

Chapter 16

Market research and its influence on new product development

Introduction

The role and use of market research in the development of new products is commonly accepted and well understood. There are times, however, when market research results produce negative reactions to discontinuous new products (innovative products) that later become profitable for the innovating company. Famous examples, such as the fax machine, the VCR and James Dyson's bagless vacuum cleaner are cited often to support this view. Despite this, companies continue to seek the views of consumers on their new product ideas. The debate about the use of market research and, more importantly, what type of research should be used in the development of new products is long-standing and controversial. This chapter will explore these and other related issues. It also provides a case study that shows how Dyson pursued 'unpopular' designs that later become the industry standard.

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Learning objectives

When you have completed this chapter you will be able to:

- understand the contribution market research can make to the new product development process;
- recognise the benefits and weaknesses of consumer new product testing;
- recognise the powerful influence of the installed base effect on new product introductions;
- understand the significance of discontinuous products; and
- recognise the role of switching costs in new product introductions.

Market research and new product development

Business students, in particular, are very familiar with the well-trodden paths of arguments about the need for **market research**. Indeed, they are warned of the dangers and pitfalls that lie ahead if firms fail to conduct sufficient market research. Compelling, and potentially alarming, stories are used to highlight the importance of market research. One of these is presented in Illustration 16.1.

Chapters 13 and 14 outlined the activities involved in the development of new products. In this chapter it is necessary to examine in more detail some of these activities and to identify areas of potential difficulty. Figure 14.9 outlined the key activities of the new product development process. Within the product concept generation stage, however, there is a significant amount of internal reviews and testing. Figure 16.1 expands this stage into a series of further activities. As can be seen from the diagram, it is extremely difficult to delineate between the activities of concept testing, prototype development and product testing. The activities are intimately related and interlinked. There is a considerable amount of iteration. Product concepts are developed into prototypes only to be quickly redeveloped following technical inputs from production or R&D. Similarly, early product prototypes may be changed almost on a daily basis as a wide variety of market inputs are received. This could include channel members who have particular requirements and early results from consumer tests may reveal a number of minor changes that can be made simply and quickly by prototype designers.

Yet, we also recognise that consumers frequently have difficulty articulating their needs. This has been confirmed by two CEOs. Steven Jobs, CEO of Apple, in an interview with *Fortune* magazine (2008) said: ‘Apple does no market research, and

Illustration 16.1

The traditional view of new product testing

Even successful firms can sometimes make errors with new products, as this illustration shows from fast food giant McDonald’s. Several years ago it was considering launching the McPloughman’s, a cheese and pickle salad sandwich. The McPloughman’s was developed to compete with the UK’s supermarket chains in the cold sandwich market. Unfortunately, had the company conducted market research, it would have found that this product was not highly desirable. Indeed, their customers did not want the product and their staff were embarrassed to sell it. From now on, said the company, rather than relying on ‘gut-feeling’ that it knew what its customers wanted, McDonald’s intended to conduct rigorous fact-based market research.



Source: Pearson Education Ltd/Burke Tricolo Productions/Brand X Pictures

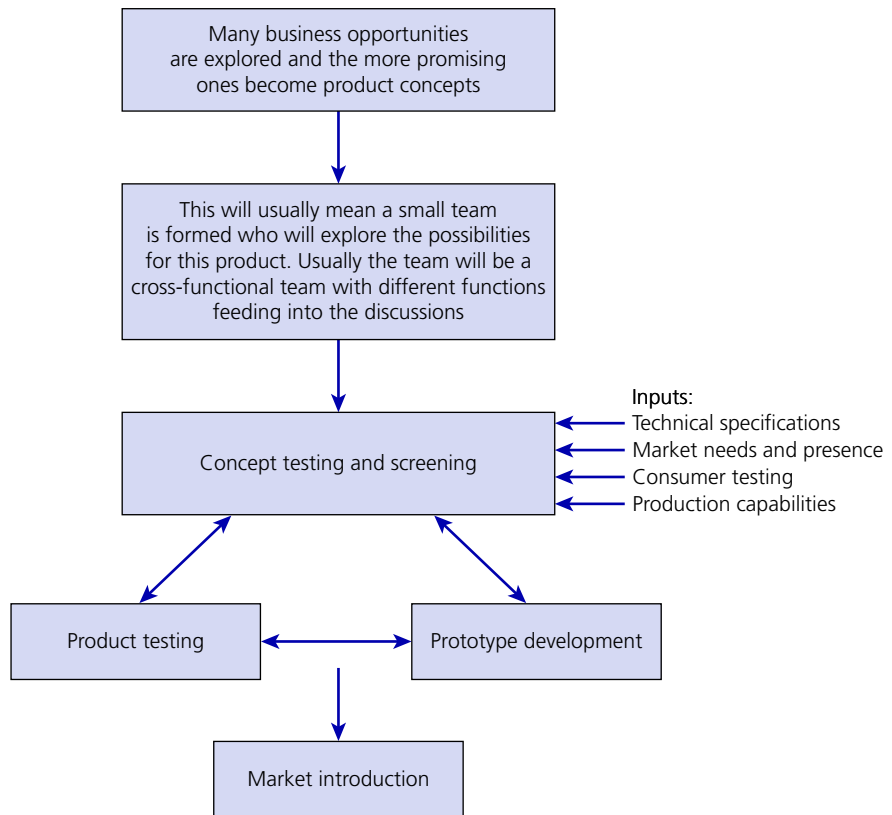


Figure 16.1 New product concept and prototype testing

in fact just wants to “make great products”.’ And Bart Becht, CEO of Reckitt Benckiser, said in an interview with *The Sunday Times* (2008): ‘Consumers are not very good at imagining what they might want to buy if it were available . . . consumers are not very innovative.’ The issue here is clear. There are some firms that wish to lead the public with new products, for they believe that the public do not know what is possible and market research frequently reinforces this lack of knowledge.

