PRODUCT MANAGEMENT

DIRECTORATE OF DISTANCE EDUCATION

MBA

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Reviewer	
Dr. M. Selvam	Dean, Faculty of Management Alagappa University, Karaikudi

Authors

Arun Kumar and N Meenakshi: Units (1.2.4, 1.3, 1.4.3-1.4.4, 2.0-2.2, 2.4.2-2.5, 2.8-2.10, 3.0-3.2.1-3.2.9-3.8, 4.0-4.4, 4.7-4.9, 5.0-5.1, 5.3-5.4, 5.5.2-5.8, 6.2) © Reserved, 2013

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SYLLABI-BOOK MAPPING TABLE

Product Management

Syllabi	Mapping in Book
UNIT 1 **Product Concept:** Product Classification – Product Vs. Service – Product Vs. Commodity – Financial Products – Derivative Products – Product line decisions: Product mix decisions, Product modification, Product differentiation, Product elimination – New Product Development: Need, risks and uncertainty- Product management organization structure – Role of product managers.	**Unit 1:** Product Concept **(Pages 3-40)**
UNIT 2 **New Product Development Process:** Generation of ideas – Idea screening – Feasibility testing – Concept development and testing – Designing a new product: Factors to be considered – Standardization Vs Adaptation Vs. Differentiation– Modular design –Reverse engineering - Marketing strategy development – Business analysis – Product development – Test marketing – Commercialization – Launching – Success and Failures in launches: New product success and failures in Indian context – Classification of new products.	**Unit 2:** New Product Development Process **(Pages 41-98)**
UNIT 3 **Creativity and Innovation for NPD:** Concept and Contours of creativity- Sources of Innovation- New Product Championing- Venture teams in new product development (NPD) – Organization for new product development – Top management contribution – 7S framework and its use in NPD – Team working.	**Unit 3:** Creativity and Innovation for New Product Development (NPD) **(Pages 99-124)**
UNIT 4 **Product and Branding Positioning:** Product Positioning: Concept and Process - Branding Positioning: Product Branding – Brand extension – Brand valuation – Brand image and equity – Brand positioning strategies – Packaging – Trends in packaging.	**Unit 4:** Product and Brand Positioning **(Pages 125-162)**
UNIT 5 **Product Life Cycle (PLC):** Phases of PLC and features thereof- Functional Management strategies for different phases of PLC- Strategic intervention for PLC management.	**Unit 5:** Product Life Cycle (PLC) **(Pages 163-182)**
UNIT 6 **Product Strategy and Policy:** Product Portfolio Strategy – Product Investment and Divestment strategy- Product policy: New product development policy: Product Line consistency, Frequency, Launch time and Cannibalization Mitigation- Product Research – Components and areas of product research.	**Unit 6:** Product Strategy and Policy **(Pages 183-199)**

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INTRODUCTION

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This book, *Product Management*, provides the basic knowledge related to management of a commercial product. Product management is a function within an organization that deals with the planning or forecasting or marketing of a product or products at various stages of the product life cycle. It deals with questions such as: the products to produce and sell; new products to add; products to discontinue, etc.

Unit 1 describes the concept of a product and its significance in the market. It dwells on the aspects of financial and derivative products and explains how product line decisions are taken. The role of a product manager is also discussed in detail.

Unit 2 analyses the new product development process. It elaborates the designing aspects of a product, the importance of product standardization, and discusses the various marketing strategies of product development.

Unit 3 elucidates the importance of creativity and innovation in new product development. It also dwells on how creativity can be nurtured in an organization, besides explaining the various types of innovation.

Unit 4 talks about the branding concept and also elucidates how brand positioning can make or break a product.

Unit 5 discusses in detail the life cycle of a product. It also analyzes how the concept is used by various organizations as a strategic marketing tool to enhance the life of a product.

Unit 6 explains several strategies and policies that can enhance the product development process. It also elaborates how some companies deliberately resort to corporate cannibalization to revive a dying product.

Each unit of the book begins with an introduction, followed by unit objectives. They introduce the students to the text and provide an overview of important concepts and topics. Numerous figures and tables highlight important points and expand on discussion of the text to aid in the understanding of key concepts. ‘Check Your Progress’ questions ensure that the concepts have been understood well. Questions and Exercises section encourages for recollecting information as well as the application of concepts.

UNIT 1 PRODUCT CONCEPT

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1.0 INTRODUCTION

Whenever we switch on our TV sets, we are bombarded with advertisements of all sorts, ranging from motor bikes to anti-ageing creams. 'Fastest bike in the market', scream some billboards. As we open the newspaper, we see retailers offering us the 'best buys'. All these strategies have one thing in common. They showcase the best qualities of certain items.

A lot of hard work, money and ideas go into these advertisements. Normally, a company spends lakhs of rupees to highlight their products in the best possible light. The product concept deals with all these and dwells on what philosophy should guide a company's marketing and selling efforts.

Product concept lets us understand how every company believes that consumers will favour products that offer the best quality, high performance and added innovative features. Managers focusing on this concept focus on making finer products and advancing them over time. But quite often than not, these managers are so involved in developing better features for their product that they fail to sense the consumer's needs.

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But before delving into this concept, it is imperative to know more about a product, its types and its significance in the market.

In the language of economics, a product is something that can be produced and offered to a consumer to satisfy a need. A product also has tangible and intangible features, such as colour, packaging, service, etc. A consumer purchases a product, based on these features, to meet his needs. But we are not to confuse a product with a commodity or a service. They can be distinguished. But the lines between product and service are getting blurred because nowadays, even organizations just do not sell a product – they provide some form of service, such as warranty, after-sales support and installation.

Due to the presence of tangible and intangible features, a product can be classified into two groups: (i) Consumer goods, (ii) Industrial goods. As mentioned earlier, anything that is sold in the market, and satisfies a consumer's needs is a product. Likewise, there are products linked to finance: financial products and derivative products. Tools that aid you to save, invest, get insurance or a mortgage fall in the financial product category. A derivative is a financial instrument whose value is based on one or more underlying assets.

A company manufactures various products. For example, the cellular phone brand, Nokia, has many types of handsets in the market. Besides highlighting its existing products, Nokia also need to constantly develop phones with innovative technology to keep ahead of its competitors. To develop a new product, the company will have to do a research about the competent models in the market and then map a plan to design its phone. Not all phones can capture the consumers' imagination. Therefore, the brand needs to tread the development stage with great care. Since the consumers' demands keep changing with the advent of newer technologies, Nokia will have to bring out a product that has an edge over its competitors. To manage all these, there has to be an organizational structure that group activities or people specializing in certain fields.

All this leads to one single thing: offering the best product to the consumer. A product thus becomes an entity of several factors — quality, social prestige, price and packaging. We shall dwell on product line decisions as we progress in this unit. The concept will help us understand how product line decisions rule the life of a product.

1.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the concept of product and its role in business
- Compare and contrast financial and derivative products
- Discuss how product line decisions play a crucial part in influencing the consumer
- Examine the need of product management

1.2 MEANING, CLASSIFICATION AND SIGNIFICANCE IN THE MARKET

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Product is the most important tool in the marketing mix. Without a product, there can be no marketing. The buyer purchases a product only because it satisfies his needs and desires. Thus, the product is a bundle of potential utility and the customer is more interested in the benefits that he gets from the product rather than the physical characteristics of the product.

There are two essential elements of a business:

1. Products (Goods and services)
2. Markets (Customers: buyers and sellers)

Without these two essential elements there can be no marketing. Transfer of ownership cannot take place unless there are both, a market and a product. Markets and products are the foundation on which the whole study of marketing is based.

1.2.1 What is a Product?

In simple terms, a **product** is something that can be offered in the market to satisfy a want or a need. It can also be described as a set of tangible and intangible features, such as colour, packaging, warranty, reputation and prestige of the manufacturer and retailer, service facility, etc. The buyer usually buys a product, based on these features, to meet his needs and requirements. A product is a bundle of utilities. People buy products for their utilities–real or perceived.

Product: Product is something that can be offered in the market to satisfy a want or a need

We need to stress upon the fact that a customer buys a product not simply based on ...'what it is', but also for what it means to him. For example, a person buys a car not simply because it provides him with the physical case of transportation but also for the social status and prestige that he enjoys from its possession. All human beings have a pre-conceived self image and based on that they buy a product or service. For example, if a person considers himself to be from the upper strata of the society, he will buy a product or service that will reinforce his self image. Similarly, a person who considers himself to be an upper class professional, will usually prefer to travel in the air-conditioned compartment of the train or will buy a branded watch that enforces his self image. Products that are marketed, include physical goods like TV, car, shampoo, washing machine; services such as courier, dry-cleaning, hospitality; events like game shows, workshops, seminars, or information and ideas such as consultancy services, etc.

There are two concepts related to a product—narrow and wide. In its narrow concept, a product is a bundle of physical or chemical attributes, which have some utility. A product is an object which satisfies the needs of the customer. Thus, a chair, a table, a fan, an electric iron, etc. are products in this sense. In the wider context, all the brands, colours, packaging and designs of the product are considered to be a different kind of product. For example, if shaving cream or tooth paste is produced in three different sizes, these are three different products because they satisfy the needs of different customers. Thus, if there is a change in the size or colour or brand or packaging, it is considered to be a new product. In other words, a product is the total benefit received by the customer.

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Product levels

As a result of the attributes and features carried by the product, such as, brand image, packaging, colour, etc., the product gets a personality of its own. It should also be understood that keeping in view the changes in the socio-economic environment, technology and human needs, the product has to undergo constant change. In this task, a crucial role is played by the marketers who suggest modifications and improvements in the product and services to combat the growing competition in the market. During this process, the product travels through five different levels, with each level adding more product value. The five levels constitute a customer value hierarchy:

1. Core Product
2. Generic Product
3. Expected Product
4. Augmented product
5. Potential Product

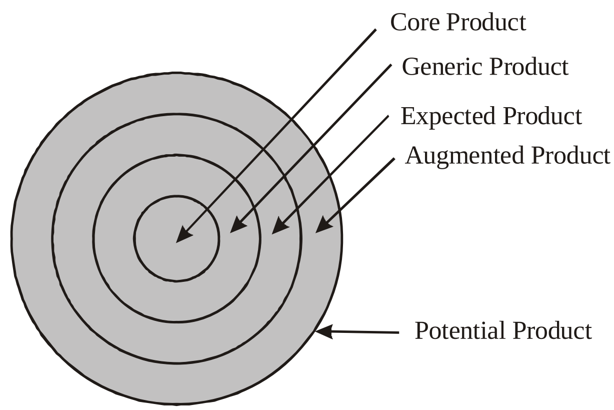

Fig. 1.1 *Product Levels*

Source: *Kotler and Kotler (2006)*

1. **Core Product:** The most fundamental product level is the one that provides a core benefit that the customer enjoys while buying the product or service. For example, a customer buys rest and sleep while paying for accommodation in a hotel. Another example will be the tooth paste which a customer buys as it is able to clean his teeth.
2. **Generic Product:** At the next stage, the marketer converts the core benefits into a basic product when we find that the hotel accommodation includes a bed, bathroom towels, tooth paste, tooth-brush, etc.
3. **Expected Product:** At the third level, the marketer prepares a list of features and benefits that the buyer usually expects while buying a product. For example, a shaving cream should conveniently be converted into lather for smooth shaving or a bathing soap should last longer. Hotel guests expect a clean bed, fresh towels, etc., since most hotels would be competent enough to meet these expectations. However, the traveller will obviously prefer a hotel, which apart from meeting these requirements, is more conveniently-located and less expensive.

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4. **Augmented Product:** At the fourth level, the marketer makes an attempt to provide more than what the customer usually expects from a product. This results in the emergence of an augmented product with an increased value addition of the product. For example, manufacturers of the Spark car have extended the normal warranty from one to three years and also offer cashless service for three years. Similarly, a hotel could provide fruit baskets on arrival, fresh flowers, 24-hrs check out, room dining service, etc.

   In fact, the most vigorous competition today takes place at the augmented level. The following points should be considered at the time of formulating a product augmentation strategy:

   (i) Each augmentation will lead to an increase in the cost of the product. The marketer has to ask if the customer will be willing to pay enough to cover that extra amount.

   (ii) Augmented benefits will soon be converted into expected benefits. For example, nowadays hotel guests expect a remote-controlled TV, telephone facility in their rooms, etc. Thus, the competitors will still have to search for other exclusive features and benefits in order to make their product more attractive.

   (iii) When the firm increases the price of an augmented product, competitors in the market can offer a 'stripped down' version of the product at a much lower price.

5. **Potential Product:** At the fifth level is the product of the future. This includes all kinds of transformations, innovations, modifications and augmentations that a particular product might undergo in the future. At this stage, the firm will search for more innovative ways to satisfy their customers and differentiate their product from their competitor's product. For example, some hotels would offer all-suite rooms, where the guest would occupy a set of rooms and this would constitute an innovation in the traditional hotel product.

Importance of product

It is rightly said that nothing happens in the economy unless there is a sale or purchase of products. A product is the soul of all marketing activities. We cannot even imagine marketing without a product. A product is a tool in the hands of management, through which it gives life to all marketing programmes. So the main responsibility of the marketing professionals should be to know their products well. The importance of product can be judged from the following facts:

- **The product is the central point of all marketing activities.** The product is the pivot and all the marketing activities revolve around it. All marketing activities, such as selling, purchasing, advertising and distribution, are useless unless there is a product. It is a basic tool by which the profitability of the firm is calculated. The product is the soul of business.
- **The product is the central point of planning.** No marketing plan can be prepared if there is no product since planning for all marketing activities is done on the basis of the nature, quality and demand of the product. Product policies decide other policies.
- **The product determines the channel of distribution.** For example, if the product happens to be an industrial product or a component, it will be sold

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directly by the manufacturer without any middlemen or intermediary. Similarly, a product of mass consumption such as washing powder, would require a wide distribution network and thus, different retailers of general merchandise will have to be approached by the marketing team of the manufacturer or wholesaler. In the case of specialty goods like laptops, washing machines, generators, etc., a different kind of distribution channel, which is much different from shopping goods, is required.

- **Promotion strategy of the firm also revolves around the product**. The choice of the major thrust area of promotion depends on the nature of the product. Whether the firm is going to use personal selling or advertising or sales promotion depends on the type of the product. For example, whereas industrial goods requires aggressive personal selling, products of mass consumption, emphasize on sales promotion and advertising.
- **The product is an end**. The main objective of all marketing activities is to satisfy the customers. It is the philosophy of the modern marketing concept. Various policy decisions are techniques to provide the customers benefits, utilities and satisfaction through the product.

1.2.2 Product Classification

Keeping in view that a product has both tangible and intangible features, it would be more appropriate to consider products in major identifiable groups. This can be done by using a formal classification system. The system works in such a way that it assists the marketer in planning the firm's marketing strategy. The two major categories of goods are (i) **Consumer Goods** and (ii) **Industrial Goods**. This classification is traditional and based on the purpose for which the goods are primarily used. Equipment and machineries used in factories are industrial goods and similarly, soaps, toothpastes, sweets and milk used in domestic households are consumer goods. However, these are not watertight compartments. For example, writing paper, when used for business or commercial purposes, comes under the category of industrial goods. But when it is used by a student for writing, it becomes a consumer good. In spite of this, classification is necessary because buying motive differs from buyer to buyer.

The two types of goods are further sub-divided into various categories as shown in Figure 1.2.

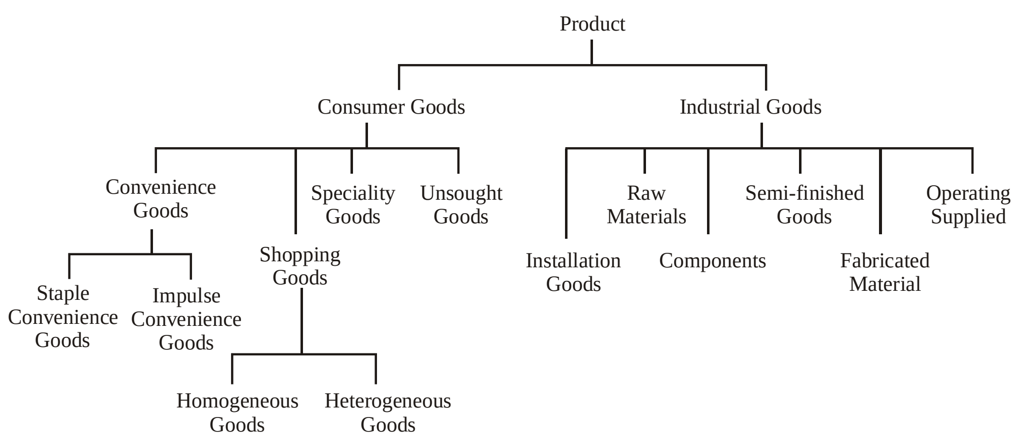

Fig. 1.2 *Product Classification*

(i) Consumer goods

Consumer goods are destined to be used ultimately by consumers or households. These goods can be further subdivided into four categories: (a) Convenience goods (b) Shopping goods (c) Specialty goods and (d) Unsought goods.

(a) Convenience goods: Household goods which have a low unit value are called convenience foods. The purchasing of such goods requires very little effort on the part of the consumer. The weekly shopping list of a family mainly consists of convenience goods. These goods are non-durable in nature and are consumed rapidly. They are also sometimes referred to as 'one shot items'. The buying of such goods is influenced by the habits of the consumer. The basis on which convenience goods are bought are easy availability and less time consumption. Thus, in order to maximize his sales, the manufacturer has to ensure that these goods are available widely.

Sometimes, the buying process in the case of convenience goods gets complicated due to the existence of multiple options which force the consumer to make comparisons and choices.

Convenience goods are further sub-divided into *staple* and *impulse* items.

Staple convenience goods: Staple convenience goods are these items that are consumed by most people on a day-to-day basis. Examples of staple goods are milk, bread and vegetables. Product differentiations for staple goods are very few. In other words, if a sudden need arises for buying staple goods, it requires very little thought.

Impulse convenience goods: There is no pre-planning involved in the purchase of impulse convenience goods. In this case, the decision to buy a product is made on the spot. Buying an ice-cream cone on a summer day is an example of impulse convenience goods.

(b) Shopping goods: Shopping goods include major durable and non-durable items. These goods are more expensive no compound to convenience goods and the purchase of such goods are less frequent, these are purchased only after comparing quality, style, price and suitability. The purchase of shopping goods is also marked by pre-planning. Products from this group are more complex and exhibit a high degree of differentiation. Being durable in nature (e.g., TV, refrigerator, car, air-conditioner, etc.), they are purchased less frequently. In case of shopping goods, brand name is also paramount. For example, the purchase of a car involves extensive consideration of facts like competitive features and strength of the product, credit terms, loan availability, delivery schedule, after-sales service, availability of spare parts, etc. Competence of the sales staff is also critical to the success of marketing of shopping goods.

Shopping goods can further be sub-divided into *homogenous* and *heterogeneous* goods.

Homogenous goods: Homogenous goods are primarily white goods such as refrigerators, washing machines, etc. Being a product of virtual necessity, there is a great degree of uniformity in the products of different producers in terms of price, prestige and image.

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Convenience goods: Household goods which have a low unit value

Staple convenience goods: Staple convenience goods are these items that are consumed by most people on a day-to-day basis

Shopping goods: Shopping goods include major durable and non-durable items

Homogenous goods: Homogenous goods are primarily white goods such as refrigerators, washing machines, etc.

Heterogeneous goods: Heterogeneous goods being a non–standard product, price is of secondary importance to the consumer. Behavioural factors play an important role in the purchase decision.

