capacity and economies of scale can be achieved.

Maturity

Maturity is when the product has reached most people who are going to buy it. This is also the stage when other companies have caught up and begin to enter the market with competitive products. The product is now marketed with special offers, discounts or added features. These act as incentives to get the last possible sales.

Decline

Decline is when the sales of the product begin to fall. At this point it is not cost effective to continue to provide support, repairs or marketing for the product. The company should be 'ahead of the curve' and have a different product in each stage of the product lifecycle to maintain profit levels.

Product Life Cycle

Revision Questions

1. When is the most expensive time in a product's life and give reasons why?

   _____

   _____

   _____

2. Why do manufacturers add features and discounts to products when the product is mature?

   _____

   _____

   _____

3. Explain why the growth stage of the cycle is the most profitable for the product?

   _____

   _____

   _____

   _____

   _____

4. Draw and plot a graph showing the lifecycle of a product that you know.

5. Look at the following products and identify at what stage they are in the product life cycle.

Iwatch

_____

CD player

_____

VHS (video recorder)

_____

DAB radio

_____

VR (Virtual Reality)

_____

Past Paper Questions

A product life cycle consists of five important stages.

One of these stages is called the growth stage.

(a) Name the other **four** stages.

1. _____

2. _____

3. _____

4. _____

(b) Outline **four** characteristics associated with the growth stage of a product.

1. _____

2. _____

3. _____

4. _____

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