The purpose of new product testing

The main objective here is to estimate the market’s reaction to the new product under consideration, prior to potentially expensive production and promotional costs. To achieve this objective, it is necessary to consider a number of other factors:

- 1 *The market*: current buying patterns; existing segments; and customer’s view of the products available.
- 2 *Purchase intention*: trial and repeat purchase; barriers to changing brands; and switching costs (more about this later).
- 3 *Improvements to the new product*: overall product concept; and features of the product concept.

All these factors are linked and usually are covered in consumer new product testing and referred to as *customer needs and preferences*. This, however, raises an important issue: the type of needs required would, surely, depend on the type of product under consideration and the consumer. King (1985) argues needs can be classified into three types:

- *Basic needs*: those that a customer would expect. For example, a customer would expect a new car to start every time.
- *Articulated needs*: those that a customer can readily express. For example, a customer may express a desire for additional features on a motor vehicle.
- *Exciting needs*: those that will surprise customers and are not being met by any provider at present. In the example here it may be finance packages enabling easy and quick purchase of a new car.

Whilst this is helpful, it is the so-called ‘exciting needs’ that all new product developers want to uncover. For success surely will come to those who are able to understand these needs and use them in the next generation of new products. This, however, is extremely difficult to capture. Some of the techniques and concepts used in consumer product testing are reviewed in the following sections.

Testing new products

Have you ever been stopped in a supermarket and asked for your opinion on a new food product? This is more than a diversion from the chore of shopping – you could be tasting the next big product. For example, all food manufacturers hope it will be their company that will develop the next ‘Flora’ or ‘Sunny Delight’ (two of the most successful new food products of the past 15 years). In-store tasting is a serious business and millions of pounds are spent on this activity to create new foods that will tempt consumers. This is the accepted and well-known face of consumer research. Indeed, the food industry is one of the most prolific developers of new products and a heavy user of consumer research. Frequently, the process involves enhancing an existing winner or repackaging tried and tested products. ‘Flora’ was one of many ‘yellow spreads’ but the brand has become so successful that it has been extended to other product lines, including cheese.

Food manufacturers continually are seeking to add value to their products. This clearly enhances their profit margins, but competition in food retailing is fierce and retailers have been able to put pressure on manufacturers to keep prices down. Indeed, between 1980 and 2015 average food retail prices have fallen. Initially, manufacturers pushed down their own costs in an attempt to improve margins, but, when these could be reduced no further, manufacturers turned to new product development to enable them to add value and command a higher price. Frequently, the success of the product lies in the packaging, as Illustration 16.2 shows.

Put crudely, to command a higher price a manufacturer of, say, baked beans will have to develop different forms of packaging, add curry, meat balls, etc., all of which will have been tested by the taste buds of consumers first. But, if a product is not liked by consumers, should it always be dumped and labelled ‘bad idea’? In the food industry, a disliked new flavour crisp may, indeed, be a ‘bad idea’ and a potential flop, if the product gets to market, but, in other industries, initial rejection by consumers may not

Illustration 16.2

Robinsons Fruit Shoot

Robinsons Fruit Shoot was launched in 2001 and is now a £100 million super brand. Britvic, owners of Fruit Shoot, delivered profits of £158 million for 2014. Its success has been attributed to the unique design and packaging of the drink. Prior to Fruit Shoot, most children's drinks were packaged in paper board cartons with a straw. Fruit Shoot revolutionised the market by using a colourful resealable plastic bottle. In the UK, Fruit Shoot was bought by 41 per cent of all households with children in 2011. Growth continued in 2012 through exports to Europe. In 2015, Britvic invested £7 million in its factory and warehousing near Leeds to help support growth. In addition, Britvic's US franchise business has pushed distribution of the brand into all 50 states.

Source: www.Britvic.com (2004 and 2007)



be a good indication of future success. The Dyson case study at the end of this chapter is a good illustration of a successful product that initially was rejected by manufacturers, retailers and some consumers, yet it turned out to be a success. There are, of course, many other well-known cases, such as the fax machine. Peter Drucker once observed that 'one can use market research only on what is already in the market'. He supported his point by saying that US companies failed to put the fax machine on the market 'because market research convinced them there was no demand for such a gadget'.

Techniques used in consumer testing of new products

The following is a brief guide to some of the research techniques used in consumer testing of new products. Some products and services go through all the stages listed, but few do or should go through all these. The techniques would have to be adapted to meet the specific requirements of the product or service under consideration.

Concept tests

Qualitative techniques, especially group discussions, are used to obtain target customer reactions to a new idea or product. Question areas would cover:

- understanding and believability in the product;
- ideas about what it would look like;

- ideas about how it would be used; and
- ideas about when and by whom it might be used.

This would help to reveal the most promising features of the new product, and groups to whom it might appeal. It might be argued that the assessment of *purchase intent* is the primary purpose of **concept testing**, so that products and services with poor potential can be removed. The most common way to assess purchase intention is to provide a description of the product or take the product to respondents and ask whether they:

- definitely would buy;
- probably would buy;
- might or might not buy;
- probably would not buy; or
- definitely would not buy.

Test centres

These are used for product testing when the product is too large, too expensive or too complicated to be taken to consumers for testing. One or more test centres will be set up and a representative sample of consumers brought to the test centre for exposure to the product and questioning about their reaction to it. See the development of the tooth whitening product in the case study at the end of Chapter 12.

Hall tests/mobile shops

These are used commonly for product testing or testing other aspects of the marketing mix, such as advertising, price, packaging, etc. A representative sample of consumers is recruited, usually in a shopping centre, and brought to a conveniently located hall or a mobile caravan, which acts as a shop. Here they are exposed to the test material and asked questions about it.

Product-use tests

These are used frequently in business-to-business markets. A small group of potential customers are selected to use the product for a limited period of time. The manufacturer's technical people watch how these customers use the product. From this test, the manufacturer learns about customer training and servicing requirements. Following the test, the customer is asked detailed questions about the product, including intent to purchase.