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(c) **Specialty goods:** In case of specialty goods the buying decision is marked by extensive search. Once the purchase choice has been made, the buyer is reluctant to accept any substitute product. Even though the market for specialty goods is small, the price and profit margins are high. The purchaser of specialty goods are prepared to pay more price for both quality product and prestige .The marketer of specialty goods companies need to take utmost care for creating and preserving the correct image of their product. If the marketing strategy adopted by a specialty goods marketer is successful, it can lead to considerable reduction in customer's search period for the product. This can be further illustrated by taking into account those cases when we find that some consumers decide much in advance to buy a designer outfit or jewellery before actual purchase is made.

(d) **Unsought Goods:** Those goods which have not been sought by the consumer an called unsought work. In this case, the purchasers have not planned their purchase in advance. In fact, they are not even aware of such products and can do without them. In this case the consumers have not been given any opportunity to evaluate and compare the product with others. Often, the consumers are suspicious of the offers made to them. All this puts the consumer in a position of disadvantage. Thus the marketers of unsought goods need to be sensitive to the consumer's choice and interest. The usual methods used in the marketing of unsought goods are door-to-door canvassing, direct-mailing, tele-marketing, etc.

Industrial goods: Industrial goods are primarily those goods which are used in producing other goods

(ii) Industrial Goods

Industrial goods are primarily those goods which are used in producing other goods. Industrial goods exhibit a uniform pattern of buying. The main features of industrial goods are: geographical concentration, technical nature of the product and limited numbers of buyers. Some of these goods have can be classified as consumer as well as industrial goods, depending on the purpose for which they are purchased. For example, tyres when purchased by the manufacturer of vehicles, come under the category of industrial goods but when purchased by individual owners of cars and scooters, become consumer goods.

Industrial goods fall into six main categories:

(a) **Installation goods:** Installation goods are critical industrial goods like plants and machineries required for the production of a company's product. They are probably the most expensive among the different products purchased by the company. Installation goods are critical, as any mistake by the company in procurement of these goods could prove costly and jeopardize the company's production base and thereby prove fatal for the company's financial health. That is why any purchase of installation goods is preceded by extensive research.

(b) **Raw materials:** Raw material procurement consumes the majority of the purchase department's time and constitutes its major workload. As there is a

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direct relationship between the raw material and the finished product, it is vital that utmost care is taken of the quality factor while purchasing raw material. Adequate attention should be given to the consistency of supply and service factor. The price of raw material is also important, particularly keeping in view the fact that these goods are purchased throughout the year and any upward trend in the price of these products can cause a decline in the company's sales and profit margin.

(c) **Components:** Components are the backbone of manufacturing units. It includes replacement and maintenance goods for manufacturing units. Other products included in the components' category are those which facilitate the manufacturing process but are not part of the finished product. Examples of such goods are oil, chemicals, packaging material and adhesives.

(d) **Semi-finished goods:** Semi-finished goods are neither raw materials nor finished goods. They are under process materials. These goods are supplied from one department to another in the same enterprise or are supplied from one to another industrial unit for further processing, e.g., steel, iron sheet, lead, etc.

(e) **Fabricated material:** Fabricated material becomes a part of finished industrial goods after going through a complete manufacturing process. However, these goods reach the consumers only after they are assembled or combined with other products. In any case, there is no change in their form or shape, e.g., electric motors, batteries, tubes and tyres, automobile parts, etc.

(f) **Operating supplies:** The products included in this category are essential for the business operation of industrial users but they do not form part of the finished product. Examples of these products are fuel, coal, cleaning material, goods required for general maintenance, etc. Operating supply goods can be considered as the convenience goods of industrial supply. The purchasing of these goods are considered as a routine job and undertaken by junior employees.

Consumer and Industrial goods: A Comparison

Consumer and Industrial goods have some basic differences as shown in the following table:

Table 1.1 *Difference between consumer goods and Industrial goods*

Consumer Goods	Industrial goods
Consumer goods are usually used by the ultimate consumers and households in a form that does not require any commercial processing.	Industrial goods are sold primarily for the purpose of producing other goods.
Consumer goods come ready in the market. The buyers can just purchase the product and consume it.	Industrial goods are not meant for direct consumption by consumers. Further processing of industrial goods is required before they can be finally consumed.
Consumer goods have a large base of consumers.	Consumers of industrial goods are usually small in number.
Consumer goods are usually purchased in small quantities.	Industrial goods are always bought in large quantities.
Consumer goods usually have a changing customer base. Buyers sometimes purchase an item without having any knowledge about it.	Users of industrial goods are well-informed and aware of the relative merits of the product. They are also aware of an alternative source of supply.

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Other categories of products

Besides the two main categories, there are also some products that make an impact.

1. Technology Products
2. Customized Products

Technology products: There are several inherent paradoxes in technology products that may prevent or postpone customer adoptions. Companies must diligently address these issues to make customers feel more comfortable. Nowadays, products are embedded with increasing amount of technology. Products like personal computers and mobile phones are supposed to make customers more efficient, entertain them and connect them with others. But customers accuse the very same products of wasting their time, creating confusing and isolating them. They have an uneasy relationship with technology and this uneasiness affects the way they shop, buy and use technology products.

A company should think carefully about how it can help customers cope with the paradoxes that its product creates. Money-back guarantee makes it easier for customers to test products. Rentals or leases will reduce the anxiety of customers who fear that their product will soon become obsolete. Companies can segment customers according to the prevailing paradox in the use of their products. They should see how their products fit the lives of customers. They should take into account the coping mechanisms adopted by customers while designing and marketing their products. A product will not be widely accepted if these paradoxes are not addressed by the makers of these products. It will be too risky to let customers fend for themselves.

Customized products: Companies can immensely benefit by using database management tools to design customized offerings for customers, and forge a learning relationship with them. Database technology permits companies to accumulate data about individual tastes and preferences of customers. This information can be used by companies to customize their offerings for customers at a low cost through flexible manufacturing systems. This can be a potent method of achieving competitive advantage, provided companies can practice it in a cost-effective manner. The only caveat for the company is that it may become so obsessed in serving customers with current technologies that it may lose sight of the next technology wave. For instance, if a company is operating in the consumer electronics business marketing music systems, it can get a competitive advantage by such customization measures, though it would miss out on the next level of technology.

Check Your Progress

1. What are the two concepts related to a product?
2. List the importance of a product.
3. Cite at least four differences between consumer goods and industrial goods
4. List the various types of industrial goods.
5. Mention the other categories of products.
6. Differentiate between products and services.
7. How is a product different from a commodity? Mention two basic differences.

1.2.3 Product vs Service

An output can be a good, a product, or a service; however, there are certain fundamental differences between a product and a service. The points of difference between a product and a service from the production and operations management point of view are:

Table 1.2 Difference between Product and Service

Product	Services
Products are tangible. They have physical parameters.	Services are intangible. They are just ideas, concepts or information.
Products can be produced, stored and transported according to demand since the value is stored in the product.	Services cannot be produced beforehand, stored or transported. Value of a service is conveyed as used
It is produced in a factory environment, usually away from the customer.	Services are produced in a market environment in collaboration with customer.
Products are often standardized.	Services are often customized.
Quality is inherent to the product.	Quality inherent to the process since it is a function of people.

The distinction between products and services is getting hazier by the day. Even purely manufacturing organizations just do not sell a product – they provide some form of back up, such as after sales service, warranty, repair, installation, etc. On the other hand, even in purely service industries such as banks, hospitals, educational institutions and consultancies, there is some tangible product changing hands, such as proposals, notes, record, diagnosis reports, prescriptions, etc. Banks sell 'products' such as loan schemes, credit cards, etc. In an educational setup, the student sees his degree or diploma as the end product, while the institution may see 'enlightened student with appropriate knowledge and skills' as the end product.

1.2.4 Product vs Commodity

Product

In the simplest terms, product is defined as a 'thing produced by labour or effort'. Simultaneously, is is also the 'result of an act or a process'. The word product originates from the verb 'produce', that means 'lead or bring forth'. Since 1575, the word 'product' has referred to anything produced. But after 1695, the word was used to refer to 'thing or things produced'. In economics and commerce, products pertain to a broader category of goods. In economic terms, the word 'product' was first used by political economist Adam Smith.

While in marketing, a product is an item that can be offered to a market and can satisfy a want or need. In retailing, products are termed as merchandise. In manufacturing, products are the raw materials and the finished goods.

Commodity

Commodities are usually raw materials such as metals and agricultural products, but a commodity can also be anything widely available in the open market. In insurance, policies are called products.

In economics, a **commodity** is the term used for any marketable item produced to satisfy wants or needs. Economic commodities consists of goods and services.

Commodity, in specific term, is only applied to goods. It is used to describe a class of goods which has demand, but is supplied without qualitative differentiation. The market treats a commodity as equivalent with no regard to the producer. Gold

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Commodity: Commodity is the term used for any marketable item produced to satisfy wants or needs and petroleum are examples of such commodities. The price of gold is universal, and fluctuates daily, based on global supply and demand. Items such as TV sets, however, have many aspects of product differentiation. They can be classified based on their brands, user interface, perceived quality, etc. The more valuable a TV set is perceived to be, the costlier it will be.

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1.3 FINANCIAL AND DERIVATIVE PRODUCTS

Financial products: Tools that aid you to save, invest, get insurance or a mortgage, are termed as financial products

Tools that aid you to save, invest, get insurance or a mortgage, are termed as **financial products**. These products are issued by banks, financial institutions, stock brokerages, insurance providers, credit card agencies and government-sponsored bodies. Based on their type, financial products are classified into various categories.

- **Shares**: are products that indicates ownership of a company. Originally, shares are issued by companies to finance their business needs, which are then purchased and sold by individuals in the share market. Shares are related with high risk as well as returns. Returns on shares may be in the form of dividend payouts by the organization or profits on the sale of shares in the stockmarket.
- **Bonds**: Bonds are tools used for funding expenses by private organizations or government agencies. Companies issue bonds to fund their business operations. Government agencies use them to support their expenses for infrastructure and social programmes. Bonds have lower risk than shares because they have a fixed interest rate.

Treasury bills: These are finance tools issued by the government to fund its short-term needs

- **Treasury Bills**: These are finance tools issued by the government to fund its short-term needs. Treasury bills are offered with a discount to the principal amount. The difference between the maturity value and the price at which the Treasury Bill was bought translates into profit.
- **Options**: When people buy or sell shares, they are given some rights. These rights are called options. An option holder does not buy shares, but he purchases the rights on the shares.
- **Mutual Funds**: Companies bring together money from many people and invests it in stocks, bonds or other assets. The combined holdings of stocks, bonds and other assets are known as its portfolio. Each investor in the fund owns shares, which represent a part of these holdings.
- **Certificate of Deposit**: Certificates of deposit, also called CDs, are given by banks, thrift institutions and credit unions. They usually have a fixed term and interest rate.

Annuitie: These are contracts between individual investors and insurance companies

- **Annuities**: These are contracts between individual investors and insurance companies. Investors agree to pay a fixed amount of premium and at the end of a pre-determined term the insurer guarantees payments to the insured party.

Complex Financial Products

Some financial products are highly complex in nature. Some of them are:

1. **Credit Default Swaps (CDS)**: CDS are extremely leveraged contracts and are privately reached on a consensus by two parties. These products cover

losses on securities in case there is a default. There is no definite reporting mechanism to determine the value of these contracts as they are not regulated by the government.

2. **Collateralized Debt Obligations (CDO)**: Collateralize means to secure (a loan) through use of collateral. CDOs are securities created by collateralizing several such debt obligations. These products can be bought and sold. The buyer gets the right to a part of the debt pool's principal and interest income.

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1.3.1 Derivative Products

The value of derivative products comes from the performance of the value of an asset. A derivative product results from modifying an existing product. Such an item has different properties than those of the product it is derived from.

Derivative products are used for these purposes:

- Cut the financial risk of an existing portfolio
- Undertake exposure to risk to achieve a profit;
- Achieve profit-lacking risk with the help of mutual transactions on the derivative and also on the primary element capable of seizing any valorization.

Some examples of derivatives: the Foreign Exchange, the Financial Futures market, the Commodities Futures market, the Options market, the Collateralized Obligations market and the Swaps Markets.

Derivatives are also called 'Contingent Claims' as they are dependent on variables which control the valuation process.

Derivatives are interrelated. Take for example, in currencies there is a cash market, a bank forward market, a currency futures market, options on cash currencies, options on currency futures, swaps on currencies, instruments on stocks or shares (ADRs), etc.

1.4 PRODUCT LINE DECISIONS

Product line involves the creation of a group of products that have similar features and perform the same functions. They are marketed to similar customer groups through the same channels of distribution. A product line may consist of products having various sizes, types, quality, colour and price. An example would be the range of soaps manufactured by a company which are different in sizes fragrance, colour and price. The important features of a product line are as follows:

Line stretching

This type of strategy is used by the marketer when he feels that he can increase the company's profitability by adding or deleting an item from its product line. The line stretching can either be an upward or downward movement.

Upward stretching takes place when the company moves or attempts to reach the upper end of the market through a line extension. The company prefers to go for upward line stretching to achieve a higher rate of growth and better margins. The

Check Your Progress

8. Give a few examples of financial products.
9. What are the types of complex financial products?
10. Define derivative product with the help of an example.

example of 'Lifebuoy soap' can explain the case of upward line stretching. When this soap was launched, it was marketed as a hygienic bathing soap for the masses, but later, the company changed its strategy and extended it into a premium quality liquid hand wash for the upper strata of society.

Downward stretching takes place when the company decides to bring down the price of a product in order to make it available to the low end consumers. Take the example of Ariel detergent powder, which started out as a premium product for the upper strata of society, but was later introduced as Ariel Bar in order to attract lower income buyers.

Line filling

This strategy involves increasing the length of the product line by adding more items. The reasons behind the adoption of the line filling strategy are:

(i) To achieve incremental profits.

(ii) To satisfy those dealers and distributors who complain about lost sales due to a missing product line.

(iii) To utilize the excess capacity.

(iv) To offer full product line.

(v) To adjust product positioning.

The launch of Lux soap in different variants is an example of line filling. Today, Lux is marketed in different wrappings and fragrances. There is also a Lux International soap that has an exclusive packaging and the photograph of an actress or model on the cover.

Such a strategy is adopted to enable the customers to differentiate between each item. Each item must have a distinct feature which will set it apart from others.

Line modernization

In case the length of the product line is already adequate, it is advisable to modernize the product line. Here, the option before the company is either to overhaul the line of products completely or one at a time. One strategy is to adopt a piecemeal approach which provides the company with an opportunity to evaluate the reaction of the customers to a new style. However, the major disadvantage of this piecemeal modernization is that it gives competitors an opportunity to see the changes and they can redesign their own line accordingly.

In today's environment when the market is changing rapidly, there is a need to carry out the task of modernization continuously as the competitors are always making an attempt to upgrade their options. Thus it is advisable that each company must constantly try to re-design their offerings.

The company should also ensure that more serious attention is paid to the timing factor in product line improvements. It should neither be too early so that it causes damage to the sales of the current product line nor should it be too late so as to provide competitors with an opportunity to completely capture the market.

Line Featuring

Under this strategy, the prime objective of the company is to attract the customers and make them visit their showroom by highlighting some exclusive features of one or more products. When they visit the showroom, they are exposed to other product ranges and models. With this strategy, the company may try to attract either high-end or low-end customers. Sometimes, the company may make an attempt to boost the sales of some slow-moving items through this strategy.

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1.4.1 Line Extension Strategy

Several companies adopt line extension as their marketing strategy. Amongst the crucial factors that lead to the adoption of this strategy, the following are the most significant:

Line extensions: Line extension is a low cost and low risk technique used to satisfy the needs of various consumer segments

1. Market segmentation

Line extension is a low cost and low risk technique used to satisfy the needs of various consumer segments. It is now possible for marketers to identify and target market segments more effectively with the help of low cost market research and the direct marketing technique. As the marketers now have access to the information related to customers' profiles, it is possible to use this information while making a decision whether to use electronic or print media for their advertising and promotional campaign.

2. Customer desires

Line extensions provides customers with a variety of options under a single umbrella, helping them in satisfying their desire. This fact is the explanation for consumers' tendency of switching brands that they have never used before. Here, we take the example of brand Amul. Under this brand umbrella, various milk products such as Amul milk, Amul cheese, Amul butter, Amul ice cream and paneer are offered to consumers.

The shelf value of a brand can be increased by utilizing the line extension strategy, which allows the product to gain higher visibility and thereby, easily attract the customer's attention. The display of a variety of products of a similar line on the store shelf can create the impression of brand equity.

3. Pricing strategy

By extending the line on a superior quality formula, marketers can fix a premium price for their newly launched products. The per unit profitability of the product can be increased by offering the current customers the same incentives to move to premium products. This also provides marketers with an opportunity to lend prestige to its product line.

Sometimes, line extensions are offered at lower price than the lead product. For example, the Standard Chartered Bank credit card section launched the Manhattan card, which had a very low annual fee and which worked like a volume builder for the company.

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4. Excess capacity utilization

In order to utilize their excess production capacity, companies prefer to add new product lines with minor alterations. This strategy is also used to improve efficiency and quality of existing products.

5. Effective way to increase sales

For marketers, line extension offers are one of the most economical and effective ways to increase sales. This is due to the fact that it is much more convenient to predict development time and cost for line extension products than for completely new products. Nowadays, even the brand managers of established companies do not prefer to take the risk of launching new products.

6. Competitive device

Keeping in view the strong link between market share and profitability, marketers prefer to use line extension as a competitive device to increase their brand's control over retail shelf space.

7. Pressure from retail channels

Quite often, marketers have to work under pressure from retailers, who compel them to offer varied line products. In order to meet the specific consumer demands of bulk or multi-packs or low quality products, retailers want the company to produce special package sizes.

8. A source of brand enlargement

By producing products in different sizes, colours and packaging, line extension can be used as an effective way to make the product more interesting and relevant to the consumers. In other words, it can help the market in achieving brand differentiation and thereby, give consumers enough reasons to buy the product.

9. Tool of brand expansion for new users

Line extension as a marketing strategy can help marketers to further strengthen their image that promotes loyalty and exclusiveness among new users. Intelligent line extensions can be used as a tool to attract those who buy multiple brands.

10. Tool for innovation

Line extension provides the company with an opportunity to be more innovative and thereby, enhances the value proposition of the product, effectively blocking out competitors. Line extensions have the potential to inhibit or neutralize the moves of competitors.

11. Effective test marketing tool

Line extension provides the company with a unique way to test the product's improvement and innovation. This also helps marketers to enter new emerging market segments.

1.4.2 Product Mix Decisions

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A marketing-oriented company does not merely sell the physical product but also sell customer satisfaction along with it. Marketing strategy involves the determination of the level of customer satisfaction. Thus the products that are marketed, include physical goods, services, experiences, persons, organization, information and ideas. A product mix is the set of all products and items that a particular seller offers for sale. Product mix is the composite of products offered for sale by a firm or business unit. It is a set of all product lines and items that a particular company offers to buyers. The nature of the product mix is at times described using expressions like depth, width and consistency.

Company's objective and product mix

The product mix of a company is immensely influenced by its long-term objectives. There may be more than one long-term objective, but for the convenience of this study, we can divide it into three main parts: profit objective, sales stability objective and sales growth objective.

1. Profit objective

Profit maximization is the main objective of every company. In order to facilitate this, the company may decide to add a product or products in the product mix which are more profit-oriented. The marketer may take the decision to improve the less profitable product and absolutely abandon the production of unprofitable products.

