

## product development and product portfolio analysis

**Cows** A cash cow is a product with a relatively high market share. It is therefore well positioned in the market and likely to be **profitable**. But the market it is in will have weak growth. So there will be little chance of increasing sales and profits in the future. There will be little need for **investment**. With slow growth in sales there should be little need for new premises for production. Cash cows have strong positive **cash flow**. Money coming into the business from profits will not be taken out via investment.

**Problem children** Problem children, also known as question marks or wildcats, are products with a relatively low market share in a fast growing market. This can be a problem for a business because it is unclear what should be done with these products. If a product is performing weakly it is unlikely to be profitable. But as it is in a fast growing market, there is potential to turn it into a star. **Cash flow** is likely to be zero or negative. The low relative market share means that it will not be profitable. **Investment** will be needed to cope with expanding sales in a growing market.

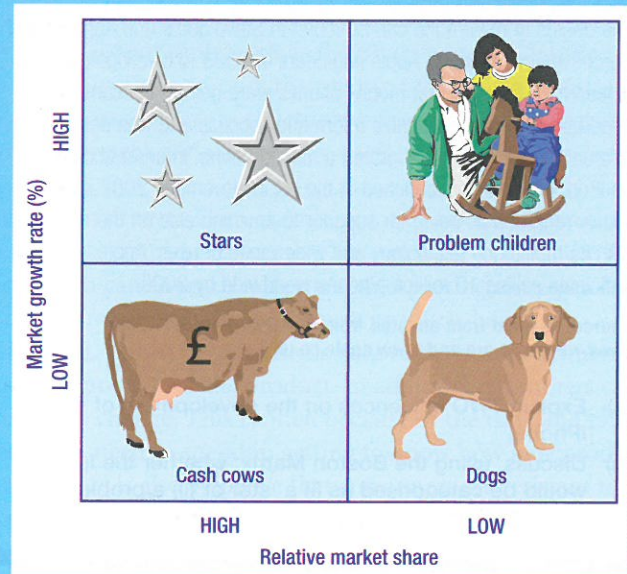
**Dogs** These are products with a relatively low market share in a market with low growth. Dogs have poor prospects for future sales and **profits**. They may generate some **cash flow** because they will need little **investment** but may earn some profit. However, they make little or no profit, cash flow may be zero or negative.

Businesses can make use of the Boston Matrix to manage their product portfolios.

**Managing product lines** Businesses must ensure that their product portfolios do not contain too many items within each category. Naturally, they do not want lots of 'Dogs', but they should also avoid having too many 'Stars' and 'Problem children'. Products on the top of the Boston Matrix are in the early stages of the product life cycle and are in growing markets. But the cost of developing and promoting them will not yet have been recovered. This will drain resources. Balancing these with 'Cash cows' will mean that the revenue from the 'Cash cows' can be used to support products in a growing market. The development of 'Cash cows' is likely to have already been recovered and promotional costs should be low relative to sales. This does not mean, though, that a business would want lots of 'Cash cows' and 'Problem children' and 'Stars'. This is because many of the 'Problem children' and perhaps some 'Problem children' might become the 'Cash cows' of the future.

**Making appropriate decisions** Products in different categories in the Boston Matrix may require different approaches. 'Problem children' and 'Stars' have great future potential. They are future cash cows. A business will need to **build** the brand of these products so that sales increase and competition is fought off successfully. 'Cash cows' might be **milked** for cash, which can then be

Figure 2: The Boston Matrix



used to develop other products. Or the business may decide to spend just enough on promotion and development to maintain sales and market share, known as **holding**.

- For problem children a business has choices. It can **build** the brand, hoping to turn it into a star, **harvest** the product by raising price and cutting promotion so that profits are increased, or **divest** itself of the product, withdrawing it or selling it because it is not making a profit.
- Dogs may be divested if they are not making a profit or in some cases harvested.

## New product development

Planning the product portfolio requires the continual development and launch of new products. New products are needed to replace products coming to the end of their life cycles and to keep up with changes in the market. This is called **new product development**.