Trade shows

Such shows draw large numbers of buyers who view new products in a few days. The manufacturer can see how buyers react to various products on display. This

technique is convenient and can deliver in-depth knowledge of the market because the buyers' views may differ considerably from those of the end-user consumers.

Monadic tests

The respondents are given only one (hence the name) product to try, and are asked their opinion of it. This is the normal situation in real life when a consumer tries a new product and draws on recent experience with the product they usually use, to judge the test product. The method is not very sensitive in comparing the test product with other products because of this.

Paired comparisons

A respondent is asked to try two or more products in pairs and asked, with each pair, to say which they prefer. This is less 'real' in terms of the way consumers normally use products, but does allow products to be deliberately tested against others.

In-home placement tests

These are used when an impression of how the product performs in normal use is required. The product(s) are placed with respondents who are asked to use the product in the normal way and complete a questionnaire about it. Products may be tested comparatively or sequentially.

Test panels

Representative panels are recruited and used for product testing. Test materials and questionnaires can be sent through the post, which cuts down the cost of conducting in-home placement tests. Business-to-business firms may also have test panels of customers or intermediaries with whom new product or service ideas or prototypes can be tested.

When market research has too much influence

It is argued by many from within the market research industry that only extensive consumer testing of new products can help to avoid large-scale losses, such as those experienced by RCA with its Videodisc, Procter & Gamble with its Pringles and General Motors with its rotary engine. Sceptics may point to the issue of vested interests in the industry, and that it is merely promoting itself. It is, however, widely accepted that most new products fail in the market because consumer needs and wants are not satisfied. Study results show that 80 per cent of newly introduced products fail to establish a market presence after two years. Indeed, cases involving international high-profile companies are cited frequently

to warn of the dangers of failing to utilise market research (e.g. Unilever's Persil Power and R.J. Reynold's smokeless cigarette).

Given the inherent risk and complexity, managers have asked, for many years, whether this could be reduced by market research. Not surprisingly, the marketing literature takes a market-driven view, which has extensive market research as its key driver. That is, find out what the customer would like and then produce it (the market-pull approach to innovation). The benefits of this approach to the new product development process have been widely articulated and are commonly understood (Cooper, 1990; Kotler, 1998). Partly because of its simplicity, this view now dominates management thinking, but, unfortunately, this sometimes goes beyond the marketing department. The effect can be that major or so-called discontinuous innovations are rejected or accepted, based on consumer research.

Advocates of market research argue that such activities ensure that companies are consumer-oriented. In practice, this means that new products are more successful if they are designed to satisfy a perceived need rather than if they are designed simply to take advantage of a new technology (Ortt and Schoormans, 1993). The approach taken by many companies with regard to market research is that, if sufficient research is undertaken, the chances of failure are reduced (Barrett, 1996). Indeed, the danger that many companies wish to avoid is the development of products without any consideration of the market. Moreover, once a product has been carried through the early stages of development, it is sometimes painful to raise questions about it once money has been spent. The problem then spirals out of control, taking the company with it. Illustration 16.3 highlights many of the difficulties facing firms introducing new products.

Illustration 16.3

Neuromarketing accesses subconscious views on products and brands

Last month, I surrendered my subconscious to analysis. A red swimming cap was stretched over my head, long grey wires stuck to my skull and my innermost thoughts fed into a computer as I nervously watched an advertisement for Volkswagen.

In turn, the computer told a team of researchers which scenes I paid attention to, what I responded to emotionally and what I would go away remembering.

It was a far cry from the marketing industry's traditional method of finding out what consumers think about their brands: asking them.

The problem is, when gathered in traditional focus groups, respondents can be swayed by those sitting next to them or by the presence of researchers.

Alternatively, they may be unable to articulate their responses accurately. As a result, an increasing number of marketers now prefer to analyse the response of peoples' brainwaves to brands and advertisements by using the latest developments in neuroscience.

In recent months, these techniques have not just been applied to the marketing of finished products, but also to product development. 'It's about uncovering new undiscovered needs', says Martin Lindstrom, author of *Buyology*, who has been studying the development of neuromarketing since its inception seven years ago. 'A lot of manufacturers are struggling as it's easy to come up with ideas consumers don't feel they need.'

He cites the example of dishwasher tablets. Consumers are attracted to tablets embedded with a blue ball because, subconsciously, they believe they clean better. However, when asked in the context of traditional marketing methods, they claim no preference about colour.

‘The main reason why [traditional market research often] fails is that we look at things from a conscious point of view’, says Mr Lindstrom. ‘We ask: “Do you like the brand?” We ask the consumer to be incredibly rational and we know today from neuroscience that 85 per cent of the decisions we make are made by the unconscious part of brain.’

Neuromarketers believe their work will be especially useful for products consumers find hard to describe – particularly when they need to know consumers’ reactions to smell, taste and touch.

According to Neurofocus, the global market leader in neurological testing, consumer goods companies are even creating their own in-house testing units that mock up supermarkets. They can use them to change everything from shelf positioning to point-of-sale advertisements with the flick of a switch and monitor the shopper’s brain during the few seconds it takes to select a product.

But some advertisers fear this adherence to science could stamp out ‘light bulb’ ideas and destroy creativity in the industry.

Neurofocus argues that mind-reading actually helps sell original thinking to companies that would otherwise stick with tried-and-tested methods.



Source: Kuchler, H. (2010) Marketing industry turns to mind-reading, FT.com, April 11.
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The issue of market research in the development of new products is controversial. Marketing literature traditionally has portrayed new product development as, essentially, a market/customer-led process, but paradoxically, many major market innovations appear in practice to be technologically driven, to arise from a technology seeking a market application rather than a market opportunity seeking a technology. This, of course, is the antithesis of the marketing concept, which is to start with trying to understand customer needs. The role of market research in new product development is most clearly questionable with major product innovations, where no market exists. First, if potential customers are unable adequately to understand the product, then market research can provide only negative answers (Brown, 1991). Second, consumers frequently have difficulty articulating their needs. Hamel and Prahalad (1994: 8) argue that customers lack foresight; they refer to Akio Morita, Sony’s influential leader:

Our plan is to lead the public with new products rather than ask them what kind of products they want. The public does not know what is possible, but we do.