2. Sales stability objective

In order to fully utilize its production capacity, every company aims at having stable sales volume. They always want to avoid a situation where sales may fluctuate widely. For example, if the sales volume of the company reaches its peak, the company may require additional production capacity. But if due to certain reasons, the sales of the company's product declines, the production capacity may remain idle, leading to a heavy penalty on the company's investment and a huge financial loss to the company. Therefore, the company has to ensure that it achieves stability of sales volume. This may require the company to initiate changes in its product mix.

3. Sales growth objective

The success of a company cannot be ensured only by the stability of sales volume. This has to be further supported by comprehensive efforts of marketers to increase the sale of the company's products. To achieve the objective of sales growth, the company is required to inculcate changes in the product mix, keeping in view the life-cycle of the existing products. A product which has reached the saturation point, should immediately be scrapped. The options that are available with the company are either to improve the product or to add some new products. It may even try to enter a new market segment by improving the products. Such steps can enhance the sales potential of a company's product mix.

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Nature of product mix

Product mix is a set of all product lines and items that a particular company offers to buyers. The nature of the product mix is described in terms like depth, width and consistency.

1. Depth

The depth of a product only refers to the number of variants that are offered for each product in the line. For example, Hindustan Lever offers Close-up toothpaste in sizes of 20 gms, 50 gms, 150 gms, etc. In this case, there is a product depth of three. Similarly, Halo shampoo comes in three different formulations in three different sizes and hence has a product depth of nine. This kind of assortment is popularly known as stock keeping units (SKUs).

2. Length

The length of product mix refers to the total number of items in the mix. This is obtained by dividing the total length by the number of lines. Take the example of Procter and Gamble company, which offers different product lines. It carries different detergent brands, such as Ariel and Tide.

3. Width

The width of product mix refers to the extent of different product lines in the product mix offered by the company. For example, FMCG company Hindustan Lever offers different products like tooth paste, detergent, bar/soap, etc.

4. Consistency

The **consistency** of product mix refers to the relatedness of various product lines. We can say that Nestlé's product lines are consistent, in the sense that they are all food products.

Consistency: Consistency of product mix refers to the relatedness of various product lines

Significance of elements of product mix: The three product mix elements are:

(i) Depth, (ii) Width and (iii) Consistency.

The product mix elements are very significant for marketers as they form the basis for rationalization of the marketing process. By enlarging the width, i.e., by increasing product lines, a company can satisfy its customers' need for variety by making products of diverse qualities in the same product line. A company producing TVs may make them in different sizes and qualities, keeping in mind the wide range of customers. By doing this, the company may specialize in a particular product line and thereby increase its goodwill and profitability by reducing the cost of production and distribution. The company can also carry out research work to improve the quality of products. It gives the company an opportunity to make a decision about adding new products or improving the quality of product. However, it should be kept in mind that nowadays, consumers pay more attention to quality than the price of the product.

In case there is consistency of product in the product line or if the product belongs to the same category of consumer goods, it can reduce production cost to a great extent. The cost of distribution of the product may also come down by using the same channels of distribution and advertisement.

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Product mix strategy

The fact that a company like Godrej manufactures diverse assortment of products, such as, refrigerators, furniture, soaps, steel almirahs, etc., is not by accident. In fact, it reflects the planned marketing strategy of the company. To be successful in marketing, manufacturers, distributors and retailers need to adopt a carefully-crafted strategy for managing their product mixes.

1. Product positioning

The revenue generated by the product's sales and company's profits depends to a great extent on the ability of the management to attract customers towards the product. Also it depends on the capability to successfully achieve product differentiation that enables the consumer to distinguish the product from that of the competitors. Thus, what is needed, is a product positioning strategy that enables the company to develop a strong image for its product, vis- à -vis, competitors. Marketers can opt for a variety of product positioning strategies:

2. Positioning in relation to the competitors' product

Some marketers prefer to put their product directly against that of the competitor's—particularly when their product has a solid differential advantage. After launching its Micro-processor, Intel started a campaign to convince buyers about the superiority of its product vis-à-vis competitors. The company even paid money to computer manufacturers to include the slogan 'Intel inside' in their advertising campaign. In case the competitor has a strong market position, 'Head to Head' positioning strategy is exactly what the marketers need to do.

3. Positioning in relation to a product class or exclusive feature

Sometimes marketers adopt a positioning strategy that puts emphasis on associating or disassociating its product a class or an attribute. Some companies promote their products as 'belonging to an exclusive class', such as 'Made in Japan' or having some attractive features, such as 'low in calorie' or energy consumption, energy saver, environment-friendly, etc. This strategy is widely used by food product manufacturers, who highlight the attributes of the product as cholesterol free, fat free, sugar free, etc.

4. Positioning by price and quality

Some garment manufacturers and retailers like Raymonds, Van Heusen and Louis Phillipe offer high quality products at a premium price. In the automotive segment, positioning is done on the basis of exclusive features like high quality and high price. For example, Maruti SX4, Honda Civic, Corolla Altis, etc.

5. Positioning in relation to target markets

Whichever positioning strategy a company may prefer, it must always give due consideration to the target market. Using this strategy, the company may find it more convenient to address the needs and aspirations of different consumers regarding their choice, taste, price preferences, quality preferences, etc.

6. Trading up and trading down

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The strategy of trading up and trading down requires marketers to bring changes in the product positioning and expand the product line. Trading up would mean adding premium priced products to attract the high-end market. This strategy will help a company in enhancing the sale of its low-priced products while encashing on the prestige of the new product.

Trading down involves adding low priced products in the company's product line. According to the company's strategist, those who could not afford to buy the product earlier due to its high price, can now easily afford the low-priced product and can thus further enhance the customer base of the firm. As per the consumer's psychology, buying the low-priced product of a company will provide the status and benefits of the company's high-end products.

However, there is a negative side of the trading down strategy, as the new offering may permanently spoil the company's reputation and also that of its high quality product. To minimize this side effect, the company may give a new brand name to its low-priced product.

In case of trading up strategy too, marketers are required to be extremely cautious while formulating their strategy. In this case, the problem depends on the fact that whether the new product or line uses the same brand which is already established or is given a new name. In case the company decides to continue with the same brand even for its new product, it must take steps to change it's image in such a manner that it will not be difficult for customers to accept the high-priced product. However, marketers do not want to lose their old customers. If the company decides to use a different brand name, it must create awareness among consumers and then stimulate them to buy the new product.

7. Product mix contraction

While using this strategy, marketers either eliminate the entire line of products or consolidate the assortment with a line. For example, some travel agencies instead of selling all kinds of travel services, decided to concentrate on specialized tours and trips to exotic places.

How many products/variants: Various companies and their different branded products are fighting for the shrinking shelf space of retailing companies, which in turn has compelled marketers to rework on their brands. During the post-liberalization phase, a large number of multinational companies entered the Indian market. As a result, there was intense competition between the domestic and multi-national companies. To generate maximum excitement among consumers, the companies launched several variants of the same product — new packaging, new formulations, different flavours, additional quantity at the same cost (25% extra), etc.

In fact, according to marketers, extensions are considered to be the best way of responding to consumer's desires. However, a large number of new offerings also pose a problem for retailers in the form of lack of shelf space. This problem may force showroom managers to squeeze more items into their store by reducing the average space allocated to each of these items.

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1.4.3 Product Mix Modifications

A company's product mix is never static. Customers' preferences change, new customer segments emerge, and company's competencies and priorities change. All these changes warrant a change in a company's product mix.

(i) Product mix expansion

Product mix expansion is achieved by increasing the depth within a particular product line, i.e., new brands or variants of existing brands are added to the product line and/or by increasing the number of product lines.

(ii) Line extension

When a company adds a similar item to an existing product line with the same brand name, it is called line extension. A company resorts to line extension to appeal to more market segments by offering a wide range of options of flavours, colour, size, etc., for a particular product.

(iii) Mix extension

New product lines are added to the company's present assortment. The new lines may be related or unrelated to the current products. The company may use one of the existing brand names or may give an entirely new name to the new product lines. When a company uses one of its existing brands to offer a new product line, it is called **brand extension**.

(iv) Product mix contraction

Product mix contraction is achieved either by eliminating an entire product line or eliminating a few products or brands from within a line. The idea is to weed out unprofitable product items or product lines and earn higher profits from fewer products.

(v) Repositioning

Repositioning involves changing customers' perceptions of a brand. It involves changing the product's attributes and communication to the customers.

(vi) Product modification

Product modification will involve changing the quality levels of the product item to make it more appropriate for the target market, functional modifications to reflect changing customer requirements and to incorporate latest technologies and style modification to appeal to customers' emerging aesthetic concerns.

(vii) Planned obsolescence

This is the practice of modifying products so that those that have already been sold become obsolete before they actually need replacement. The modified product is substantially different and better than the earlier version, and customers who possess the earlier version feel disadvantaged or unfashionable.

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1.4.4 Product Differentiation

Product differentiation results from added features, which give customers benefits that rivals cannot match. Before adding features, a company should thoroughly research the need for the particular feature among customers in the intended target market. Companies keep on adding new features just because their competitors offer them. Sometimes deletion of features and benefits from a product may be a very effective differentiation because customers never really wanted these benefits.

Adding the same features as competitors may make the product of a company more acceptable among customers, though it may end up introducing similar products that does not result in any differential advantage. Such a strategy of matching features and benefits will result in product parity, with no company providing any compelling reasons to the customer for buying its product. In such industries, customers will buy on the basis of price, and competitors will be forced to cut prices to win customers from each other. The profit of every company will go down. Companies will not have the ability to differentiate their product as they will not have enough resources due to their dwindling profit margins. The only way out of this mess is that companies should pick up courage, arrange resources and start differentiating their products from each other. Price-based competition should be avoided.

In most categories of goods, consumers get products with features that are needlessly paying for and can do without. Most products can be made more suitable for their target markets by deletion of certain features. Nokia has introduced a stripped down version of the cellular phone for the entry level customer in India. The phone is a contrast to the ones that offer Internet usage, m-commerce, camera, etc. It serves the basic purpose of mobile connectivity. Many customers are realizing that they do not need what they have bought and are switching over to these simpler phones. This phenomenon is likely to be repeated in many categories of goods, once simpler options are available at lesser prices.

1.4.5 Product Elimination

One ground reality that every company must realize is that every new product cannot be successful, as all of them cannot satisfy customers and also interest in the product can not be kept alive for an indefinite period. Product elimination is the process of deleting a product from the list of a product mix when the marketers realize that it is no longer capable of satisfying a sufficient number of customers. The decision to delete a product becomes unavoidable when a declining product reduces the company's profitability and drains resources that can otherwise be used for modifying the product or developing new ones.

Product deletion also becomes a necessity due to the fact that when a dying product loses favour with customers, the negative feeling may get transferred to some other products of the company as well. However, the decision to eliminate a product is not easy as it is opposed by both the management and other employees due to various reasons. Such decisions involve lot of emotions due to the sadness of a final parting with an old and trusted friend.

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Reasons for product elimination

Continuous decrease in product sale: During the last stage of a product's life cycle, there is a rapid decline in the sales of the product due to the changing business environment and emergence of better quality products. If the company feels that it is no longer possible to revive the sales in spite of best efforts, a decision may be taken to eliminate the product.

Market rejection: The product may be rejected due to various factors which may sometimes be beyond the control of marketers, who have no option left but to eliminate the product.

Reduction in product relevance and effectiveness: Over a period of time, certain products lose their effectiveness and relevance in providing benefits to the customers, for which they were originally manufactured. This may happen in the case of pharmaceutical products. Here, certain drugs may have to be eliminated due to the availability of more effective and advanced alternatives, which have been produced after lot of research.

Emergence of superior improved products: Due to the emergence of superior substitutes as a result of advancement of technology, the company's product becomes irrelevant and it may have no other option but to withdraw it from the market.

Downward trend in product price: If there is a continuous decline in the price of the product, it may no longer be profitable for the company. The company can then decide in favour of product elimination.

Macro-economic factors: Macro-economic factors, such as the changing global environment, political environment, etc., may also lead to product elimination. For example, a company which is operating in foreign markets may be affected by new quality norms imposed by the buying country. Recently, the rejection of Indian garments by the United States government practically forced many Indian manufacturers to close down their factories.

Government regulations: Specific new or changed government regulations may sound a death knell for certain products in the market.

Various stages of product deletion

(i) **Recognition weak products:** Products that are found weak during the process of continuous and systematic monitoring. They may not be able to live up to the expectations in terms of sales and profitability and so identified for elimination.

(ii) **Analysis of weak products:** The weak products should be subjected to close analysis to decide about the possibility of product modification, repositioning and improved marketing mix strategy.

(iii) **Cause and effect evaluation:** If the steps taken during the stage of weak product analysis fail in improving the product's sales, the next step is to consider the implication of product deletion in the company.

(iv) **Implementation of delete decision:** If the company decides in favour of product deletion after going through the mentioned stages, the timing and procedure of elimination must be planned in order to ensure that there is minimum disruption in the company's business.

NOTES

New product development: a procedure in which ideas are developed for viable new products or as an extension to the existing products

Check Your Progress

11. List the features of product line decisions
12. Mention three factors that determine Line Extension strategy.
13. Define product mix decisions.
14. What is trading up and trading down?
15. Why does product mix modification happen? List the types of product mix modification.
16. Why is product differentiation important for a company?
17. Why does product elimination happen?

A few examples of product deletion are:

(i) Due to declining sales volume, Ford motors decided to delete Ford Escort from the automobile segment and replaced it with Ford Ikon.

(ii) Hindustan Motors deleted the Ambassador Deluxe model and released the Ambassador classic model.

(iii) Pepsico and Coca-Cola had to withdraw Diet Pepsi and Diet Coke due to non-acceptance by consumers.

(iv) In 2001, Hindustan Lever decided to cut down its product list from 110 to 36.

(v) Maruti Udyog had to delete Maruti-1000 due to some problem with its engine.

1.5 NEW PRODUCT DEVELOPMENT: NEED, RISKS AND UNCERTAINTY

The development of new products is essential for the survival and long-term profitability of a firm. As technological advancements makes the existing products obsolete very quickly, it is essential in the organization's own interest that adequate attention is paid by the company's research and development (R&D) department towards developing new products. In more specific terms, new product initiatives are driven by the following factors:

(i) To meet the targets of financial growth

(ii) A strategy to meet competitive threats

(iii) Emerging technology that makes existing products obsolete

(iv) Changing customers' needs and feedback

(v) New legal requirements

New product development is a procedure in which ideas are developed for viable new products or as an extension to the existing products. New product ideas are generated either through scientific research or by consumers' feedback. New product ideas have to be screened based on the following factors:

(a) Viability

(b) Concept test

(c) Potential profitability

Those product ideas that successfully cross the above stages are subjected to extensive product development. In the next stage, prototypes are developed and tested at the level of company and consumers. Improvements are made based on the feedback from consumers.

1.5.1 Classification of New Products

New products can be classified into two major groups:

(i) Products that emerge out of technological innovations

(ii) Products that have their origin in marketing-oriented modifications and changing consumer responses and preferences and new environmental regulations

1.5.2 Advantages of New Product Development

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New product development is one of the most crucial aspects of a business enterprise. It would not be an exaggeration to say that the growth and profitability of a business unit depends on the successful launching of a new product in the market and its acceptance by consumers. New product development provides a number of advantages to the enterprise. Some important advantages are:

(i) It helps the company in producing the best quality product/services for the consumer.

(ii) Since the product is developed on the basis of consumers' demand and feedback, it can provide maximum possible satisfaction to customers.

(iii) It helps a company in market expansion and diversification

(iv) It helps a company to secure stability in product demand.

(v) New product development helps a company in reducing the risk of product obsolescence by providing an opportunity for improvement in the existing product.

(vi) It also helps the company in effectively facing growing market competition.

(vii) New product development helps the company improve and further strengthens the goodwill of the firm.

(viii) New product development secures growth and profitability for the firm.

1.5.3 Basic Requirements of New Products

The basic requirements of a new product are:

(i) A good quality product based on sound technology and research

(ii) Reasonable price

(iii) Economic viability

(iv) Adequate distribution

(v) Effective packaging and branding

(vi) Adequate servicing facility

1.5.4 Main Elements of New Product Development

The main elements of new product development are listed below:

(i) To discover production feasibility

(ii) To develop characteristics and qualities of the product

(iii) To develop differently-designed models of the product

(iv) To select the best design or model

(v) To take a decision regarding size, colour and packaging of the product

(vi) Expansion/contraction of the product mix

(vii) Discontinuation or withdrawal of unprofitable products

(viii) Product improvement

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1.5.5 Risks and Uncertainty

New product development is a highly risky and a time-consuming affair. Only the companies that have the capacity to absorb these shocks can really go ahead with the task of new product development. The rate of success in new product development is high in these companies because they have the capacity of huge investment in R&D and also because they have several new product ideas in the pipeline. These companies are the leaders in the chosen field. A majority of the firms prefer to be followers rather than taking a lead in the task of new product development.

Why do companies shy away from the task of new product development?

High attrition rate: Many new product ideas fail to reach the market at all, even after years of effort and care. In such a case, considerable amount of time and money is wasted.

High rate of market failure: New product launches have a high rate of market failure. Even those products which are able to reach the market after years of preparation and hard work, often fail.

Short-lived success: Some products that successfully reach the market, have a very short life-cycle. Most of them suddenly disappear from the market after an initial boom.

1.5.6 Failure of New Products

In this era of tight competition from domestic and global firms, the firms who don't come out with new products put themselves at great risk because their existing products are prone to changing customer needs, shorter product life cycles, new technologies and increased competition.Despite years of research and huge capital being pumped in to understanding the consumer, making a launch successful is still a difficult task. The new product largely depends on the product quality and the marketing strategy of the firms. There are many occasions where the product failed miserably even after using the best technology and quality as the new product was not worth its price for the customers. The prime factor for the new product success is customer value. Value is what the customer thinks the product should be worth.

In Unit 2, we shall discuss in detail the various reasons that lead to a new product's failure.

1.5.7 How to Avert Failure of New Products

Product failure can be controlled by companies by taking some suitable measures. Research and analysis have shown that several new products fail in the market not due to any defect in the product but because the companies are not well-equipped to handle the product. Such a situation arises only when companies fail to answer certain basic questions at the product idea stage. Before taking the new product idea further, the companies should find answers to some basic issues.

(i) Whether the new product is to be launched in line with the existing business of the company or will it constitute an entirely new line or business?

(ii) Is the new product radically new for the market? Or is it similar in some way to an already existing product? In case the product is radically new, how long will it take for the product to get established in the market? Can the product sustain the long pioneering stage? What is the current level of demand and what is the extent of share that the new product hopes to capture in the market? In case the product is likely to face some retaliation from its competitors, is the company adequately prepared with the resources to respond to such retaliation from dominant competitors?

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The company should be prepared to face the challenges and possible retaliation from competitors who see the new product as a rival that can hamper their market share. In case of a medium and small-sized firm, it is strongly recommended that they must analyse whether with their limited resources, they can face the bigger and more resourceful competitors. The company must have a very clear picture about the resource capacity and functioning style of such competitors who consider the launching of new product as a provocation. Though it is not possible to prescribe any success formula for the success of a new product, companies can minimize the risk of new product failure by keeping in mind these issues.

1.6 ORGANIZATIONAL STRUCTURE FOR PRODUCT MANAGEMENT

Product development organizations have, for years, experimented with and developed many new and novel ways of organizing. Project team organization traces its roots back to the problems faced in developing new products. The need for a focussed and well-coordinated effort, involving many disciplines led to the formation of temporary interdisciplinary teams. This form of organization has now been carried into many areas outside of product development. What has become known as matrix organization or matrix management evolved from similar origin.