In some business sectors the need to plan ahead is very important. In the chemical industry, development work is done on products which might not reach the market for over ten years. In the motor industry many cars take over five years to develop. New products normally pass through five stages when they are being developed.

**Generating ideas** The first stage is when firms generate ideas. Ideas for new products come from a variety of sources.

- Identifying gaps in the market, perhaps through market research. An example of this has been the development of vegetarian microwave dishes by food producers. An important issue here for businesses is in identifying the unique selling point of a product.
- Scientific research. Pharmaceuticals businesses devote huge



## Question 2.

The origins of the iPhone can be found in Steve Job's (the Apple Chief executive) instruction to Apple engineers in 2003 to investigate touch screens. He believed that mobile phones were going to become important devices for portable information access and was determined to create a device that integrated a mobile phone, Internet access and an iPod. When it was launched in the UK in November, 2007 it was widely regarded as being far superior to anything else on the market with its multitouch technology and wide range of uses. Apple anticipate selling 10 million iPhones worldwide by 2008.

Source: adapted from *The Guardian*, 5.11.2007, [www.wikipedia.org](http://www.wikipedia.org) and [www.apple.co.uk](http://www.apple.co.uk)

- Explain TWO influences on the development of the iPhone.
- Discuss, using the Boston Matrix, whether the iPhone would be categorised as (i) a star or (ii) a problem child in future.

amounts to research and development expenditure. As a result they have developed products to tackle a range of ailments from heart disease through to cancer. Generating creative ideas through open discussions. Products such as the jet engine have come about as a result of this.

Analysing other products. When developing new products many businesses will analyse products manufactured by competitors. They aim to include, adapt or improve upon the best features of these products in their own designs. Some businesses adapt their own successful products to make new products.

**Analysis** The second stage is the analysis of those ideas generated in the first stage. There are a number of questions a firm might ask. Most importantly, it must find out if the product is marketable – if enough consumers wish to buy it to allow the firm to make a profit. Businesses must also decide if the product fits in with the company's objectives, if it is legal and if the technology is available to produce it.

**Development** The third stage is the actual development of the product. This may involve technical development in the laboratory or the production of a prototype. Such work will be carried out by the research and development department. An important part of this process is the actual design of the product. Some preliminary testing may be carried out to find out whether or not the product actually meets consumers' needs.

**Test marketing** TEST MARKETING occurs when a new product is tested on a small, representative section of the total market. The test market area should share characteristics which are similar to those found in the market as a whole. The benefit of test marketing is the high degree of reliability of results

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gained. It is carried out because of the high cost and risk of launching a product in a large, usually national, market. Test marketing can itself be costly, but not as expensive as a national launch which fails. One problem is that it allows competitors to see the new product and gives them the chance to take counter-action before a national launch.

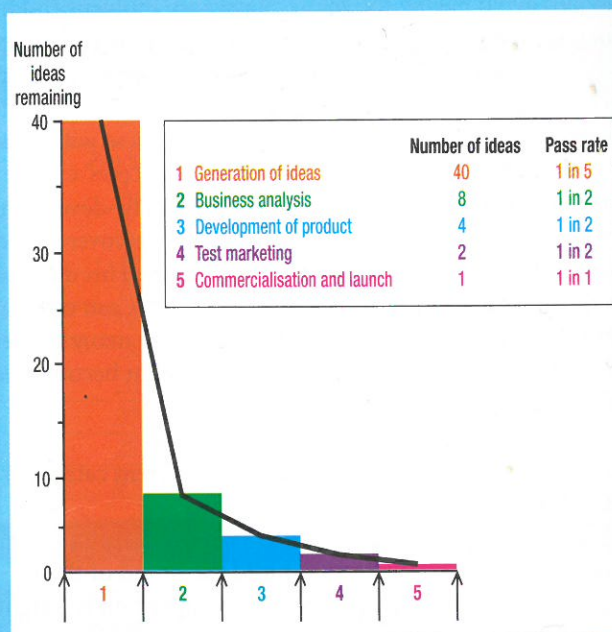
**Commercialisation and launch** The final stage is the launch and commercialisation. Here any problems found during test marketing must be solved. The firm will then decide on the 'marketing package' it will use to give the product launch the greatest chance of success.