This leads many scientists and technologists to view marketing departments with scepticism. Frequently, they have seen their exciting new technology rejected, due to market research findings produced by their marketing department. Market research specialists would argue that such problems could be overcome with the use of ‘benefits research’. The problem here is that the benefits may not be clearly understood, or even perceived as a benefit by respondents. King (1985: 2) sums up the research dilemma neatly:

Consumer research can tell you what people did and thought at one point in time: it can’t tell you directly what they might do in a new set of circumstances.

In Illustration 16.4, from GlaxoSmithKline, consumer healthcare highlights the difficulties of trying to understand consumer research.

Illustration 16.4

GlaxoSmithKline

GSK have known for many years that consumers are fickle. Many years after the launch of its very successful Aquafresh striped toothpaste GlaxoSmithKline undertook consumer research to try to explore product development opportunities. Some of the findings were surprising. Consumers questioned the need or benefit of having stripes in the paste. Yet, in store trials, when given the opportunity to purchase a single colour paste consumers continued to purchase the striped toothpaste. A similar reaction was recorded when consumers were asked about flavouring of the toothpaste. Consumers suggested that they would prefer a wider variety of flavours such as strawberry or banana rather than mint, yet when other flavours were offered few consumers purchased them. The product manager emphasised the need to check consumer rhetoric with their actions.



Source: Pearson Education Ltd/Michael Matisse/Photodisc

Source: Trott, P. and Lataste, A. (2003) The role of consumer market research in new product decision-making: some preliminary findings from European firms, Entrepreneurship, Marketing and Innovation Conference, University of Karlsruhe, 8–9 September, conference proceedings.

Discontinuous new products

Major innovations are referred to as **discontinuous new products** when they differ from existing products in that field, sometimes creating entirely new markets and when they require buyers to change their behaviour patterns. For example, the personal computer and MP3 players created entirely new markets and required consumers to change their behaviour. Such products usually require a period of learning on the part of the user. Indeed, sometimes the manufacturer has to explain and suggest to users how the product should and could be used. Rogers' (2010) study on the diffusion of innovations as a social process argues that it requires time for societies to learn and experiment with new products. This raises the problem of how to deal with consumers with limited prior knowledge and how to conduct market research on a totally new product or a major product innovation. The two major difficulties are:

- 1 the problem of selection of respondents; and
- 2 the problem of understanding the major innovation.

Due to their focus on what is currently on offer in the marketplace, customers primarily demand so-called incremental innovations. Companies, however, want

to develop entry points for radical innovations. The identification of radical innovations is a difficult task whose implementation is associated often with significant risk. It is questionable if market research alone can allow innovation management to develop attractive search fields for radical innovations and whether it can also contribute to a reduction of the risk that such innovations inherently possess. Research by Lettl et al. (2006) shows that successful innovative companies tend to choose to involve specifically qualified knowledge carriers early on in the innovation process, such as lead users or external experts in their search for innovations.

Confronted with a radically new technology, consumers may not understand what needs the technology can satisfy, as was the case with the fax machine or 3M's Post-it Note. This is because consumers are not able to link physical product characteristics with the outputs of the innovation. For example, when consumers first saw a fax machine, all they saw was a bulky expensive machine that looked like a copier. They were not able to imagine using it, hence they were not receptive to the new idea. Research has shown that experts are better able to understand potential benefits than those with less product knowledge. The type of research technique selected is crucial in obtaining accurate and reliable data.

This is the key issue. Early customer input on applications that use radically new technologies is crucial for gaining an understanding of the benefits and value of these new technologies. But new technologies often are difficult to understand. Potential customers must have a clear understanding of a new technology application before they give their input on it. Otherwise, that input may be misleading. Prototypes provide a clear picture to the customer, but seldom are available in the early (predevelopment) stage. Research by van den Hende and Schoormans (2012) suggests that an easy-to-apply product narrative can explain a technology application that uses a radically new technology to a customer before prototypes have been completed.

Market research and discontinuous new products

In the case of discontinuous product innovations, the use and validity of market research methods is questionable. As far back as the early 1970s, Tauber (1974) argued that such approaches discourage the development of major innovations. It may be argued that less, rather than more, market research is required, if major product innovations are required. Such an approach is characterised by the so-called technology-push model of innovation. Products that emerge from a technology-push approach are generated with little consideration of the market. Indeed, a market may not yet exist, as with the case of the PC and many other completely new products. Frequently, consumers are unable to understand the technology in question and view new products as a threat to their existing way of operating. Martin (1995: 122) argues that:

customers can be extremely unimaginative . . . trying to get people to change the way they do things is the biggest obstacle facing many companies.

Many writers on this subject argue that potential consumers are not able to relate the physical aspects of a major innovative product with the consequences of owning and using it (Ortt and Schoormans, 1993). Others argue that, whilst market research

can help to fine-tune product concepts, it is seldom the spur for an entirely new product concept. Consequently, most conventional market research techniques deliver invalid results (Hamel and Prahalad, 1994).

New approaches are being recognised in the area of discontinuous product innovations. One technique adopts a process of probing and learning, where valuable experience is gained with every step taken and modifications are made to the product and the approach to the market based on that learning (Lynn et al., 1997). This is not trial and error but careful experimental design and exploration of the market often using the heritage of the organisation. This type of new product development is very different from traditional techniques and methods described in most marketing texts.