Organizations are always looking for new ways to group activities together to achieve greater efficiency or effectiveness. They are constantly experimenting and designing new organization charts, searching for the ideal organization. In the process, managers have been very creative, designing all sorts of reporting relationships among people and groups and laying these out in charts with solid or dotted lines and lines of different colors delineating varied relationships.

Most organizations are structured by grouping people by task, specialty, or geography. Leaving geography aside for the moment, we are left with task and specialty as the underlying bases for most organizational forms. Corporations, for example, can be structured by function and product, with either taking the dominant position. The firm can either let functions dominate, with product line groupings under each function or have product lines dominate, with functional groupings in each product organization.

Check Your Progress

18. What is new product development?
19. What are the types of new product groups?
20. 'New product development is a highly risky and time-consuming affair.' Why do companies prefer to stay away from developing a new product?

1.6.1 Role of Product Manager

A product manager represents the product owner and the end-user or customer. He is responsible for defining and scheduling the delivery of high quality output in line with business requirements and priorities**.** A product manager investigates, selects and develops products for an organization and supervises product management.

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A product manager considers numerous factors before taking a decision. These factors include demographic factors, the products offered by competitors and how well the product fits with the company's business model. Generally, a product manager manages one or more tangible products. However, the term may also be used to describe a person who manages intangible products, such as music, information and services.

The designation of product manager is often used to describe totally different duties and responsibilities. Although, the arena of product management is well defined in high-tech sectors but the job description of a product manager varies widely among companies. This is due to tradition and intuitive interpretations by different individuals.

In the financial services sectors, such as banking, credit cards, insurance, mutual funds, housing loans, etc., the profit and loss determines the business development strategy pursued by product managers.

The product manager is also referred to as the product owner, and usually has the main role of representing the product to the customer. Some of the responsibilities of a product owner include marketing of the product and analysis of the competition.

Managerial role of a product manager

In some companies, the product manager also performs three different managerial roles:

(i) **Product marketing manager:** One who may perform all outbound marketing activities

(ii) **Project manager:** Major performance areas include activities related to schedule and resource management

(iii) **Programme manager:** Assigned responsibilities related to schedule, resource and cross-functional execution

Major activities of a product manager

The main responsibilities of product managers involve many crucial activities:

(i) Nurturing the product

(ii) Positioning the product strategically

(iii) Pricing the product

(iv) Monitoring the product

(v) With the emergence of new technologies, product managers play a supporting role in providing technical product information and conduct product demonstrations in engineering companies. Some of their responsibilities include:

- Supply of technical information and specifications
- Providing product development the information related to users' requirement
- Product scheduling
- Technical copy writing

Requisite qualification for product managers

For product managers of technical products, a bachelor's degree in engineering and a master's degree in business administration are preferred. Computer skills and knowledge of database applications can also benefit people in marketing. However, product management positions are not for fresh graduates. Most companies offer these jobs to people who have experience in sales.

NOTES

Skills required to be a product manager

A competent product manager should possess the following skills:

(i) Analytical and strategic thinking
(ii) Strong communication and interpersonal skills
(iii) Good presentation skills
(iv) Persuasive powers
(v) Ability to interpret and analyze data
(vi) Business analysis skills
(vii) Problem-solving skills/strategies
(viii) Computer and statistical skills
(ix) Domain knowledge
(x) Knowledge of marketing trends
(xi) Result-oriented attitudes
(xii) Creativity and innovation skills
(xiii) Entrepreneurial skills
(xiv) Customer focus
(xv) Attention to detail
(xvi) Multitasking and prorogation skills
(xvii) People-management and leadership skills

How to be a good product manager?

A good product manager should worry more about potential future competitors than current competitors. Understanding and monitoring current competition is an important part of being a market-focussed product manager. A good understanding of the market is the most crucial responsibility of a product manager. However, current competitors pose lesser risk since the company knows who they are and can easily identify them. Competitors who have the potential to challenge and totally change the market are the ones who should be of concern.

Product managers should realize that there are many products in the market that have the potential to put their own products out of business. Sometimes the product manager may not even know the names of these competitive products. An alert product manager can prevent himself from being caught offguard by following these guidelines:

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1. Always Be on the lookout for potential threats. If the product managers do not devote time to find out about new potential threats on time, it might cost them a great deal.
2. Early warning signs must not be ignored: In most cases, products and companies who have been made obsolete due to the emergence of new technologies ignored the early warning signs. Many companies had dismissed Google, eBay, Amazon and the IPod initially, which ultimately put the companies making similar products out of business.
3. Feel the pulse of the future and be prepared to respond to the situation demand.

Product managers should be prepared for these eventualities: What would they do if similar products from other companies enter their market? What would they do if a startup company offers same product for cheaper price? The product managers should run through these scenarios regularly and prepare their product accordingly in case of such eventualities. This may involve changes in the product, distribution, or promotion.

Monitoring current competitors is important, but the competitors with greater potential threat to business are the ones that are currently either unknown or in unrelated fields. Good product managers need to be careful regarding disruptive competition and need to be proactive about product development.

Product research

Developing and designing great products is the key to success in any business. Anything less than an excellent product strategy can be destructive to a firm. The product manager should focus on a limited number of products and concentrate on maintaining high level of quality for those products to maximize the potential for success.

The importance of product research can be understood by citing a few examples. For instance, Honda's focus is engines. Virtually, all of Honda's sales, e.g., autos, motorcycles, generators, etc., are based on its excellent engine technology. Similarly, Intel's focus is on computer chips, while Microsoft's is on PC software.

Keeping in view a reality that most products have a limited and even predictable life-cycle, product managers must be constantly looking for new products to design, develop and introduce into the market. Good product managers insist upon strong communication between customers, products, processes and suppliers that results in a high success rate for their new products. One product strategy is to build particular competence in customizing goods or services. This approach allows the customer to choose product variations while reinforcing the organization's strength. Dell Computers, for example, has built a huge market by delivering computers with the exact hardware and software as desired by the end user. This Dell does very fast, as it understands that speed to market is the most important pre-requisite to gain a competitive edge.

1.6.2 Product Manager in Technical and Consumer Good Companies

Technology-based companies usually start with a single product. As the product becomes more popular in the market, additional sales force is required to handle the marketing. Now the sales force need sales tools like brochure, catalogue, leaflets, etc., which has to be supplied by the marketing communication department. However, the additional technical support required by all the three departments is to be provided by the product manager.

NOTES

In consumer goods companies, product managers know more about the prospective customers than anyone else in the company. If the market share of a company's product is 30 per cent of the segment, the product manager must ask: what's preventing the remaining 70 per cent from buying the product. Knowing the answer to this question is very important.

Even before releasing the next batch of product supply, the product manager should be in the market talking to prospective customers. The product manager must know the prospect, and the prospect's problems. This is the true role of a product manager.

Tasks performed by product managers

Product managers work in close coordination with product designers and marketers. They perform the following tasks:

- Organizing research related to products, markets and competitors
- Devising and executing product plans
- Studying market trends, introducing new products and adding new features to existing products
- Positioning of existing brands
- Development of product strategies and promotional planning
- Study of sales figures, feedback, and other survey reports, and accordingly forecast competitors' success of their product
- Keeping track of competitors products and monitor marketing and production efforts
- Pricing and profitability analyses
- Bearing responsibility for the successes and failures of their products
- Carefully handle serious product flaws and work towards achieving real solutions
- Provide superior value for customers

Apart from the tasks mentioned here, product managers should ensure than they do not interfere with the responsibility of marketing and operating.

1.7 SUMMARY

Some of important concepts discussed in this unit are:

- Product is the most important tool in the marketing mix. Without a product, there can be no marketing. Simply put, a product is something that can be offered in the market to satisfy a want or a need.

Check Your Progress

21. What role does a project manager play in a company?
22. What is the role of a project manager in a consumer goods company?

NOTES

- There are two concepts related to products: (i) Narrow and (ii) Wide.
- A product is important because: (i) It is the central point of all marketing activities. (ii) The product is the pivotal point of planning. (iii) The product determines the channel of distribution.
- A product has tangible and intangible features. Based on this, products are classified into two major groups. The classification system works in such a way that it assists the company in planning the firm's marketing strategy. The two types of products are: (i) Consumer goods and (ii) Industrial goods.
- Industrial goods are divided into six types: (i) Installation goods, (ii) Raw materials, (iii) Components, (iv) Semi-finished goods, (v) Fabricated material, (vi) Operating supplies.
- Apart from consumer and industrial goods, there are also other categories of products: (i) Technology products; (ii) Customized products.
- Products are different from services and commodities. Products are tangible items, services are intangible.
- Tools that help you to save, invest, get insurance or a mortgage, are termed as financial products. Financial products are classified into various categories: a) Shares, b) Bonds, c) Treasury bills, d) Options, e) Mutual funds, f) Certificate of deposit, g) Annuities.
- There are some financial products which are complex in nature: (i) Credit Default Swaps (CDS) and (ii) Collateralized Debt Obligations (CDO)
- When an existing product is modified, it is called a derivative product. Some examples of derivatives: the foreign exchange, the financial futures market and the commodities futures market. Derivative products serve the following purposes:
  - (i) Cut the financial risk of an existing portfolio
  - (ii) Take risk to achieve a profit
  - (iii) Achieve profit-lacking risk with the help of mutual transactions
- Product line is the creation of a set of products with similar features, that does the same job and are marketed to similar customer segments through the same channels of distribution.
- Product line decisions have the following features: (i) Line stretching, (ii) Line filling, (iii) Line modernization, (iv) Line featuring.
- When companies adopt line extensions as their marketing strategy, it is termed as line extension strategy.
- A company does not just sell the product, but also sells customer satisfaction along with it. Product mix is the set of all products and items that a particular seller offers for sale. Product mix is described in terms like depth, width and consistency.
- Product mix is influenced by long-term objectives of the company. The major objectives are: i. Profit, ii. Sales stability, iii. Sales growth.

NOTES

- Customers' demands and preferences keep changing. Emerging customer groups lead to change in demand. All these factors lead to a change in a company's product mix. This is called product mix modification.
- Companies add features to their products in a bid to find a place in the fierce completion. But at times, deleting some features to simplify the product can bring more customer satisfaction. The cutting down process to differentiate an item is called product differentiation.
- Sometimes companies realize that it is no longer capable of satisfying a sufficient number of customers. In such a scenario, the company deletes the product from the list of a product mix. This process is termed as product elimination.
- A product can be eliminated from the market for various reasons:
  - (i) Continuous decrease in sale
  - (ii) Market rejection
  - (iii) Reduction in product relevance
  - (iv) Appearance of superior products from competitors
  - (v) Downward trend in product price
- The process of product elimination takes place at various stages:
  - (i) Recognition of weak products
  - (ii) Analysis of weak products
  - (iii) Cause and effect evaluation
  - (iv) Implementation of delete decision
- New product development is a process in which ideas are developed for realistic new products or when new features are added to the existing products. Ideas for new products are generated either through research or by gaining feedback from the consumers. The ideas are screened before it goes to the next stage of product development.
- New product development is one of the most crucial aspects of a business enterprise. It provides numerous advantages:
  - (i) The company produces the best quality product or services for the consumer.
  - (ii) Since the product is developed on the basis of consumers' feedback, it can provide optimum satisfaction to customers.
  - (iii) A new product helps a company in market expansion.
  - (iv) A company can secure stability in product demand with the help of a new product.
  - (v) By improving an existing product, new product development helps a company in reducing the risk of product obsolescence.
  - (vi) It also enables the company to face growing market competition.
  - (vii) New product development secures growth and profitability for the firm.

NOTES

- New product development undertakes high risk and can be a time-consuming affair. Companies need huge resources to carry out the R&D and invest in the development of a new product. A large number of companies prefer to be followers rather than taking a lead in the task of new product development.
- A new product doesn't always guarantee success. There are several reasons why a product might fail in the market:
  - (i) Lack of proper market analysis
  - (ii) Cost of new product higher than the estimated amount
  - (iii) Defective product that results due to wrong product design, substandard raw material or poor packaging, etc.
  - (iv) Inadequate resources to fight market competition.
  - (v) Introducing a new product on wrong time.
- Product development organizations conduct research and develop new ways of organizing. This form of organization has now been carried into many areas outside of product development.
- Companies that deal with product management, employs product managers to carry out the functions. The role of a product manager is to define and plan the delivery of quality products based on business requirements. Product managers investigate, decide and develop products for a company. They are also responsible for supervising the product management process.
- Quite often, product managers are also called product owners because they represent the product to the consumers. They have the responsibility of not only marketing the product well but also gauging the competition in the market.
- The major activities of product managers include:
  - (i) Cultivating the product
  - (ii) Releasing the product with a feasible strategy
  - (iii) Correct pricing of the product
  - (iv) Keeping a tab on the product
  - (v) Providing technical information
- In reality, most products have a limited and life-cycle. So it is the responsibility of product managers to keep a tab on the market and bring more ideas for new designs, technology and features for its product. They have to conduct product research which will help them understand what customers really want, allowing them to modify their product, thus giving a competitive edge. Product research helps in refining product designs and plans that can cut product development costs.

1.8 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The two concepts related to products are as follows:
   - (i) Narrow: According to this concept, a product is a group of physical or chemical attributes, which have utility.

(ii) Wide: In the wider concept, all the brands, colours, packaging and designs of items

2. The importance of a product lies in the following factors: (i) It is the central point of all marketing activities. (ii) The product is the central point of planning. (iii) The product determines the channel of distribution.

NOTES

3. Consumer and industrial goods differ in many ways. Four such differences are:
   (i) Consumer goods are used directly by the buyers, as they don't need processing. Industrial goods are sold primarily to produce other goods.
   (ii) Consumer goods have a large customer base. Customers of industrial goods are lesser in number.
   (iii) Consumer goods are purchased in small quantities. Industrial goods are always bought in bigger quantities.
   (iv) Consumer goods have impulsive buyers. Industrial goods have buyers who buy after research and analysis.
4. Industrial goods are divided into six categories:
   (i) Installation goods
   (ii) Raw materials
   (iii) Components
   (iv) Semi-finished goods
   (v) Fabricated material
   (vi) Operating supplies
5. Besides consumer and industrial goods, there are also some other categories of products, viz.,
   (i) Technology products
   (ii) Customized products
6. Products are different from services in the following ways:
   (i) Products have physical characteristics, whereas services are just ideas, concepts or information.
   (ii) Products can be produced, stored and transported. Services can not be produced or transported.
   (iii) Products are made in a factory, away from the customer, whereas services are produced in a market environment with the aid of customers.
   (iv) Products are standardized, whereas services are customized.
7. There are various differences between a commodity and a product. Two of these are as follows:
   (i) Product is any item produced by labour or effort. Commodity is any marketable item made to satisfy needs.
   (ii) Product is the raw material and the finished good. Commodity is usually the raw material .
8. Shares, bonds, treasuries, options, mutual funds and annuities are a few examples of financial products.

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9. There are two types of complex financial products:
   (i) Credit Default Swaps (CDS)
   (ii) Collateralized Debt Obligations (CDO)
10. A derivative product results from modifying an existing product. Such an item has different properties than those of the product it is derived from. Some examples of derivatives: the foreign exchange, the financial futures market and the commodities futures market.
11. The four features of product line decisions are:
    (i) Line stretching
    (ii) Line filling
    (iii) Line modernization
    (iv) Line featuring
12. A few factors that determine line extension strategy are: a) Market segmentation, b) customer desires and c) pricing strategy.
13. A product mix is the group of all products that a particular seller offers for sale. Product mix is a bundle of products offered for sale by a company.
14. Trading up means adding premium priced products to attract the high-end market. Trading down involves adding low priced products in the company's product line.
15. Customers' demands and preferences keep changing in the market. New customer segments emerge, and accordingly, a company's competencies and priorities change. All these factors lead to a change in a company's product mix. This is called product mix modification.

    The various types of product mix are:
    (i) Product mix expansion
    (ii) Line extension
    (iii) Mix extension
    (iv) Product mix contraction
    (v) Repositioning
    (vi) Product modification
    (vii) Planned obsolescence
16. Sometimes features are added to products to retain old customers or gain bigger customer base or fight fierce competition. But at times, deleting a few features to differentiate the product becomes necessary because customers are happy without the added features. The simplifying process cuts cost and provides customer satisfaction.
17. Product elimination is the process of deleting a product from the list of a product mix when the marketers realize that it is no longer capable of satisfying a sufficient number of customers.

18. New product development is a procedure in which ideas are developed for viable new products or as an extension to the existing products.
19. There are two types of new products.
    (i) Products that come out of technological innovations
    (ii) Products that are modified due to changing consumer responses and preferences. Also, new environmental regulations govern this category of products.
20. The following three factors bar a company from venturing into new product development:
    (i) High attrition rate
    (ii) High rate of market failure
    (iii) Short-lived success of the product
21. A product manager has various roles to play in an organization. Some of them are as follows:
    (i) He represents the product owner and the end-user or customer.
    (ii) He is accountable for scheduling the delivery of high quality product.
    (iii) He selects and develops products for an organization and supervises product management.
    (iv) He considers numerous factors before taking a decision. These factors include demographic factors, the products offered by competitors and how well the product fits with the company's business model.
22. A product manager has more knowledge about the prospective customers in the consumer goods companies. He is responsible for gauging the mood of the customers even before the next batch of products is released in the market. Also, he gets feedback about the products' status in the market.

1.9 QUESTIONS AND EXERCISES

Short-Answer Questions

1. List the five levels that constitute product value.
2. What are the various types of consumer goods?
3. Differentiate between industrial and consumer goods.
4. What are financial derivatives?
5. Mention the critical features of product line.
6. How does line extension strategy help a customer?
7. Cite three examples of product deletion.
8. State the major factors that lead to the failure of new products.

Long-Answer Questions

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1. Discuss the importance of a product in an economy.
2. Explain the various categories of industrial goods.
3. Evaluate derivative products with the aid of three examples.
4. How is line stretching different from line filling? Support your answer with suitable examples.
5. Assess the product mix strategy.
6. 'Product differentiation results from added features which give customers benefits that rivals cannot match.' Elucidate.
7. Explain the various reasons of a product failure in the market.
8. What is the role of product managers in an organization? How can they bring success to a company?

UNIT 2 NEW PRODUCT DEVELOPMENT PROCESS

NOTES

Structure

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2.7 Classification of New Products Innovations
2.8 Summary
2.9 Answers to 'Check Your Progress'
2.10 Questions and Exercises

2.0 INTRODUCTION

In Unit 1, we had dwelt on the concept of a product and how it deals with the philosophy that guides a company's marketing and selling efforts. We also learnt how companies need to develop new products to maintain product stability.

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In this unit, we will discuss the new product development process in detail. This type of development is the first step in product or service development and involves a numerous other measures that needs to be taken before the product is released the market. New product development is vital to sustain changing market trends and demands.

A company needs a new product development strategy before anything else. After the strategy is set, there can be an idea generation session, where the senior management can do a brain-storming session and finalize a few ideas for the new product. But not ideas can generate success. So there has to a screening of ideas, where the commercial worth will be evaluated. The company assesses the market potential of the product by examining the feasibility of profits. After the ideas are accepted, they are developed into concepts.

At this developmental stage, the concepts are tested on sample customers. The product concept—a set of features, benefits and price—usually tests the consumers' reaction and seeks their feedback. Based on the feedback, estimates of sales, cost and profits are made. The company then makes a business analysis and gives nod to the next stage, which is product development.