At each of the five stages, many ideas are rejected. This means that very few ideas generated in the first stage will actually end up as a product launched onto the market. In Figure 3, an example is shown where 40 ideas were put forward for a new product. In this company the majority of ideas do not get beyond the first stage. The pass rate at this stage is only 1 in 5, with 4 out of 5 ideas being rejected. After that, the number of ideas which survive from one stage to the next increases as the pass rate falls from 1 in 5 ideas to 1 in 2. At the end of the process, only 1 out of a total of 40 ideas has survived to be launched onto the market.

## Influences on new product development

There is a wide range of influences on businesses developing new goods and services. These influences may encourage a business to go ahead with a new product or, alternatively, restrict the development of one or more new products.

Figure 3: New product development





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**ability of finance and resources** In highly competitive businesses find that their profit margins are squeezed. This means that financial and human resources are often not available to develop new products. An example of this is in the market for budget fashion clothing. Businesses in this market often copy products developed for designer labels. Other businesses may find that they have a number of mature products generating a healthy stream of income. Such businesses may divert this income in new product development, hoping to create the 'cash cows' of the future.

**Technology** The development of technology can affect the type of product or service provided. One hundred years ago computers did not exist. Today they are sold in a variety of ways in different businesses. Internet cafes and laptop computers are standard products for a range of consumers. There are now many opportunities for new goods and services, such as the online retailing of music that are linked to these new technologies. Just ten years ago such opportunities for new products like these did not exist.

Even when businesses have resources, the cost of developing new products may be prohibitive. The development of products in the electronics market can cost millions of pounds. As technological boundaries have been pushed forward, the cost of even modest new product development has risen sharply. Also, in many markets products have increasingly shorter life spans. This means that less time is available to cover development costs. Conversely, in those markets, such as the market for computer games consoles where technological developments are moving at a fast pace, there can be enormous rewards for successful new products. This creates a clear incentive for new products even when the costs are high.

**Competitors' actions** The behaviour of a business' competitors strongly influence new product development. In some cases

an innovative competitor can act as a spur to other businesses in the same sector in their efforts to create new products. Some would argue, for example, that the new products produced by the Apple Corporation, such as the iPhone and iPod, have caused competitors to raise their game. Other businesses respond to innovative competitors by copying, as far as possible within copyright and patent laws, their competitors' products.

**Market constraints** There is little point in a business developing a new product unless consumers are prepared to purchase it at a price which can cover development and production costs. Many so-called 'tremendous ideas' for new products have been abandoned. This is because firms believe they cannot find a profitable market for the product. In addition, consumers can be resistant to change. This is often because of the time and effort consumers need to spend in getting to know how new products 'work'. There is also evidence that consumers are resistant to new products which represent a radical departure from existing products. New versions of existing products are sometimes more popular with consumers than totally new ideas for this reason.

**Entrepreneurial skills of managers and owners** Some businesses are more likely to engage in new product development because of the skills and attitudes of their managers and owners. More entrepreneurial managers and owners of businesses are likely to be more inclined to take risks rather than continue doing what they know best. Steve Job, for example, Chief Executive of the Apple Corporation, has been widely credited as being the driving force behind the revolutionary new products produced by Apple, including the iPod, iMac and iPhone.

**Legal constraints** Firms cannot develop whatever new products they wish. Legislation must be taken into account. For example, a pharmaceutical company wishing to develop a new product must be sure that it adheres to health legislation.

## KNOWLEDGE

- What is a product?
- What is the difference between a consumer and a producer product?
- Explain how a business can prevent a 'vacuum' in its product portfolio.
- What is meant by a product line?
- What is meant by the Boston Matrix?
- How can the Boston Matrix help a business to manage its product portfolio?
- What is meant by new product development?
- State two ways in which a business can generate new product ideas.
- State six factors that can influence the development of new products.