Circumstances when market research may hinder the development of discontinuous new products

Product developers and product testers tend to view the product offering in a classical layered view, where the product is assumed to have a core benefit and additional attributes and features are laid around it, hence layered view. Saren and Tzokas (1994) have argued that much of the problem is due to the way we view a product. They state that often we view it in isolation from:

- its context;
- the way it is used; and
- the role of the customer–supplier relationship.

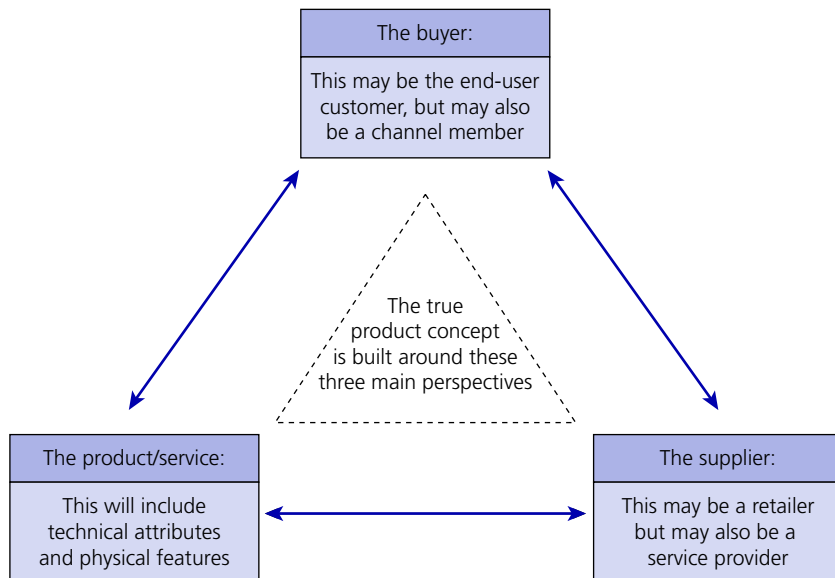


Figure 16.2 The tripartite product concept

Source: Adapted from Saren, M.A.J. and Tzokas, N. (1994) Proceedings of the Annual Conference of the European Marketing Academy, Maastricht.

This contributes to misleading views on new products. Figure 16.2 illustrates the **tripartite product concept** that captures the three views highlighted by Saren and Tzokas. The significance of this alternative view is that it highlights the reality of any product's situation. That is, product developers and product testers need to recognise that a product will be viewed differently by channel members than by end users. For example, end users will be concerned about how the product will perform, whereas channel members are more interested in how the product will *sell*, whether it will be easy to *stock and display* and, most importantly, whether it will be *profitable*. The Dyson case study at the end of this chapter illustrates the difficulties in trying to convince retailers to stock a new, slightly unusual product with which they are not familiar.

Technology-intensive products

Adopting a technology-push¹ approach to product innovations can allow a company to target and control premium market segments, establish its technology as the industry standard, build a favourable market reputation, determine the industry's future evolution, and achieve high profits. It can become the centrepiece in a company's strategy for market leadership. It is, however, costly and risky. Such an approach requires a company to develop and commercialise an emerging technology in pursuit of growth and profits. To be successful, a company needs to ensure its technology is at the heart of its competitive strategy. Merck, Microsoft and Dyson have created competitive advantage by offering unique products, lower costs or both by making technology the focal point in their strategies. These companies have understood the role of technology in differentiating their products in the marketplace. They have used their respective technologies to offer a distinct bundle of products, services and price ranges that have appealed to different market segments. Such products revolutionise product categories or define new categories, such as Hewlett-Packard's laser-jet printers and Apple's (then IBM's) personal computer. These products shift market structures, require consumer learning and induce behaviour changes, hence the difficulties for consumers when they are asked to pass judgement.

This is particularly the case if the circumstances relate to an entirely new product that is unknown to the respondent. New information is always interpreted in the light of one's prior knowledge and experience. In industrial markets, the level of information symmetry about the core technology usually is very high indeed (hence the limited use of market research), but, in consumer markets, this is not always the case. For example, industrial markets are characterised by:

- relatively few (information-rich) buyers;
- products often being customised and involving protracted negotiations regarding specifications;
- and, most importantly, the buyers usually being expert in the technology of the new product (i.e. high information symmetry about the core technology).

In situations of low information symmetry, consumers have difficulty in understanding the core product and are unable to articulate their needs and any additional

¹ The technology-push approach to NPD centres on trying to deliver the most effective technology available.

benefits sought. Conversely, in situations of high information symmetry, consumers are readily able to understand the core product and, hence, are able to articulate their needs and a wide range of additional benefits sought, for example in tasting new food products.

Furthermore, discontinuous product innovations or radical product innovations frequently have to overcome the currently installed technology base – usually through displacement. This is known as the **installed base effect**. The installed base effect is the massive inertial effect of an existing technology or product that tends to preclude or severely slow the adoption of a superseding technology or product. This creates an artificial adoption barrier that can become insurmountable for some socially efficient and advantageous innovations. An example of this is the DVORAK keyboard, which has been shown to provide up to 40 per cent faster typing speeds. Yet, the QWERTY keyboard remains the preference for most users because of its installed base, i.e. the widespread availability of keyboards that have the QWERTY configuration (Kay, 2013).

The idea of being shackled with an obsolete technology leads to the notion of **switching costs**. Switching is the one-time cost to the buyer who converts to the new product. Porter (1985) notes that switching costs may be a significant impediment to the adoption of a new consumer product. Buyer switching costs may arise as a result of prior commitments to a technology (a) and to a particular vendor (b). Computer software is an obvious example where problems of compatibility frequently arise. Similarly, buyers may have developed routines and procedures for dealing with a specific vendor that will need to be modified if a new relationship is established. The effect of both types of switching costs for a buyer is a disincentive to explore new vendors. There is a clear dilemma facing firms: market research may reveal genuine limitations with the new product, but also it may produce negative feedback on a truly innovative product that may create a completely new market. The uncertainty centres on two key variables:

- 1 information symmetry about the core technology between producer and buyer; and
- 2 the installed base effect and switching costs.