A few product samples are released into the market to conduct market testing. The test evaluates the target consumer and areas and the next step is to get involved in innovation to make the product visible in the market.

The need to develop new products in the market propels companies to design new product. This involves understanding various concepts of a designing a new product:

(i) Research and development
(ii) Reverse engineering
(iii) Computer-aided design or computer-aided manufacturing.
(iv) Concurrent engineering
(v) Life cycle of a product

There are three techniques of product design and development: Quality function design, Design for manufacturing and Assembly and Value Analysis.

A product can be developed in two designs: modular and reverse engineering and designing. Modular designing involves building a complex product from smaller systems that are designed independently. These designs function together as a group. Whereas reverse engineering and designing involves transforming an idea into a product and testing it in the market before releasing it for consumers.

It is imperative to set standards for products so that customers can easily identify them in the market. Based on the standardization, products are grouped into categories and sub categories.

A company distinguishes its customers based on the knowledge when and how they buy the new product. It is important for a company to evaluate how consumers adapt or adopt their product. Such knowledge helps the firm in managing market stability.

To keep itself ahead in the market, a company needs keep a tab on the product demands. Catering to the specific needs of customers leads to product differentiation. From time to time, companies need to revise their marketing strategy. A careful examination of all the bigger forces that impact the business.

Before releasing a product into the market, the company needs to raise product awara thorough evaluation of all the macro forces that impact the business,eness among the customers. This needs planning the new product's success ahead. It is important to note that a product's availability and its positioning can make or break a product's launch. It is important to note here that in spite of all the correct measures, a new product may fail in the market. A wrong idea, poor pricing strategy or even poor launching time can hamper a product's image and it may bomb in the market. We shall discuss various other factors in detail as we progress in this unit.

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2.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Understand the various steps involved in developing a new product
- Differentiate between the various concepts of design
- Evaluate the techniques emplyed to design and develop new products
- Distinguish between modular designing and reverse engineering in the context of product development
- Determine how product standardization impacts the market
- Examplify the various marketing strategies adopted by companies
- Analyse the role of marketers in new product development process

2.2 STEPS INVOLVED IN THE DEVELOPMENT OF A NEW PRODUCT

Product development process is expensive, risky and time consuming. Though world-shaping innovations have emerged from the 'garages' and will continue to do so, companies cannot depend solely on flashes of brilliance and inspiration to provide create their next blockbuster. In the absence of any better method to bring out new products, a formal process with review points, clear new product goals, and strong marketing orientations underlying the process is being relied upon by companies to achieve greater success. An eight-step new product development process consists of new product strategy, idea generation, screening, concept testing, business analysis, product development, market testing and commercialization. New products pass through every stage at varying speeds.

Eight-step new product development process: It consists of new product strategy, idea generation, screening, concept testing, business analysis, product development, market testing and commercialization

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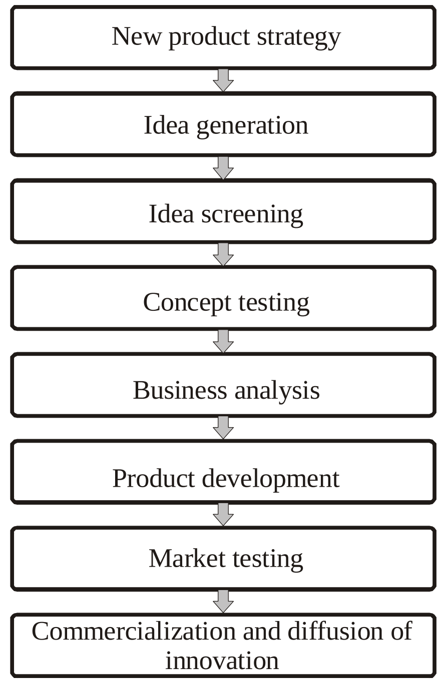

Fig. 2.1 *New Product Development Process*

2.2.1 New Product Strategy

Senior management should provide vision and priorities for new product development. It should provide guidelines about which product or market the company is interested in serving. It has to provide a focus for the areas in which idea generation should take place. By outlining their objectives—for instance, market share, profitability, or technological leadership for new products—the senior management can provide indicators for screening criteria that should be used to evaluate these ideas.

A development team is likely to achieve better results if it concentrates its resources on a few projects, instead of taking shots at anything that might work. Since the outcome of new product development process is unpredictable, a company might believe that it is taking a risk by working only on a few new ideas. However unpredictable the new product development process may be, chances of success will definitely improve if the team knows precisely what it wants to achieve from the process, puts its best people in the project, and has enough resources to commit to the project.

2.2.2 Generation of Ideas

Developing an innovative culture that kindles imagination is a prerequisite. Sources of new product ideas can be internal to the company. Scientists, engineers, marketers, salespeople, designers, etc., can be rich sources of new ideas. Companies use brainstorming session to stimulate creation of ideas and financial incentives to persuade people to ideate. Though anyone can come up with a brilliant idea, a company can work systematically to generate great ideas. An organization can follow the following practices:

- A company can look outside markets that are currently being served. It may not be manufacturing the exact product that the new market requires, but it may realize that it has the competence to serve the new market. When a company scrutinizes its core competences, it may discover that these factors may be combined in a new way to serve a new market. Apart from people who specialize in various technologies, it is important that a company has a few market-savvy people who understand all its technologies. These people will combine technologies to serve customer needs in interesting ways.

- For too long, companies have viewed the market as a set of customer needs and product functionalities to serve these needs. But they should begin to ask as to why the product has to be like that. Can customer needs be satisfied with some other product form? Companies will realize that their products have shaped consumer expectations about the appropriate solution to their needs but if the companies become bold and persistent, customers will accept new solutions to their needs.
- A company should question conventional price and performance relationships. It should explore the possibility of providing the same value at lesser price or try to make the customers pay more by serving their needs in a new or better way. A rigorous market research may reveal more sophistication in customers' needs that the company can serve with a novel product. A company should reject the idea that an existing product is the only starting point for new product development. The greatest hindrance to development of novel products is the existing product. Developers keep making mental references to the existing product—how their new product will be different or better than the existing ones. Having people from outside the industry can help the development team in distancing themselves from the existing product. A development team comprising solely of outsiders can be tried if the company desperately wants a novel product.
- A company can try to lead customers by imagining unarticulated needs rather than simply following them. The developers need to have an in-depth talk with customers and observe closely a market's sophisticated and demanding customers. But an innovation need not always be more sophisticated than the current products. Customers might be using sophisticated products because they do not have a choice but may be actually looking for simpler solutions. In quite a few markets, companies have to reduce the sophistication of their products. Sometimes, customers need to acquire quite a few skills to use sophisticated products. They would be happier using a simpler product at a lesser price.
- A company should examine its competitors' products at frequent intervals. Though copying competitors' products may not inspire many developers, a company can use the competitors' products to identify features and benefits that its own product lacks.

  If a competitor's product is more advanced or sophisticated, the company can use the competitor's product as a base and develop the product further.
- Retailers have a direct relation to customers and they have a firsthand hearing of the customer's feedback. The experiences of retailers can provide useful information about customers' experience with the company's offerings. A company should be in constant interaction with retailers so that they are able to glean customers' opinions about their product. Retailers are also in contact

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with the customers of competitors' products and such information have be very sueful in developing ideas.

- Customers are the original sources of new product ideas. Lead users, who are the most sophisticated users of a product, are excellent sources of ideas for new products, as they are most likely to encounter new problems due to the increased sophistication of their needs. Business customers, who are innovators and market leaders in their own marketplace, are sources of new product ideas, as they have advanced needs and are likely to face problems before other product users. But companies who focus on lead users may develop products which may be too sophisticated for the average product user. It may contain features and benefits that the average customer may not need, but will have to pay for.
- Customers can give feedback about the products that they are familiar with, and these inputs can be used to drive innovations which will be incremental in nature. But for breakthrough innovations, ideas must come from other sources, such as the R&D team. This is because the customer cannot talk beyond his realm of experience. Therefore, if a company wants to launch a radical innovation, it has to look beyond existing customers as a source of idea.

2.2.3 Idea Screening

Ideas are screened to evaluate their commercial worth. At this stage, the company needs to ascertain whether the new products will fit in with the company's strategy and available resource. Simultaneously, the company also evaluates the market potential for the new product by evaluating criteria, such as projected sales, profit potential, extent of competition and return on investments. Unique designs that lower costs or give performance advantages are also considered.

Though it is difficult to forecast the success of an idea accurately at this stage, the process helps the company to check if the idea is in alignment with the company's objectives and competencies, and that the idea has reasonable chances of success. The process helps the company in weaning fanciful ideas. But sometimes, at this stage, such fanciful ideas may entice the management and the idea generator may get permission to go ahead with it.

2.2.4 Concept Testing

At the developmental stage, every idea can be developed into several product concepts. Each concept is then tested with a small sample of customers from the target market to know their degree of acceptance. A product concept is a particular combination of features, benefits and price. Alternate product concepts are evaluated by customers. Though it may still be a description rather than the actual product, customers have something tangible to react to. This process allows customer feedback to seep into the new product development process early enough for the marketers to evaluate the degree of acceptance of the potential new product. As the physical product may not be available at this stage, companies go in for a verbal or pictorial description of the product to let customers have an idea about the actual item. Prospective customers present feedbacks about the attractiveness of the features and benefits offered by the potential product. Usually, the intention of the company is to gauge the most desirable combination of benefits that customers are willing to pay for. An instrument, such as a questionnaire, is used to know which customers are likely to find the product most attractive, what price point would best suit the customer, what trade-offs is the customer willing to make while evaluating the product, immediacy of the product requirement and how frequently they would buy the product. These features or benefits are then incorporated into the product development process, which is likely to lead to competitive advantage for the company.

2.2.5 Business Analysis

Estimates of sales, cost and profits are made. The company identifies the target market, its size and projected product acceptance over a number of years. The company considers various prices and their implications on sales revenues. Costs and break even point are estimated. Sensitivity analysis is done in which variations from given assumptions about price, cost, customer acceptance are checked to see how they would impact on sales revenue and profit. Optimistic, most likely and pessimistic scenarios can be drawn up to estimate degree of risk attached to the project. The idea is to test if the proposed product will generate enough revenues and profits to justify the expenses that its development and marketing will entail.

Though it is not possible to draw reliable conclusions from such futuristic analysis, it does force company's executives to peep into what the proposed product can or cannot achieve for the company. If they decipher that the proposed product has huge potential they can pump more resources and expedite the project. The process permits the commercial instincts of the executives to be put to test.

2.2.6 Product Development

The product concept that has found the best acceptance is then developed into a physical product. Components have to be designed in terms of length, width, diameter, angle, etc., and arranged to be assembled in a manner which provides the features and benefits of the selected product concept. Multi-disciplinary project teams are established to bring the product to the marketplace. The product development process is faster and results in the development of better, high quality products when engineers, technicians, marketers, finance and production specialists work together in a synergistic fashion. This also allows the company to let various departments work simultaneously than work in stages using 3D solid modelling, CAD, CAM, thus reducing the time to market, while also reducing the cost of innovations.

R&D focusses on functional aspects of product whereas marketing keeps the project team aware of psychological factors. Marketers need to understand and communicate the important attributes that customers are looking for in the product, even as the product is being developed. Marketing may brief R&D on product concept and the latter will be responsible for turning the concept into reality.

At this stage, the product is tested to analyze its functional performance and the degree of customer acceptance. Paired comparison tests are used to compare the new product with existing or potential competitors in order to give a realistic feel to the consumer decision-making process. Customers compare and judge the overall preference for the product, as well as preference for specific features or benefits

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offered by various choices available to them. In monadic placement tests, only the new product is given to users for trial. Experts can also be given the task of testing. When testing products in business markets, products may be placed with customers free of charge, to check preference.

It is important to exercise certain precautions during the product development stage.

- Developers are left to their own devices during this stage. They feel relieved that marketers and other commercially-minded people have finally got off their back. They feel that they can finally get into their laboratories and start working on the product. They feel that they can now work in isolation, which is dangerous. Developers have to be kept in the loop at this stage, as they may commit the company to a product that was never envisaged or discussed in any of the earlier stages. It is important to remember that real and concrete innovation takes place only at this stage. During all the prior stages, only ideas were being discussed, analyzed and evaluated. However rigorously defined a product concept may be, it is only a description after all, and the developers can interpret the description very differently from what other players think it should have been. And since developers give physical form to the idea, they have something more tangible to show and prove their point when other people protest that the physical form is not really a replica of the idea that they had endorsed. Developers should not be allowed to run amok at this stage as they are capable of coming up with a physical form that will nullify all the hard work of market research and commercial analysis that the company might have put in.
- Developers are wary of showing their incomplete designs to other people in the organization because they fear that everybody will have a suggestion to make, and if they went about incorporating those suggestions, there would be nothing in the product that they could call their own. They insist on releasing only their final design. And when this final design reaches the manufacturing people, they may express their inability to produce the design or say the production will exceed the calculated cost. The design is relayed back to the developers who have to modify the design to make it fit for production. This may happen several times and leading to time wastage before developers and manufacturers settle on a design for production. But more dangerously, since the developers are modifying their original design to enhance its producibility, they may lose sight of the customer need that his original design was meant to serve. So the modified design may be more easily produced but it may have digressed so much from the original design that it may not be serving the customers' needs. This happens quite often because the focus of design modification is producibility and not customer needs.

  It is important that developers share their design with the manufacturing people before they freeze it, so that they are upgraded about the producibility status of the design. Usually, by agreeing to make minor changes in the design, the manufacturing cost is reduced drastically. It is possible to avoid buying new and expensive equipments and make the design on the existing machines, to use less expensive material, to use components that the company is already incorporating in some other model, or simplify manufacturing, if developers pay heed to the suggestion of manufacturing people. The irrefutable suggestion is that manufacturing people should be closely associated with developers during the product development stage and should be provided preliminary designs and allowed to comment on its producibility. A good developer will keep a manufacturer as his conscience keeper.

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- A developer sets out to serve defined customer needs with available set of technologies. But customer needs and technologies are likely to change during the development process. The developer has to anticipate these changes and allow them to be incorporated in the final design. The developer has to set up mechanisms by which the changing customers' needs and technologies are allowed to creep in and the design process forced to pay heed to them. The developer can delay freezing those parts of the design which are likely to be affected by changing customer needs and technologies. At some point in time the developer has to stop taking cognizance of changing customer needs and technologies as it may delay the project. But a developer has to realize that it is futile rushing to the market with a product, which is already obsolete at the time of its launch.
- Product concept has already been tested with customers but a description of the product can never match the physical product in eliciting real reactions of customers. Before the developer freezes the design, he has to get it approved by customers. The physical product has to tested by the customer in actual use, if true worth of the design is to be known. It is undeniably costly and cumbersome to make limited number of products before manufacturing facilities are set up. But companies have to manage it if they do not want to set up manufacturing facilities for products that customers would not like and would have told them so if they had been given the opportunity to use the product. To get the real product in as many customer hands as possible and keeping the option to redesign the product in a wholesome manner based on customer feedback, rather than just tweak it, is absolutely imperative to get a successful design. Developers of information products like software routinely get customers' feedback on their design. There is an urgent need to replicate the concept in development of physical products. It is also important to note that while virtual prototyping, i.e., making a virtual model of the product with the help of software is useful to the developer, to test if he is getting the desired functions and benefits from the components and subsystems that he has designed; it is not useful for getting customers' feedback. The nuances of product performance decide the success or failure of a new product and customers can get a real 'hang' only from an original product.
- It is important to understand that a company should be willing to do 'anything' to increase the profitability of success of a new product. The probability of success of the new product should govern every decision that the company takes about the innovation process. If a new product fails, all the effort, time and money expended in developing it comes to naught. If a few more million dollars, and a few more months can improve the chances of the new product succeeding in the market, the company should go ahead. It is never a good

idea to save a few million dollars and few months and sink a billion dollars in the bargain.

2.2.7 Market Testing

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So far in the product development process, potential customers have been asked if they intend to buy the product, but have never been placed in the position of having to pay for it. Now customers are forced to vote with their money. The company seeks to have a limited launch for the product in the marketplace so that it can gauge the customer response in true test conditions. The feedback obtained from this launch guides the company's decision to continue with the large scale commercialization of the project, or to abandon it. Ideally, the feedback that is obtained from the test sample should be as realistic as possible, i.e., the profile of the sample of respondents should closely resemble the profile of prospective customers in the actual marketplace, and they should be buying the product from a realistic retail setup as they would actually do. For instance, a sample of customers may be recruited to buy their groceries from a mobile supermarket which visits them once a week. They are provided with magazines in which advertisements for the new products appear. Key success indicators such as penetration (the proportion of customers who buy the new product at least once) and repeat purchase (the rate at which purchasers buy again) can be found out. If the penetration is high but repeat purchase low, it is important for the company to ascertain the reasons for it. In case of any problems pertaining to specific aspects of the marketing mix, such as price points, product features, packaging, or availability, the company can take corrective measures. But if the company finds out that corrections are now impossible, or that the cost involved in remedial actions would outweigh the benefits, it can decide to withdraw the product from the market.

Test marketing involves the launch of a new product in one or few geographical areas chosen to be represent its intended market. The product is positioned and promoted the same way as it would be done in case of a full-scale launch. The new product is made available in select distribution outlets so that the real-time response of customers in terms of parameters such as purchase, amount of time spent in evaluation, or repeat purchase can be tracked vis-à-vis competing products. As the characteristics and composition of customers in the test market resemble the characteristics of customers in the entire target market, the results of test marketing can be extrapolated for the entire market. Marketers take decisions about the modification of some part of the marketing mix, and even about the continuation of the product launch according to the results of test marketing. Test towns and areas may not be representative of the national market and thus sales projections may be inaccurate. Competitors may invalidate the test market by giving distribution incentives to stock their product, thereby denying the new product shelf space. Test markets need to be long enough to measure the repeat purchase rate for the product. This can mean a delay in national launch stretching to many months and years. In the meantime more aggressive competitors can launch a rival product nationally and therefore gain pioneer advantage. Getting the co-operation of distributors is important. Distributors may not want to co-operate for conducting test marketing, or they may charge exorbitant fees for the activity.

The most important rationale for test marketing is that, the obtained results helps the company to concretize its marketing strategies for the full-scale launch of the product. This is undoubtedly more efficient than making costly blunders after the full-scale product launch. A company may also choose to test several combinations of the variables in the marketing mix to ascertain the optimal one. This process is used very often for fast moving customer goods (FMCG) products where a test market is typically conducted in a few cities in a country. For very expensive equipment, it is impractical. Globally, when a company does a phased product launch, it can apply the lessons learnt from one country market, in another country where the product, consumer and market characteristics may bear close resemblance.