Breaking with convention and winning new markets

There is evidence to suggest that many successful companies were successful because they were prepared to take the risky decision to ignore their customers' views and proceed with their new product ideas because they passionately believed that it would be successful. Subsequent success for these new products suggested that the firm's existing customers were unable to peer into the future, recognise that a different product or service would be desirable and articulate this to the firm. On reflection, this seems a lot to ask of customers and, indeed, is extremely difficult.

Between 1975 and 1995, 60 per cent of the companies in the *Fortune* 500 listing were replaced. Irrespective of their industry, new entrants either created new markets or recreated existing ones. Compaq overtook IBM to become the world's largest manufacturer of personal computers; Dyson overhauled Hoover's established position of market leader to become the new market leader in vacuum

Illustration 16.5

Closures for the wine industry: the customer does not know best

Consumers made it clear time and again that they did not want a screw-cap on their bottle of wine. They preferred the theatre of the cork and pop. Yet, the international wine brands and retailers were determined to show customers

that screw-cap was better: in 2011, over 90 per cent of wine bottles were sold with a screw-cap (<http://www.jancisrobinson.com/articles/arent-screwcaps-mahvellous>). See the case study at the end of Chapter 7.

cleaners; Xerox lost out to Canon, which quickly became the bestseller in copiers; and there are many other examples. So why is it that established highly respected firms fail to recognise the future? In the cases already mentioned, hindsight suggests that more resources should have been devoted to innovation, but that is not all. Established businesses that have been successful for many years also develop comfortable routines and become complacent. Hierarchies, systems, rulebooks and formulae work pretty well for controlling and improving the efficiency of repeated actions. They are hopeless for inventing, experimenting with and developing something that has never happened before (see ‘The dilemma of innovation management’, Chapter 4). Furthermore, a growing number of academics (Christensen, 1997; Hamel and Prahalad, 1994) argue that a particular problem exists because firms rely too heavily on market research and that some of the techniques reinforce the present and do not peer into the future. It is well known that market research results often produce negative reactions to discontinuous new products (innovative products) that later become profitable for the innovating company. Indeed, there are some famous examples, such as the fax machine, the VCR and James Dyson’s bagless vacuum cleaner. Despite this, companies continue to seek the views of consumers on their new product ideas. The debate about the use of market research in the development of new products is long-standing and controversial.

In his award-winning ‘business book of the year’² Clayton Christensen (1997) investigated why well-run companies that were admired by many failed to stay on top of their industry. His research showed that, in the cases of well-managed firms such as Digital, IBM, Apple and Xerox, ‘good management’ (sic) was the most powerful reason why they failed to remain market leaders. It was precisely because these firms listened to their customers and provided more and better products of the sort they wanted that they lost their position of leadership. He argues that there are times when it is right not to listen to customers. Indeed, many companies share the same ideas about who their customers are and what products and services they want. The more that companies share this conventional wisdom about how they compete, the more they fight for incremental improvements in cost reductions and quality, and the more they avoid the discontinuous disruptive new products. Illustration 16.5 highlights the dangers of falling into this trap.

It is not surprising that many firms try to meet the needs of their customers. After all, successful companies have established themselves and built a successful

² Christensen (1997) was awarded the *Financial Times* business book of the year award in 1999.

business on providing the customer with what he or she wanted. IBM and Hoover, for example, became very good at serving their customers. But, when a new, very different, technology came along, these companies struggled. These large successful companies have been fighting known competitors for many years through careful planning and reducing costs. Suddenly, they were faced with a completely different threat: new, smaller firms doing things differently and using unusual technologies. In IBM's case, it was personal computers and, in Hoover's case, it has been bagless vacuum cleaners. Table 16.1 illustrates a wide range of products that initially were rejected by consumers, but went on to be successful.

If sufficient care is not exercised by managers, market research can be used to support conservative product development decision making. The previous sections have highlighted the difficulty faced by many managers in the field of new product development. In many crucial new product development decisions, the course of action that is most desirable over the long run is not the best course of action in the short term. This is the dilemma addressed in the debate about short-termism, that is, an emphasis on cutting costs and improving efficiencies in the immediate future, rather than on creativity and the development of innovative new product ideas for the long term. What is of concern is not the desire to cut costs but the apparent disregard of the implications and damage that such policies may bring about and, in particular, the neglect of the company's ability to create new business opportunities for the future well-being of the company.

To return to a point made earlier by Akio Morita, Sony's influential leader Morita argued that the public did not know what was possible and it was the firm that should lead the customer. This point is explored more fully by Hamel and Prahalad (1994: 108) who argue that firms need to go beyond customer-led ideas if they wish

Table 16.1 Products that initially were rejected by consumers but went on to be successful

New product	Year	
Fax machines	1960s	Initially rejected by consumers who could not see any application for this product.
Microcomputers	1960s	Initially consumers could not foresee all the potential uses for microcomputers.
Benson & Hedges Gold cigarettes	1970s	Gallagher launched this product in the UK in 1978. Early consumer tests revealed indifferent support, yet the product was, eventually, a huge commercial success and brand leader in the UK.
Baileys Irish Cream Liqueur	1980s	Early consumer trials of this product suggested that it was not liked by consumers.
Dyson bagless vacuum cleaner	1990	Consumer research by retailers led them to believe consumers did not want a vacuum cleaner that displayed dirt collected in a transparent container. In fact, consumers later preferred this design.
Chryslers PT Cruiser	1990s	Actually, this product was not rejected, but Chrysler interpreted its consumer research as a niche product rather than a mass volume product. Hence, sales production could not match demand.
Screw-cap wine bottle closures	2000	Wine bottlers bowed to the demand of large retailers (buyers) to incorporate screw-caps. Consumers initially rejected screw-caps, but many now prefer it.