2.2.8 Commercialization and Diffusion of Innovation

Choice regarding target market to whom the product should be sold first and product positioning that will be attractive to the first target market has to be made. The fundamental process that defines the success of an innovation is its diffusion rate. Therefore, the target market for the innovation has to be decided by understanding the process of **diffusion** of innovation. The spread of an innovation is called diffusion, and when an individual customer unit buys the new product, it is called adoption. Thus, when many customers adopt the new product quickly, the diffusion is fast, and the diffusion rate is high. The new product becomes successful. And when either the number of customers who adopt the new product is low, or the process of adoption is slow, the diffusion rate is low. The rate of diffusion depends on:

- The characteristics of the innovation, i.e., an innovation having a relative advantage over existing options in the market, that fulfill the same needs of the customers, is more likely to be successful
- The social system or the target market where the innovation is introduced
- The channels of communication used by the marketer to explain innovations to prospective customers
- The amount of time that has lapsed since the execution of the innovation

Diffusion: The spread of an innovation is called diffusion, and when an individual customer unit buys the new product, it is called adoption

Fundamentally, all members of the target market are not equally receptive to the new product as they are in different states of readiness, and the ability to take risk varies. It is important that in the initial phase of launch, the company targets customers who are more likely to buy the new product than others. The process of adoption will be slower if the company targets the whole market, as a large part of the market will not be interested in the product or will be suspicious about it at this stage. Also, a launch targeting the whole potential market will also be expensive compared to the adoption achieved. Customers feel comfortable in trying the new product when they find significant people possessing the product. Students will feel comfortable buying a text book when they find that the topper of their class is using the same book. In every product category, there would be customers who would know more about the product, or would want the best product, or would know more about whether a certain product would work or not. The average customers look up to such savvy or knowledgeable customers for advice or reassurance. It is important to place new products in the hands of such people who act as references or guides for average customers.

People who are most likely to buy the new product should be targeted first. These first buyers are called innovators. It is difficult to characterize innovators because they differ from category to another. Market research has to be carried out to find innovators of a particular category. The most important characteristic that defines an innovator is venturesome, i.e., his ability to take risks is higher than the rest of the target market. Therefore, he is willing to buy a new product that has hitherto not been tested in the market. Research reveals that in consumer markets, the customers who take higher risks are better educated, wealthier and younger, than the target market. And in business markets, the innovators comprise companies that are large and profitable, have well-educated and progressive leadership and management at the helm, and are innovators in their own markets.

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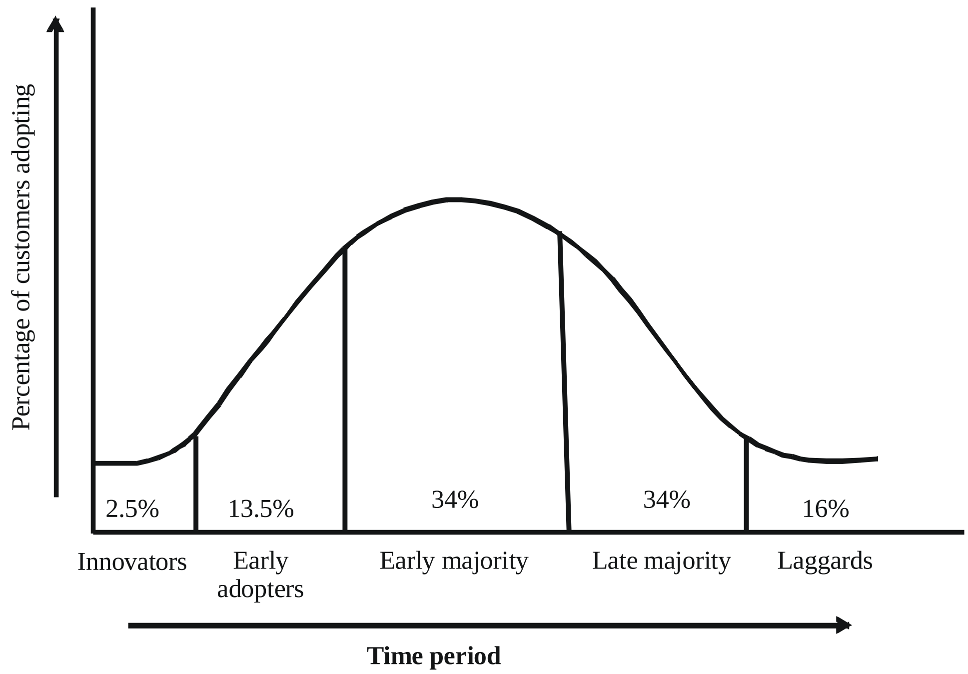

Fig. 2.2 *Diffusion of Innovation*

The group of customers who buy the product next are called early adopters. This category cannot take the risk of buying the product first. They feel assured that someone before them has bought and used the product, so that they could observe how the product works. But they soon follow the lead. They are also relatively affluent and self-confident to adopt the new product that is not yet very successful. Among the innovators and early adopters are a group of people called the opinion leaders. Opinion leaders are critical in hastening the process of diffusion of the new product as they influence other prospects to adopt the new product. The credibility of the opinion leaders is much higher than the communication sent by the company, as they are considered to be independent sources, and moreover, they are usually part of the reference groups of the customers in the target market.

The next categories of consumers are the early majority and the late majority, who usually comprise more than two-thirds of the market for the new product. The early majority are deliberate and cautious. They wait to see the product being accepted in the market before adopting it. The late majority are more cautious and skeptical than the early majority. They wait till a large part of the market adopts the product before buying it. Social pressures move them to purchase.

The last category of consumers is laggards. They are traditional. Usually, they comprise of the older, less-educated and not very well-off section of the target market. They wait till the product becomes a part of an accepted tradition.

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It is important to understand the characteristics of consumers in the process of diffusion of innovation. Marketers should first target innovators and early adopters while introducing a product in the market as they exhibit the least resistance to adoption of an innovation. Thus, the marketer will be able to earn revenues from these consumers early, enabling him to establish a foothold for the new product. This is important because, initially, the high investments in product development and launch can be offset, only when the company earns enough revenues from these customers as early as possible. This will enable the innovation to sustain in the market. The innovators and early adopters can be identified by the company by conducting marketing research.

The characteristics of consumers enable the company to perform the process of segmentation and targeting. Innovators and early adopters would be the first target markets for the company.

The diffusion of innovation curve is strongly linked to the product life cycle curve. During the introduction phase, few consumers buy the product, coinciding with the small percentage of innovators in the market. The sales gradually increase, signifying the entry of the early majority. As the sales rise sharply and reach a plateau, the early majority and a percentage of the late majority adopt the product. The stable sales curve in the PLC signifies repurchase by these groups. A part of the late majority and the laggards enter during the decline stage. As the profile of users keeps undergoing a change, companies need to change their marketing strategies over the PLC.

The main purpose of the marketing strategy of a company is to yield competitive advantage. Initially, it is critical for the company to understand the characteristics and needs of the innovators and the early adopters as they are vital for the success of an innovation. In the initial phase of the launch, the positioning of a new product should be for innovators and early adopters.

It is also important for marketers to reduce the resistance of these consumers while adopting the new product. This can be done by clearly communicating the relative advantage of the new product. Primarily, the marketer must give consumers adequate reasons to buy the new product. Therefore, the new or improved product must yield sufficient value for the consumer to induce him to buy it. Research reveals that the rate of diffusion is faster when the product is compatible with the existing values, beliefs and experiences of consumers-compatibility, it is not extremely complex to understand or use (or the marketer gives elaborate explanations to overcome complexity)-complexity, when consumers can easily observe and understand the usage and advantages of the product–communicability, and consumers can try out the new product before buying it–trialability. Marketers should devise launch strategies that allow low cost and risk free trial of more expensive innovations. A company can offer the product on lease or offer to take back the product if the customers do not find it useful or can arrange and manage a sharing arrangement between customers. The idea is to reduce the risk of customers in using the new product. Whenever the benefits of the new product will accrue over a period of time, it is more difficult for consumers to understand the advantages of the new product.

The marketer should ensure that the relative advantages of the new product are clearly communicated to consumers. Nothing should be presumed to be obvious. Communication to consumers should be clear and convincing. Promotion showing opinion leaders accepting and using the product is important.

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Marketers must always remember that consumers give up an existing way of solving a problem in order to adopt a new one–they do not merely adopt the new product. Therefore, they must evaluate what the consumer is giving up in order to gain the new product. The loss experienced by the consumer in giving up the existing solution should not outweigh the gains that they make from adopting the new product. Also, he must attempt to ascertain the degree of difficulty that the consumer would experience in order to give up the existing solution. The more difficult it is for the consumer to give up the existing solution, the greater is his resistance to adopting the new product.

How to commercialize an innovation

There are various approaches to commercialize a new product idea. It must decide whether to go all alone in the entire process of innovation, involve other organizations in performing some functions or license its innovation. The approach that companies choose in commercializing their ideas is the most important factor in deciding the success or failure of a new product idea. There are three approaches companies can choose from.

1. In the integrator’s approach, companies manage all the stages of the innovation process by which they turn ideas into profits. Intel invested $4 billion in semiconductor research in 2002, manufactured its products almost entirely at company-owned facilities, and managed the marketing, branding and distribution of its chips. Integrators believe that this is the least risky approach, but it requires manufacturing expertise, marketing skills, cross functional cooperation and a big up-front investment to succeed.
2. When a company uses an orchestrator approach, it makes use of the assets and the unique capabilities of its partners, and the company's own assets and capabilities contribute little to the innovation process. For Handspring, IDEO designed its devices, and Flextronics manufactured them, and both of these critical processes contributed to the success of the company's innovations. The orchestrator approach works best when a company wants to reduce its time to market drastically, or wants to reduce its investments. A company can succeed in the orchestrator approach only when it is extremely skillful at managing relationships with its partners, and can also manage several projects simultaneously across multiple companies. It becomes imperative for the orchestrator to protect its intellectual property rights as there is tremendous flow of critical information across partners. Therefore, if there are any glitches among the partners, there is a strong possibility of theft or piracy, which will do great damage to the orchestrator.
3. The licensing approach is used when companies want to profit from innovations that are not linked directly to a company's core strategies. This approach is used often in industries where technological changes are extremely rapid, for example, in the biotech and the information technology industries. IBM's innovations are commercialized by other companies, and in turn, IBM earns royalty fee. Licensors usually pick up equity holdings in those companies that commercialize their technologies so that they can keep track of the outcome of the commercialization of the new technology, and ascertain its success. If the licensor finds that the technologies are well-accepted in the market, there should

be no harm in selling off the technology, as it is not related to the core strategy of the company. However, this is not very easy, as the inventors of the technology have a lot of attachment with it.

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The primary difference across the three approaches is the level of investment that has to be borne by the company. The integrator approach requires the highest investment while the licensing approach requires the least. The cash flows, risks and returns also vary. Most companies choose the approach that they have been following traditionally. Polaroid had always been an integrator and it continued to use the integrator approach for developing digital photography. But if it had considered the other two options, which it had never used, it would have realized that a mixture of licensing and orchestrator approaches would have been more appropriate for developing technologies which were very different from the ones it was familiar with.

Choosing the right approach is very critical. If a company needs to invest heavily in physical assets, and the potential partners are not developed, an integrator approach would work. If the supplier base is sophisticated, and the value attached to brands is high, orchestrator approach would be appropriate.

The characteristics of the innovation would also affect the approach which should be adopted. Products, whose potential life cycle is very short like that of disk-drives, should follow orchestrator approach since the partners would help in incorporating the latest technologies in the product. If the product is a radical breakthrough, it will require greater resources for educating the market as well as setting up new manufacturing facilities. If a product requires lot of complementary products and infrastructure support, the innovator has to become a very active orchestrator. If a product enjoys a patent protection, the innovator should be interested in following an integrator approach.

The company should also figure out the risk associated with the innovation before settling on an approach. There are four risks which should be evaluated. The first risk with the new product is whether it will actually work as promised. New products generally promise relative advantage over existing alternatives. If this promise is not delivered, the product fails. If the company has any doubt about the success of the new product, it should license it to some other company, and obtain royalty fees. The second risk involved is that consumer adoption of the innovation may be very slow, or absent, despite the fact that the new product lives up to its promises. There could be various reasons for this, one of them being that customers experience huge inertia in changing from existing alternatives to a new product, as it usually requires change of habits. The third risk is from substitute products. These products tend to distort prices and margins of the new product. The fourth major risk is the amount of investment required by the company in the innovation process. Members in the innovation team usually prefer that everything related to the innovation should be done in-house. But the company should examine all the risks to understand whether some of the tasks related to the innovation process can be passed on to third parties.

Check Your Progress

1. What steps are to be followed to develop a new product?
2. Specify factors that propel a company to design and develop new products.

The integrator approach works best when market conditions are stable—customer preferences are understood clearly, there is clarity about competitors' strategies, product life cycle is long and the existing technologies are working well. The orchestrator approach works best when the company has developed a breakthrough innovation that does not fit into its existing business strategies. The company however, has several capable partners such as its suppliers, and time to market for the innovation is critical. The licensor method works when the company enters a new market, and when it needs to protect its intellectual property rights. This method is also useful when the product needs complementary items to go with it, and when the innovator's brand is not critical to it being accepted by customers.

Managers will also have to figure out as to whether the selected approach matches with the company's internal skills. An integrator approach will be successful only if the company has the assets and the capabilities to design, manufacture and launch the product quickly. An orchestrator approach will be successful only if the company has assets and capabilities to manage projects across several organizations. A licensor approach will be successful if the company has the assets and the capabilities to protect intellectual property rights and structure long-term arrangements. A company should carefully audit its assets and capabilities, and make a judgement as to which approach would be most suitable for it to pursue—it should not adopt the most prevalent model automatically.

Product design: It refers to the development of the concept or idea of a product in terms of specifications that are required for transforming the idea into that product

Product development: This refers to the process of creating new products or modifying the existing ones within a predetermined time frame and cost price while maintaining the preset quality requirements

2.3 DESIGNING A NEW PRODUCT

1. **Product design:** It refers to the development of the concept or idea of a product in terms of specifications that are required for transforming the idea into that product. These specifications are created, keeping in mind the constraints of the production process, feasibility to produce and meeting customer expectations without sacrificing quality. Product design involves activities, such as, creating drawings and specifications pertaining to sizes and tolerances, and deciding on the type of materials to be used, etc.
2. **Product development:** This refers to the process of creating new products or modifying the existing ones within a predetermined time frame and cost price while maintaining the preset quality requirements. The needs or requirements of consumers keep changing with time. Therefore, to meet these needs successfully, organizations either introduce new products in the market or modify the existing ones. The objective of both these activities is to achieve customer satisfaction and to make production more feasible. This provides the organization both growth and profitability.

Before proceeding further with the unit, it is important to understand the concepts on which product design and product development are based.

2.3.1 Need for Product Design and Development

Product design and development are required by all organizations to achieve certain objectives. These terms will be analyzed separately for new well as modified products.

1. Develop and introduce new products

To develop and introduce new products in the market, the following objectives need to be kept in mind:

(a) To overcome decline in the growth rate of an organization

(b) To replace short-lived products

(c) To optimally utilize surplus capacity, such as available physical facilities, managerial expertise and workmen skills

(d) To re-deploy surplus manpower arising out of technological changes

(e) To utilize surplus funds and increased borrowing power of the organization

(f) To increase market visibility with the introduction of new products

(g) To meet the new requirements of the customers

(h) Expand growth in the market share by adding new designs and more variety to the product range

(i) Filling in the missing products in the product range to provide consumers with all the possible options within the same brand, thereby ensuring that the customers remain loyal to the brand.

2. Modify existing products

Sometimes, instead of introducing new products, the existing products are modified. These modifications are made for variuos reasons:

(a) To develop brand loyalty in a customer.

(b) Improving the life-cycle of a product in the market by providing it a new look or adding to its functionality, thereby increasing the product's profit and bringing it back to the growth base.

(c) Expenses involved in developing new products are generally much higher than those for product modification.

(d) Time required to modify an existing product is less than the time required to launch a new one.

(e) Maintaining the advantage of those products that have already established themselves in the market by improving them from time to time by giving new advantages in terms of functionality, multiple ability, etc.

(f) Utilizing the production resources effectively, since the same lines for production can be more or less utilized for making modifications in the existing product.

(g) Increasing market share through economical pricing by passing on to the consumers, the advantage of reduced cost of production, achieved by amortizing capital cost over increased number of units produced for the product

To summarize, we can further say that introduction of new products adds to an organization's profits through a corresponding increase in sales. Modification of the existing products provides sustainability in the market and cost reduction, which further helps to maintain the profitability for an organization.

2.3.2 Characteristics of Good Design

The design of a product affects the factors responsible for the success or failure of a product in the market. While designing a product, various factors such as product performance in the prevalent market conditions, feasible productivity of the product and the features that would satisfy the consumer needs are considered. Even a small omission in interpreting the market requirement into a design for the product can prove

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disastrous for the company. Hence, it is important for a product to be well-designed. The characteristics of a well-designed product are as under:

1. Functionality

While designing, the most important consideration is the function that the product is expected to perform. Products are designed with a core objective and for meeting a specific customer need. If the product is unable to meet that very need, the whole purpose of introducing a new or a modified version of a product is defeated. For example, the basic function of a mobile phone is verbal communication. If the phone provides a very good camera, but lacks voice clarity, then the model cannot perform its basic function and is likely to be a failure in the market.

2. Reliability

Reliability means the dependability on the performance of a product for a designated period of time, without deterioration in the performance quality. While designing a product, its life-cycle is an important consideration. Consumers expect a certain life span in a product in terms of duration or number of cycles the product will last. When you buy an electric bulb, you expect it to burn for a specified number of days, giving a certain level of illumination.

3. Productivity

Productivity can be defined as the possibility of manufacturing the product in the required quantity at a feasible cost. A product that may be very well-designed in terms of functionality and appearance, but if it is not produced in the required quantity and at a favourable cost, it will not be successful in the market. The factors, in relation to productivity, that should be considered while designing a product are, number of operations that form the manufacturing process, availability of the necessary materials, technology requirements, etc.

To improve the product's productivity, designers consider certain options like reducing number of operations or replacing time-consuming operations with other technological options. Today, most computers are attached to printer-cum-fax machine-cum-scanner types. Instead of using separate machines for each operation, multiple machines are being used. Productivity of the machine has now increased manifold and at a fraction of the cost. Alternate materials can also be used to achieve this objective. For example, for galvanizing, steel plants use zinc which is 99 per cent pure. If they use zinc which has a purity of 95 per cent, the cost of steel will come down by almost 20 per cent without any alteration in its quality, since the impurities do not harm the galvanized sheet in any manner. This would greatly reduce the cost of sheet produced.

4. Quality

Quality means conformance to specifications. A good design ensures the required quality in a product. The agreed process should be capable of producing the desired quantity with consistent quality. Inspection only indicates deviations from specifications.

The materials and their specifications ascertained while designing, play an important role in making the product durable and reliable. Tolerances in the dimensions of individual parts affect the final quality of the assembled product. In certain cases where the product is an assembly of more than one part, the tolerances of the individual parts used, when combined together should not be beyond the tolerance specified for the assembly. This especially needs to be taken care of in assembly parts, where the tolerance of the individual components when put together, tends to overshoot the tolerance of the assembly as a whole.

Quality will be discussed further in the subsequent units.

5. Standardization and simplification

Standardization is a tool which promotes the use of minimum number of parts to serve the maximum number of purposes, in order to achieve economy in manufacture. It minimizes whole life cost and maintains quality and reliability necessary to ensure operational efficiency and effectiveness.

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Standardization: A tool which promotes the use of minimum number of parts to serve the maximum number of purposes, in order to achieve economy in manufacture

Simplification menas making the design simple. A design which has standard parts will always have an edge over designs that have custom-made parts. For example, all computers and typewriters have the same arrangement of keys on the keyboard because consumers are used to. Although many other designs of keyboard keys are available, no company is willing to take the risk of deviating from this standard. Lack of standardization creates problems. Standardization has benefits, such as, lower design cost due to use of existing components or parts and easy availability of components for replacement if any defects arise. Also, the inventory management of few standard parts is simple in comparison to that of having a large number of different components in a non-standard design.

6. Maintainability

Products are designed to perform reliably for the designated period of time. All the same, some amount of maintenance is required. This maintenance may be preventive, i.e., to prevent deterioration of the product or may be corrective, i.e., to correct any defect that may occur in the product. The product design should be such that maintaining it is simple and cost effective in terms of repair or replacement of the defective part. In fact, the desire for easy maintainability can be seen everywhere. For instance, clothes which are easy to maintain and do not require starching, pressing, etc,. are popular among consumers. Other examples of easy maintenance products are, new age water purifiers that do not require frequent cleaning, tubeless automobile tyres, etc.

7. Cost effective

The production cost of an item gets determined at the designing stage. It plays an important role in its economic manufacture. At the designing stage, effective measures like standardization of parts and manufacturing process, and choice of input materials influence the cost of product. Being cost competitive is an essential requirement for a product to be successful.

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This unit discusses the design and development of products. Marketing suggests ideas for new products and provides specifications for existing product lines. Product development provides the technical concept for the product to be manufactured. As an activity, product development links customer needs and expectations to the activities required to manufacture the product.

8. Soft Features of Good Design

Technical Superiority in terms of less use of energy per unit of performance, ease of handling, add-on features, ease of maintenance, environmentally sustainable features, environmentally friendlier features like less carbon-footprint/water-print, reusable components, in-built safety features, etc are important now-a-days. With competition every manufacturer is vying with each other to incorporate these features to differentiate the offering from those of others.

2.3.3 Concepts of Product Design

You can begin by understanding the various concepts involved in designing a product.

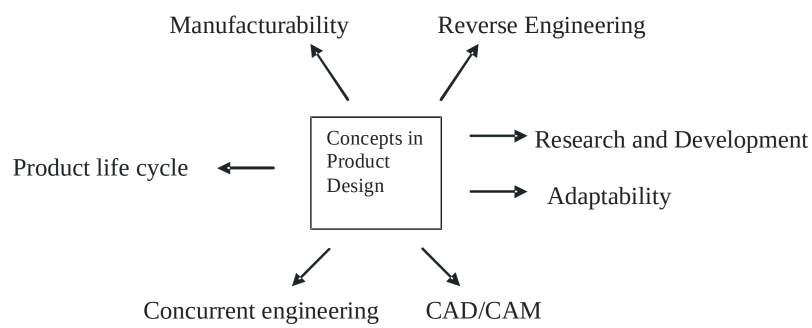

Fig. 2.3 *Concepts of Product Design*

1. Research and development

We know that research is a consciously directed investigation to find new knowledge. Basic research is a search for new knowledge without regard to any specific use and may not be immediately converted into commercial applications. For example, when Newton found the law of gravity, it was a fundamental research, which did not have immediate applications. In the course of time, many commercial applications of the Law have come into existence.

Applied research has the objective of developing commercial applications and is either investigative or experimental, for specific problems, products and processes. Development is the process of converting the results of applied research into useful commercial applications. Research usually has a good deal of uncertainty about its technological or commercial success. Most organizations have a research and development wing.

2. Reverse engineering

Reverse engineering is the process of careful step-by-step dismantling of an existing product (usually of a competitor) in order to understand its unique underlying concepts.

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Reverse engineering helps in designing products which are better than those of the competitors. In the field of consumer electronics, Sony Corporation is the market leader for products such as the walkman, handy cam, digital cameras, etc. Many other companies are said to have followed the reverse engineering approach in order to produce similar products in the shortest possible time.

3. Computer-aided design/Computer-aided manufacturing

Computer-aided design (CAD) and computer-aided manufacturing (CAM) are product design and manufacturing activities along with material and capacity planning, scheduling, materials handling, and inventory control. These techniques depend on the use of computers and an accurate database. Each item in the database has a unique code and stores the relevant characteristics of that item, e.g., dimensions, composition, number in stock, list of suppliers, drawings, etc. This data is available to many functional users such as engineering and marketing department personnel.

CAD is the use of computerized work stations to rapidly develop and analyze a product's design. Once the designer provides specifications, the system creates a three-dimensional geometric model of its product. The model can be rotated on the screen to display the product's characteristics completely even before it is manufactured. In addition, designers can obtain and test such factors as stress, tolerance, product reliability, serviceability and costs.

CAM follows CAD. It involves the extensive use of computers to accomplish and control production operations. Some major examples where CAM is used: to include numerically controlled (NC) machines, process controllers, systems that are linked by group technology, automatic assembly operations and computer-aided inspection and testing.

4. Concurrent engineering

Concurrent engineering (CE) is a product design approach which is radically different from the classical serial product design approach. The design process takes place in stages, moving from one department to another. Concurrent engineering saves a lot of time and effort since its emphasis is on cross functional integration and concurrent development of both products and their processes.

Cross functional teams form the backbone of the CE process. Several types of teams exist: programme management team, technical team and many design-build teams. Based on the level of complexity of the project, teams could be required to collate the efforts of the numerous design-build teams that have contributed to the product's design. To address specific product-related problems, task forces for the investigation of an emerging technology, can be created.

The main benefit of the CE approach is that it reduces the time required to complete a project. This happens when all major activities happen in parallel; for example, the simultaneous development of market concepts, design of products, manufacture of processes, and creation of product support structure. This not only saves time (since many activities take place simultaneously) but also minimizes errors that can possibly occur at an initial stage and remain unnoticed until later. Frequent information sharing is important to the success of CE. Hewlett-Packard uses technology-focussed teams that operate in parallel, as part of its strategy. Each team works on a key technology essential to the development of its products.

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5. Life-cycle of a product

Every product has a certain marketable life. The duration for which a product exists in the market can be broken down into several stages. Life span varies, depending on the product. Even the relative life span of each stage of a product varies. An analysis of the life span helps understand the pattern of demand during the life of a product.

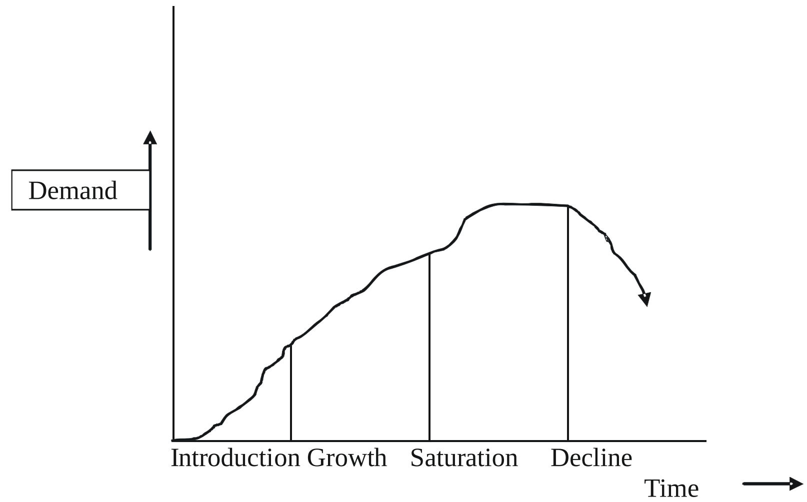

Fig. 2.4 *Life of a Product*

(a) **Introduction Phase:** This represents the launching phase of a product. The product has to find a market and prove its worth. If the demand for the product is low, the company does not make profits. When products are introduced into the market, frequent design changes occur. Hence, innovation, flexibility and responsiveness to customer needs are most important. Here, productivity is not critical.

(b) **Growth Phase:** As the product finds acceptability in the market, its sales rise. The company streamlines its manufacturing and distribution systems and makes profit from that product. As the growth stage develops, the manufacturing section must have the ability to meet these growing demands. Capacity growth and utilization become critical performance measures. Manufacturers try to maximize productivity and minimize costs. Productivity measurement becomes a useful performance measure at this stage and is likely to continue during the decline stage.

(c) **Saturation Phase:** This phase is marked by stability in the demand or sales of the product. Competitors may begin to introduce new and similar products; hence stagnating the growth rate of this product.

(d) **Decline Phase:** In the decline phase, the demand or sales of a product begins to decline. Unless the product is given a fresh lease of life by adding new features to it, the product may eventually be withdrawn. In this phase, the product begins to lose its appeal as substitute products are introduced which become more popular. At this point, the product is either discontinued or replaced by a new or modified product.

(e) **Manufacturability:** Manufacturability implies designing a product in such a way that it can be easily manufactured or assembled. While designing a new product, the manufacturing capabilities (such as existing machines, equipment, skills of workers, etc.) of the organization have to be kept in mind. It also needs to be checked whether or not the product can be economically produced in bulk.

(f) **Adaptability:** A product should be operational in varying environmental conditions. It is always easier to create a product, which has a robust design rather than make changes in the environment to suit the product. For instance, some years ago, computers needed to be kept in air-conditioned surroundings, free from dust. But today's computers are more robust and can efficiently work at normal room temperatures.

2.3.4 Product Development Process

The product development process consists of a series of activities starting from idea generation and moving up to commercial production. The process involves a complex set of activities that includes almost all the functions in a business. In the initial stages, when a concept is developed and a product is planned, it is pertinent to combine information about market opportunities, competitive products, technical possibilities and production requirements. This information can define the new product's architecture and constitute the product's conceptual design, its target market and the level of performance desired, investment requirements and the potential financial impact. Before approving any new product development programme, firms conduct small-scale tests to prove the viability of the concept. Such a test can involve discussions with potential consumers and the construction of product models.

1. Exploration

This is the starting point where ideas emerge from the sales force that is in direct contact with the customers. In addition, new ideas may also be generated from management employees, shareholders, consultants or from study of foreign products and markets, reports of trade journals, seminar papers, R&D laboratories, government or university laboratories, etc.

2. Feasibility study

At this stage, the new ideas are screened and the most viable ones are finally selected. Mere guesswork may not be a foolproof method of selection. In order to make the selection process more scientific and less risk-prone, every quantitative and qualitative information needs to be consolidated, keeping in view the organizational objectives and available facilities. All relevant technical and economic factors and insufficient details are analyzed at this stage.

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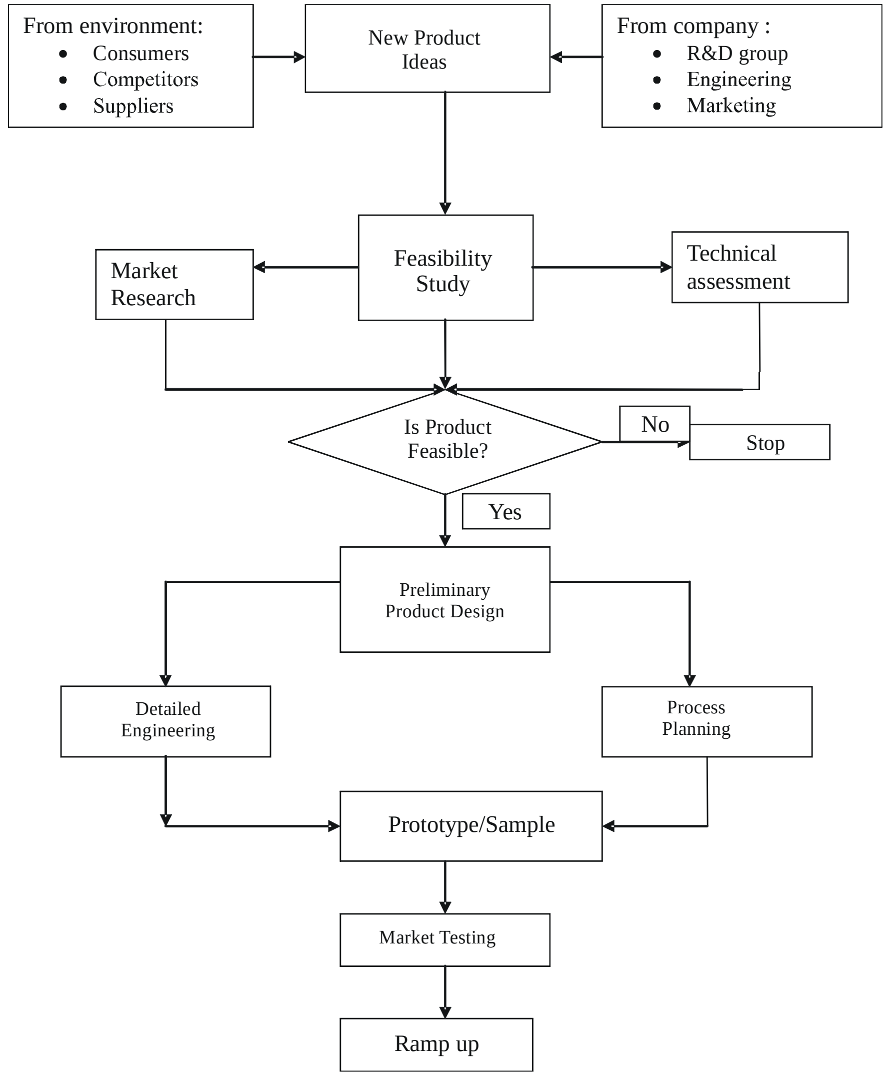

Fig. 2.5 *Product Development Process*

Some of the questions considered before selecting an idea are:

(a) What is the market potentiality of the idea?

(b) Is the idea technically feasible?

(c) Is the idea free from intellectual property rights or patent regulations?

(d) What are the present and future raw material supply positions?

(e) To what extent are the existing production facilities and resource availability suitable to commercialize the new ideas?

(f) What would be the amount of investment required and to what extent can the company internally generate such an amount?

(g) If external sources need to be tapped, has the cost of borrowing been taken into consideration?

(h) Would there be adequate return on investment?

This stage ultimately facilities the budgeting process.

3. Detailed engineering phase

Upon approval, a new product project graduates to the detailed engineering phase. Primary activities constituting this phase are the design and construction of working samples, as also the development of tools and equipment critical to the product's commercial production. If the prototype fails to deliver the desired performance results, necessary changes in the product's design are made by engineers and the tests are repeated.

Once this is done, the firm shifts the development of the product to the next phase, which is the pilot manufacturing phase. During this phase, the individual components that were build and tested on production equipment, are assembled. Post assembling, these are tested as a unitary system in the factory. During the pilot manufacturing phase, the units that comprise the product are also produced. Moreover, the new or modified manufacturing process's ability to execute at a commercial rate is also tested. It is very important that during this stage all tools and equipment are in order and all units that supply parts are ready for volume production. This point in the product's development brings the entire system together—be it the design, engineering, parts, production supervisors, tools and equipment, assembly sequences, or the operators and the technicians.

4. Ramp up

The last phase of development, where commercial production begins, is called ramp-up. However, volume of production increases only when the organization develops the confidence in its (and its supplier's) ability to execute consistent production as also the ability of the marketing department to sell the product.

5. Commercialization

This is the final stage of new product planning and it consists of important decisions about whether to make or buy the product's component parts, and activities such as developing production methods, activating distribution network, integrating the new product with the organization's normal activity and finally achieving satisfactory sales volume and profitability.

2.3.5 Techniques of Product Design and Development

Three techniques are commonly used in product selection and development. These are QFD, value engineering and DFMA.

1. Quality function development (QFD)

QFD is a method which helps transform customer needs (the voice of the customer [VOC]) into engineering characteristics for a product or service. Dr. Yoji Akao, who originally developed QFD in Japan in 1966, states that QFD is a **'**method to transform user demands into design quality, to deploy the functions forming quality, and to deploy methods for achieving the design quality into subsystems and component parts, and ultimately to specific elements of the manufacturing process.' QFD is considered an important practice of design for six sigma (DFSS). It is also mentioned in the ISO 9000:2000 standard which focuses on customer satisfaction.

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QFD: QFD is a method which helps transform customer needs (the voice of the customer [VOC]) into engineering characteristics for a product or service

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QFD considers the customers' requirement, the products' existing and desired characteristics to form the basis of a matrix called house of quality. By building this matrix, the cross functional QFD team uses customer feedback to make decisons on engineering, marketing and design. It translates them into concrete designs and engineering goals. In short, the house of quality enables the firm to build a product as per customer's needs. QFD makes use of a series of matrices that record the information gathered and developed by it. These matrices then represent the product plan made by the team. The method followed by QFD is based on systems engineering approach. It consists of a few general steps:

- Develop a list of customer requirements and build a product planning matrix
- Rank them in order of importance
- Develop product concepts or technical characteristics that satisfy customer requirements
- Evaluate the given concepts for suitability and select that which is found optimum. (Concept Selection Matrix)
- Derive subsystem/assembly requirements (Assembly/Part Deployment Matrix) from the product requirements and technical characteristics
- Determine which manufacturing process steps meet the stated Assembly/Part characteristics.

Further, on the basis of these process steps, set-up requirements and process and quality controls are determined. These should then insure that critical assembly or part characteristics are achieved.

QFD is applicable to a wide range of services. These range from consumer products to military requirements. Among the well-known US companies that use QFD techniques are the automobile manufacturers GM, Ford Motors and Daimler Chrysler as well as those manufacturers that supply components to these companies.

DFMA: DFMA is a methodology used to determine how to simplify a current or future product design or manufacturing process to achieve cost savings

2. Design for manufacturing and assembly (DFMA)

DFMA is a methodology used to determine how to simplify a current or future product design or manufacturing process to achieve cost savings. This method is based on the logic that if you simplify the manufacture and assembly of the designs by eliminating unnecessary parts and assembly tooling, it will be less costly to manufacture and will lead to significant cost savings. This method helps you to analyze and compare the costs of different materials and manufacturing methods in the design phase itself, thus creating products that are not only cheaper, but also easier to manufacture and maintain. Hundreds of leading companies use DFMA methods and tools to make their products 'lean from the start'.

Since this methodology and tools were introduced, by Dr. Boothroyd and Dr. Dewhurst in 1983, many companies including Harley-Davidson, John Deere and Abbott Laboratories have brought down the manufacturing cost of their product and have thus saved millions of dollars.

Some benefits of using DFMA are:

- Reduction in supply chain costs
- Simplification of the product and improvement of quality

- An improvement in the communication between various branches such as the management, manufacturing, design and purchasing
- Reduction in manufacturing cost

Various DFMA software is now available in the market, which essentially helps in the following manner:

- Enables design engineers to quickly analyze and manage the various design approaches. The end design will be leaner since it will consist of fewer components and therefore be easier to manufacture
- The DFMA software allows product simplification. This in turn, enhances the manufacturability of a design
- Alternatives available for processes and materials can be explored. These alternatives also provide their individual cost impact.

DFMA tools can answer questions such as, what will be the cost of the said product, how can one reduce its cost without compromising its quality, can we improve the products while reducing its costs?

3. Value analysis/Value engineering

This concept of value engineering was developed during World War II by Lawrence D. Miles, a purchase executive. In 1945, Miles was required to organize raw material for sub-contracting. Most of his vendors had complained about raw material shortage. Miles therefore started analyzing the reasons for which the particular raw material was specified and if there were alternatives available. He solved this problem without his seniors having any knowledge about the process; they only knew that Miles had used a new technique.

With the US government and the US President's recognition, the US Navy adopted the technique in 1954. So much so that if there is a project worth more than $5 million in any government agency, it has to be certified by the Value Engineering Screening and Value Engineering Project Groups.

So, what is value engineering, value analysis, value management, etc.? The value of a product is based on the degree to which it can satisfy needs, both given and implied. The value of a product or service to a customer is its worth to him in monetary terms.

The British Productivity Council has defined **value analysis** as **'**the study of the relationship of design, function and cost of any product, material or service with the object of reducing its cost through modification of design or material specification, manufacture by a more efficient process, change in source of supply (external or internal) or possible elimination or incorporation in a related item.'