Source: A dirty business, *Guardian* 16/03/1999, copyright Guardian News & Media Ltd 2010.

to be successful in the future. They are brutal in their criticism of customers' ability to peer into the future:

Customers are notoriously lacking in foresight. Ten or fifteen years ago, how many of us were asking for cellular telephones, fax machines and copiers at home, 24 hour discount brokerage accounts, multivalve automobile engines, video dial tone, etc.?

Successful companies of the future will be those that are part of its creation. This means developing products that will be used in the future. Companies need to continually challenge existing products and markets. This can be achieved by pushing at the boundaries of current product concepts. Some firms have recognised this and are putting the most advanced technology they have available into the hands of the world's most sophisticated and demanding customers. IBM and Xerox have learnt through bitter experience what it is like to lose out to newcomers with new ideas and new technology. They know that today's customers may not be tomorrow's.

Using a simple two-by-two matrix (Figure 16.3) showing needs and customers, Hamel and Prahalad have shown that however well a company meets the articulated needs of current customers, it runs a great risk if it does not have a view of the needs customers cannot yet articulate: in other words, the products of the future.

All this raises the problem of how to deal with consumers with limited prior knowledge and how to conduct market research on a totally new product or a major product innovation. In their research analysing successful cases of discontinuous product innovations, Lynn et al. (1997) argue that firms adopt a process of probing and learning. Valuable experience is gained with every step taken and modifications are made to the product and the approach to the market based on that learning.

This is not trial and error, but careful experimental design and exploration of the market often using the experience and heritage of the organisation. This type of new product development is very different from traditional techniques and methods described in marketing texts.

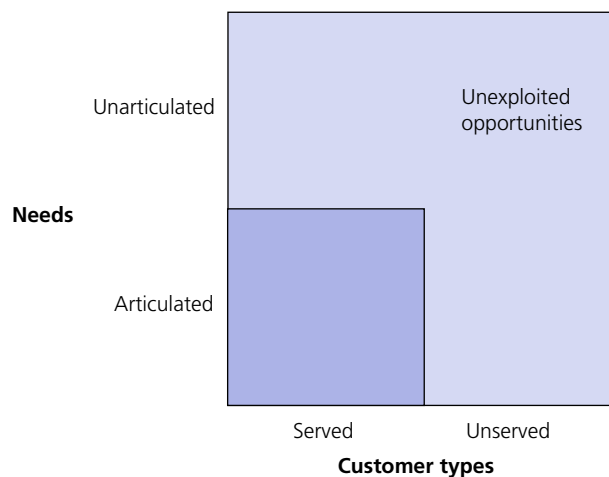


Figure 16.3 Gaining new customers of the future

Source: Hamel, S. and Prahalad, C.K. (1994) Competing for the future, *Harvard Business Review*, vol. 72, no. 4, 122–8.

Technology-intensive products present similar difficulties. Nyström (1990) described high-tech markets as marketing dependent and technologically driven. Unfortunately, there is evidence that this linkage often is not recognised by organisations (Trott et al., 2013). High-tech markets are characterised as complex. In addition, they exist under rapidly changing technological conditions, which lead to shorter life cycles and the need for rapid decisions. The importance of speed in high-tech markets is driven by increasing competition and the continually evolving expectations of customers. All of this is compounded by higher levels of risk for both the customer and the producer. Herein lies the problem: highly innovative products have an inherent high degree of uncertainty about exactly how an emerging technology may be formulated into a usable product and what the final product application will be. Market vision, or the ability to look into the future and picture products and services that will be successful, is a fundamental requirement for those firms wishing to engage in innovation, but is also very problematic (Van der Duin, 2006). It involves assessing one's own technological capability and present or future market needs and visioning a market offering that people will want to buy. Whilst this may sound simple, it lies at the heart of the innovation process and focuses attention on the need to examine not only the market but the way the new product offering is used or consumed.

When it may be correct to ignore your customers

Many industry analysts and business consultants argued that the devotion to focus groups and market research had gone too far (Christensen, 1997; Francis, 1994; Martin, 1995). Indeed, the traditional new product development process of market research, segmentation, competitive analysis and forecasting, prior to passing the resultant information to the research and development (R&D) department, leads to commonality and bland new products. This is largely because the process constrains rather than facilitates innovative thinking and creativity. Furthermore, and more alarming, these techniques are well-known and used by virtually all companies operating in consumer markets. In many of these markets, the effect is an over-emphasis on minor product modifications and on competition that tends to focus on price. Indeed, critics of the market-orientated approach to new product development argue that the traditional marketing activities of branding, advertising and positioning, market research and consumer research act as an expensive obstacle course to product development rather than facilitating the development of new product ideas.

For many large multi-product companies, it seems the use of market research is based upon accepted practice in addition to being an insurance policy. Many large companies are not short of new product ideas – the problem lies in deciding in which ones to invest substantial sums of money (Cooper, 2001; Liddle, 2004), and then justifying this decision to senior managers. Against this background one can see why market research is so frequently used without hesitation, as decisions can be justified and defended. Small companies in general, and small single-product companies in particular, are in a different situation. Very often, new product ideas are scarce; hence, such companies frequently support ideas based upon their intuition and personal knowledge of the product.

The significance of discontinuous new products often is overlooked. Morone's (1993) study of successful US product innovations suggests that success was achieved through a combination of discontinuous product innovations and incremental improvements. Furthermore, in competitive, technology-intensive industries, success is achieved with discontinuous product innovations through the creation of entirely new products and businesses, whereas product line extensions and incremental improvements are necessary for maintaining leadership (Lynn et al., 1997). This, however, is only after leadership has been established through a discontinuous product innovation. This may appear to be at variance with accepted thinking that Japan secured success in the 1980s through copying and improving US and European technology. This argument is difficult to sustain on close examination of the evidence. The most successful Japanese firms have also been leaders in research and development. Furthermore, as Cohen and Levinthal (1990, 1994) have continually argued, access to technology is dependent on one's understanding of that technology.

Pause for thought



Ignoring your customers' views seems like a very high risk strategy, especially for an ambitious new manager and, if the product eventually fails, so might the career of the new manager!

Striking the balance between new technology and market research

Market research can provide a valuable contribution to the development of innovative products. The difficulties lie in the selection and implementation of research methods. It may be that market research has become a victim of its own success, that is, business and product managers now expect it to provide solutions to all difficult product management decisions. Practitioners need to view market research as a collection of techniques that can help to inform the decision process.

The development and adoption process for discontinuous or complex products is particularly difficult. The benefits to potential users may be difficult to identify and value and, usually because there are likely to be few substitute products available, it is difficult for buyers to compare and contrast. Sometimes, product developers have to lead buyers/consumers and show them the benefits, even educate them. This is where some marketing views suggest the process is no longer customer-led or driven by the market, and they would argue that what is now occurring is a technology-push approach to product development. Day (1999) suggests that, on closer examination, there are a number of false dichotomies here:

- that you must either lead or follow customers;
- that you cannot stay close to both current and potential customers; and
- that technology-push cannot be balanced with market-pull.

It is true, as we have seen in this chapter, that customers respond most positively to what is familiar and comfortable and that customers view the high costs of new

technology (including switching costs) in a largely negative way. Firms need to try to understand how customers will view innovations in the marketplace; this may include adoption influences, such as consumption pattern, product capability and technological capability (Veryzer, 2003). Valid good management should be capable of selecting the appropriate market research techniques to avoid superficial consumer reactions. A thorough understanding of all aspects of the market and the needs of users should inform managers that it is possible to provide customers with what they want and lead them through education.

The argument about current markets and future markets is made powerfully by both Christensen (1997) and Hamel and Prahalad (1994). The suggestion here is that firms become myopic towards their current customers and fail to see the larger slowly changing market. The case of IBM in the 1980s is often given here. It surely is a responsibility of senior management to try to understand the wider and future environment of the firm. This may be very easy to record, but, in practice, it is extremely difficult to carry out. There are real dangers for all firms here. For example, discontinuous new technologies may require huge changes for firms and one can see that, for many, the easy option is to hope the new technology fails and the firm can carry on as normal. Failure to change and adopt may result in more cases like IBM, Xerox, Hoover and many financial service firms that failed to respond to online banking. Once again, it should be possible for a well-run company to fully exploit its current markets and develop and enter the markets of the future. For example, both Kodak and Fuji have exploited the massive changes in the photographic market with the introduction of digital photography.

Finally, the arguments about market-pull or technology-push never seem to go away. But readers of this book should now be clear that this is a stale argument. What is required is an understanding of innovation. Whilst it is clear that, in some industries, the role of science and technology is far greater than in other industries, innovation requires inputs from both. It is true there are many firms in the pharmaceutical sector that argue that their approach to product development is to start with brilliant science and to look for ways of using it in new drugs; and that the role of marketing and sales is to develop sales of these products. Whilst this approach may work for a few, even in this industry sector, there are many firms that operate differently. Some of the most successful pharmaceutical firms, including Glaxo-SmithKline, Pfizer and Merck, work very closely with buyers and users to develop new drugs and to improve many existing ones. Indeed, the success of one of the world's bestselling drugs, Viagra, is, surely, testament to the benefits of working closely with the market.

Using suppliers and lead users to improve product variety

On the suppliers' side, collaboration during the NPD process may lead to a faster and more efficient process. On the lead users' side, collaboration may provide ideas for entirely new products and/or modifications to existing ones. Research by Al-Zubi and Tsinopoulos (2012) has shown that increasing the extent of collaboration with lead users and with suppliers during the NPD process will increase the variety of products offered to customers, and that lead users have a higher impact on product variety to suppliers. (See Chapter 3 for more on lead users.)

Innovation in action

Self-service is growing in some industries. What other sectors can it be applied to?

MINIBAR, in the heart of Amsterdam, is a self-service bar. When you arrive, a concierge gives you the key to your own fridge, which is stocked with beer, wine, spirits and snacks. You and your friends help yourselves over the course of the evening, and settle up your account before leaving. The mini-bars are stocked from the back, making for easy restocking. It's simply extending the concept of the hotel mini-bar to the high street of course – but it's new and is bound to attract interest.

From the customer perspective, it's fun, convenient and there's no more queuing at the bar. From a business perspective it also means fewer staff members, and more customers can be accommodated because less space is taken up by the bar.

Source: HSBC (2010) 100 Thoughts, HSBC, London.

The challenge for senior management

Innovation is clearly a complex issue and, sometimes, it is a concept that sits uneasily in organisations. Indeed, some writers on the subject have argued that organisations are often the graveyard rather than the birthplace for many innovations. Applying pressure on product managers to seek high profits from quick volume sales rather than develop business opportunities for the future is a common mistake made by senior management. Similarly a heavy reliance on market research to minimise risk when developing new product ideas also contributes to an early grave for product ideas. The use of financial systems that minimise risk and avoid investment in more long-term projects is another common preference, which frequently emanates from senior management.

Correcting such ills will never be easy, but, given the strategic importance of innovation, it is a challenge senior management must take up. The adjustments that need to be made in order to encourage innovation in large companies may break some of the established rules of corporate life. They will require changes to internal systems and structures and the culture of the organisation. However, without such changes, potential innovations will continue to be squeezed out by the system, and thus rob the company of the most effective means of survival (Brown, 1991).

Case study

Dyson, Hoover and the bagless vacuum cleaner

This case study illustrates many of the obstacles and difficulties of launching a new product. The product in question used new technology that initially was rejected by existing manufacturers. It was

priced at more than double that of existing products, but, eventually, captured more than 50 per cent of the UK vacuum cleaner market in less than four years.