According to the Society of American Value Engineers (SAVE), 'value analysis is a systematic application of recognized techniques, which identify the function of a product or service, establish a monetary value for the function and provide the necessary function at lowest overall cost.' Therefore, value analysis is a cost reduction technique that is used to improve the value of any existing product or service. It allows a person to investigate all the components of an existing product and eliminate unnecessary cost associated with it. Value engineering is however, the

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Value analysis: Value analysis as 'the study of the relationship of design, function and cost of any product, material or service with the object of reducing its cost through modification of design or material specification, manufacture by a more efficient process, change in source of supply (external or internal) or possible elimination or incorporation in a related item'

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application of the same set of techniques that are applied to a new product at the design phase. It ensures that all the defined functions are performed at the minimum possible cost by eliminating the weak features at the early stage of production. Therefore, value analysis is a remedial technique, whereas value engineering is a preventive technique.

Value analysis and value engineering activity is usually done by a cross-functional team of people from materials, manufacturing, product design, production, production engineering, maintenance and accounts. The team systematically follows the basic steps:

- Identifying the function
- Collecting all possible information about the function
- Investigating and evaluating the information
- Generating alternatives
- Recommending and applying a VA check list
- Implementing and reviewing

Take the example of a manual assembly operation on a truck chassis assembly line. The operator takes numerous individual steps but only a small number of these mean value addition for the product, as far as the customer is concerned. The steps were all written down and they were as follows:

- Bringing components to the assembly line
- Walk 20 feet to pick up the component
- Removing cards to expose the component
- Reaching for the component
- Placing the component at the point where it will be used
- Picking up bolts for the component
- Walking 25 feet to the chassis on the assembly line
- Positioning the component on the chassis
- Walking to the power tool
- Reaching for the power tool
- Walking and pulling the power tool to the component on the chassis
- Pulling the power tool down to the component
- Placing the bolts in the component
- Tightening the bolts to the chassis with the power tool
- Walking back 25 feet for the next component

All the activities performed do not add value to a product. Only some do. The trick is to identify those activities which add value to the product and eliminate the rest.

2.3.6 Modular Design

Modular designs can increase the rate of innovation. Innovations in modules must fit in the design of the complete product.

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Modularity is building a complex product from smaller subsystems that can be designed independently and can function together as a whole. Through widespread adoption of modular designs, the computer industry has dramatically increased its rate of innovation. By breaking up a product into subsystems or modules, designers can gain tremendous flexibility.

Different companies can take up responsibility for separate modules. To achieve compatibility among the modules, designers have to establish and enforce the visible overall design rules that determine how the different modules of the product would work together. Designers working on the modules have to adhere to these rules, but they have full control over those elements of the design that have no effect on other modules. The module designers are free to try out a wide range of approaches as long as they obey the design rules, ensuring that the modules would fit together.

Designers of many companies may be working on a particular module and each may carry out many experiments about the internal configuration of the module. In industries where there is technological uncertainty, this type of experimentation enables the industry to develop improved versions. This freedom to experiment with product design is what distinguishes modular suppliers from ordinary subcontractors. Also, they have more opportunity to add value than traditional subcontractors who merely manufacture according to the specification provided by the original equipment maker.

For example, a team of disk drive designers has to obey the overall requirements of a personal computer, such as data transmission protocols, specifications for the size and shape of hardware, and standards for interface, to be sure that the module will function within the system as a whole. But otherwise, team members can design the disk drive in the way they think works best. The decisions they make need not be communicated to designers of other modules or even to the system's architects, i.e., creators of the visible design rules. Rival disk-drive designers can also experiment with completely different engineering approaches for their versions of the module as long as they also obey the visible design rules.

Products can be designed to allow modularity in use. Consumers can mix and match elements to come up with a final product that suits their tastes and needs. For example, to make a bed, consumers buy bed frames, mattresses, pillows from different manufacturers. They all fit together because the other manufacturers put these goods according to standard sizes. Manufacturers can innovate freely as long as their modules fit the standard dimension.

Companies which operate in industries where modular design prevails have to make a strategic choice. A company can compete as an architect creating the visible information or design rules for a product made up of modules. Or it can compete as a designer of modules that conform to the architecture, interfaces and test protocols of others. For an architect, advantage comes from attracting module designers to its design rules by convincing them that this architecture will prevail in the marketplace. For the module maker, advantage comes from mastering the hidden information of the design and from superior execution in bringing its module to market.

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Companies will have to keep a track of where money and power lies at any point in time. An architect's position may look attractive but sometimes, module makers may have enhanced the performance of the modules to such an extent, that attractiveness of the product is governed by the presence of their modules in the product. Intel and Microsoft have become powerful makers of modules in the computer industry. No player, whether an architect or a module maker, can hope to remain in a strong position if they are not on the watch for competitors who may be surging ahead. There is no entrenched position in a market dominated by modular designs.

2.3.7 Reverse Engineering and Designing

According to Eilam, Eldad & Chikofsky, Elliot J. (2007). **Reverse engineering** (**RE**) is the process of discovering the technological principles of a device, object, or system through analysis of its structure, function, and operation. It often involves taking something (a device, component or whole product mechanical, electrical, electronic or otherwise, computer program, or biological, chemical, or organic matter) apart and analyzing its workings in detail to be used in maintenance, or to try to make a new device or program that does the same thing without using or simply duplicating (without understanding) the original.

Reverse engineering has its origins in the analysis of hardware for commercial or military advantage. Reverse engineering is also adopted in costly R&D based products to duplicate cheaper ones with reverse engineered knowledge. In chemical, pharma and electronic products which involve high R&D thrust, reverse engineering is adopted. However it may not be ethically correct.

The purpose is to deduce design decisions from end products with little or no additional knowledge about the procedures involved in the original production. The same techniques are subsequently being researched for application to legacy software systems, not for industrial or defence ends, but rather to replace incorrect, incomplete, or otherwise unavailable documentation.

Reasons for Reverse Engineering

- **Interfacing**. RE can be used when a system is required to interface to another system and how both systems would negotiate is to be established. Such requirements typically exist for inter-operability.
- **Military or commercial espionage**. Learning about an enemy's or competitor's latest research by stealing or capturing a prototype and dismantling it. It may result in development of similar product.
- **Improve documentation shortcomings** Reverse engineering can be done when documentation of a system for its design, production, operation or maintenance have shortcomings and original designers are not available to improve it. RE of software can provide the most current documentation necessary for understanding the most current state of a software system
- **Obsolescence Integrated Circuits** often seem to have been designed on obsolete, proprietary systems, which means that the only way to incorporate the functionality into new technology is to reverse-engineer the existing chip and then re-design it.

- **Software Modernization**. RE is generally needed in order to understand the 'as is' state of existing or legacy software in order to properly estimate the effort required to migrate system knowledge into a 'to be' state. Much of this may be driven by changing functional, compliance or security requirements.
- **Product Security Analysis.** To examine how a product works, what are specifications of its components, estimate costs and identify potential patent infringement. Acquiring sensitive data by disassembling and analyzing the design of a system component. Another intent may be to remove copy protection, circumvention of access restrictions.
- **Bug fixing**. To fix (or sometimes to enhance) legacy software which is no longer supported by its creators.
- Creation of unlicensed/unapproved duplicates.
- Academic/learning purposes. RE for learning purposes may be understand the key issues of an unsuccessful design and subsequently improve the design.
- Competitive technical intelligence (understand what your competitor is actually doing, versus what they say they are doing).

Reverse engineering is also used by businesses to bring existing physical geometry into digital product development environments, to make a digital 3D record of their own products, or to assess competitors' products. It is used to analyse, for instance, how a product works, what it does, and what components it consists of, estimate costs, and identify potential patent infringement, etc.

Value-engineering is a related activity also used by businesses. It involves de-constructing and analysing products, but the objective is to find opportunities for cost cutting.

2.4 STANDARDIZATION VS ADAPTATION VS DIFFERENTIATION

2.4.1 Product Standardization

The process of setting uniform characteristics for a particular good or service is called product stadardization. It can be useful for consumers because it permits competition among various suppliers.

Standards can be classified as given below:

Positive: It describes the positive quality of a product.

Negative: The standard that describes positively the qualities which are absent in the product.

General: The features and quality that need to be generally present in all similar products, irrespective of who produces them.

Private: Standard is considered to be private when an individual prescribes certain standards for his product, such as, shoes, sewing machine, etc.

Reasons for product standardization

Even though product adaptation becomes inevitable in the case of certain products, it should be realized that there is a sound economic logic behind a product policy which

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Check Your Progress

3. List the characteristics of a well-designed product.
4. Mention the various concepts of product design.
5. Describe a product's life cycle.
6. Why is the feasibility study of a product important?
7. Define: a) QFD; b) DFMA
8. Which people are involved with value analysis and value engineering done?
9. Cite one major difference between modular design and reverse engineering

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suggests uniformity in all markets. Six factors have been identified that may favour international product standardization.

(i) Lower manufacturing cost: When only one standard version is marketed in all the areas, it will be possible to have larger production runs, which will result in lower manufacturing costs.

(ii) Lower research and development and product adaptation cost: Similarly, product standardization will allow recovery of the costs incurred in product research and development from the entire sales. This will reduce the recovery period and also lower the break-even point. Moreover, additional expenditure on adapting the product to each individual market can be avoided.

(iii) Marketing convenience: When the same product is to be launched in different markets, economies can be achieved in terms of sales brochure, sales training, inventory management, advertising and after-sales service requirements.

(iv) Consumer mobility: Consumers are becoming increasingly mobile and overseas travelling is now fairly common. A consumer who is loyal to a particular brand in his home market, is more likely to remain loyal in a foreign land. Here, we can cite the examples of Gillette razors and Dove soaps.

(v) Brand image: When the name of a product is associated with high standard of quality in the minds of the consumers, a product manufactured under the same brand may enjoy the same status.

(vi) Impact of technology: Industrial products generally tend to have standard specifications and do not require much adaptation for foreign markets, unless climatic and similar considerations call for it. Even when industrial goods are modified, changes are likely to be minimal.

Advantages of product standardization

Standardization of a product provides the following advantages:

(i) Saves duplication of effort when designing standard products for which some other design already exists.

(ii) Reduces burden on product process, as standard parts are available at cheap rates due to mass production by other firms.

(iii) Simplifies material planning, attractive subcontracting.

(iv) Helps in reducing difficulties involved with drawing, specifications, designing, etc.

(v) Reduces storage cost as standardized goods require less storage areas.

(vi) Helps in reducing the production cycle, as standard parts may be subcontracted at a time when it is just needed. It, therefore, facilitates speed-to-market.

(vii) When backed by product standardization, advertising and promotion prove to be more effective in terms of demand creation.

(viii) Product standardization increases the good-will of the company.

Product standardization in the global market

Standardizing a product for the global market is known as global standardization. It means developing such standardized products that can be marketed worldwide with a

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standardized marketing mix. The Big Mac burger at McDonald's is an example of global standardization. This company uses the same brand name and slogan for the same product all over the world. Such a strategy is adopted on the assumption that there is a large, similar market that can be targeted globally. McDonald's and Coca-Cola are two examples of companies using this strategy.

The main advantage of this strategy is cost saving. Using standardized products across all your business units helps in generating economies of scale. These savings can then be applied to increase profitability, offering discounts to consumers, or reinvest it in the company for research and development. In the examples of Coke and McDonald's, they use their cost savings to offer low prices to consumers. This strategy helps them in making money with smaller margins spread across high numbers of consumers.

Product standardization and company objectives

Product standardization is the most effective cost reduction and quality improvement method. By minimizing the differences in their products, companies are able to achieve the following objectives:

(i) Rapidly increase production

(ii) Streamline distribution

(iii) Decrease raw material costs

(iv) Reinforce product branding

The best product standardization strategies allow companies to balance the need for targeted adaptation with the cost savings of standardization.

Major areas of product standardization

There are certain areas where product standardization has the greatest impact. They are:

1. **Components:** Product standardization can be done at the component level. Companies should look at their product line and determine whether they can create similar component sections across several products. If necessary, they can modify their products so that similar components can be used. This will help the companies in minimizing production costs. Through standardized installation instructions, companies can decrease testing costs. When companies have a high number of similar components, they can quickly introduce new products to the market to capitalize on changes in customer preferences.
2. **Packaging:** Companies can standardize their products for overseas markets by incorporating even a minor change in packaging. Without making changes in their actual products, companies can alter product packaging to reflect differences according to legal requirements of a specific market such as warnings, language, promotions and branding. Products exported to international markets may also require additional protection against moisture, extreme temperatures and difficult sales conditions. For example, if we sell an electronic item in the U.S. and want to expand to other European markets, we need to change our existing packaging as per the European market and change the colours to make it more appealing to European customers.

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3. **Quantity:** Product standardization can be achieved by selling products in different quantities. Companies can make large packages for warehouse stores and small packages for international markets. Most international customers do not buy products in bulk due to lack of space, transportation limitations and monetary differences. Thus companies can take advantage of product standardization savings by selling different quantities through different marketing channels. Companies can sell their products in different quantities in the same store to tap a particular customer base. For example, potato wafers can be sold in a snack-size package or family-size package.

2.4.2 Diffusion or Adaptation or Adoption

A company should at first target customers who are most likely to buy the new product. Such first buyers are called innovators. It is difficult to characterize innovators because they differ from one category to another. Market research has to be carried out to find the innovators of a category. But in general, innovators are the adventurous sort and prefer to be different. They do not mind taking chances with new products. In the case of consumer markets, such innovators are usually more financially affluent, confident, better-educated and younger. They take a chance while purchasing something novel. In the case of business markets, innovators are usually large and profitable firms with progressive and better-educated managers with a pattern of coming up with novel products.

Customers who buy the product after the innovators are called early adopters. They feel comfortable buying the product only after someone has taken the risk of buying and using the product. But early adopters follow the innovators' footsteps. They need to be affluent and self-confident if they are to purchase something that has not been accepted by the market yet. Innovators and early adopters are opinion leaders, i.e., they impact the views of the other people regarding the product and therefore influence the product's success. They popularize the product.

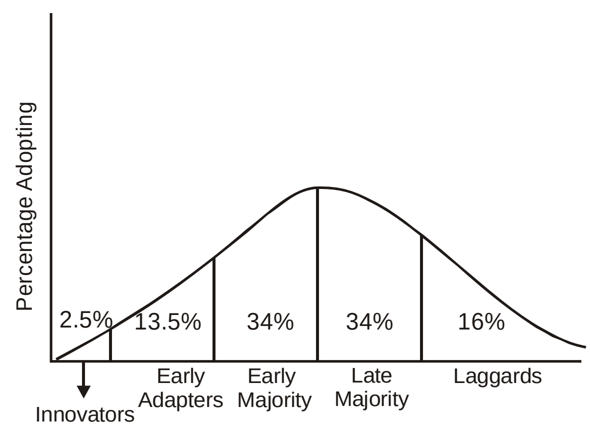

***Fig. 2.6** Diffusion of an Innovation*

The bulk of the customers are early and late majorities. They are deliberate and cautious and prefer to see a product prove itself in the market prior to purchasing it. The latter group is even more careful and even sceptical of the product. Novel products are adopted by this group only after they have been tried priorly by maximum number of people. Social pressures compel them to buy the product.

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Laggards tend to be bound by tradition. It is only after the new product has acquired the status of a traditional product that this group purchases it. This group usually consists of the old and less educated members of the population.

A crucial role is played by the diffusion of innovation categories in choosing target markets. The key lies in understanding the features of the early adopter and innovator groups and making them the target during the launch. While it may be helpful to think about the kind of customers who would purchase the novel products soon after the launch, it would be better to precisely locate the innovators and early adopters through market research.

Target market segmentation can then be done on the basis of these categories. The lifecycle of a product and the diffusion curve can be related. At the beginning, the product is purchased by innovators, during the growth stage, which is stimulated by the late and early majority, early adopters purchase it and sales are stabilized in the maturity stage (perhaps because of repurchase by such groups). It is only in the late maturity or even the decline phase that laggards enter the market. It may be necessary to modify the promotional activities designed or the stimulating trial as the types of buyers vary with time.

A marketing strategy has to be chosen for establishing a differential advantage. Understanding the requirements of innovators and early adopters is crucial. Since customer characteristics have a bearing on the rate at which an innovation is adopted, marketers must identify and target such customers as would not be unwilling to adopt following the launch. In the initial phase of the launch, positioning of the new product should be for innovators and early adopters.

The features of a new product also affect the rate of diffusion. The speed of adoption is also affected by its differential advantage in comparison with the existing products. The more the benefits given by a product, the more customers would prefer to purchase it. It will not help if the extra benefits are offset by costs. The compatibility of the innovation with these behaviours, lifestyles, experiences and values of the people affects the speed of diffusion of a new product. Promotion showing opinion leaders accepting and using the product is important. The innovation's complexity affects the rate at which it is accepted—products that cannot be easily understood or used may need a longer time for adoption.

Marketers can expect later adoption if they make the later models more user-friendly. Divisibility is the degree to which it is possible to try the new product without facing the risk of heavy monetary losses. Marketers should devise launch strategies that allow low cost, risk-free trial of more expensive innovations.

A company can offer the product on lease or offer to take back the product if customers do not find it useful> The company also can arrange and manage a sharing arrangement between customers. The aim is to reduce the risk faced by customers in using the product.

A product's communicability also affects its adoption. A product has a better chance of getting adopted if the applications and benefits are apparent to the target market. If it is not easy to quantify the benefits or they accrue only in the long run, then diffusion may take more time. It must not be assumed by marketers that what seems apparent to them would be felt by the customers too. Communication strategies that

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allow prospective customers to get acquainted with the new product and be assured of its benefits need to be devised.

2.4.3 Differentiation

A company's offer has to be distinct from those of its competitors and should fulfil the requirements of its targeted customers. A company's positioning is the result of whatever it does. Marketing mix is the most tangible and flexible tool to create the desired positioning. Companies use their marketing mix to create something specific and special for their customers.

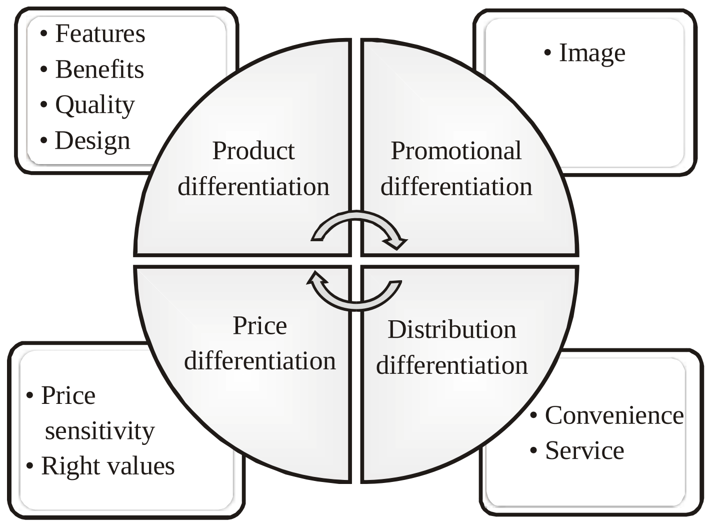

Fig. 2.7 *Differentiation*

The various types of differentiation are:

1. Product differentiation

We have already discussed in Unit 1 how product differentiation results from added features which give benefits to customers that rivals cannot match. Adding the same features as competitors may make the product more acceptable among customers. But it may end up introducing similar products that does not result in any differential advantage. Such a strategy of matching features and benefits will result in product parity, with no company providing any compelling reasons to the customer for buying the company's product. In such industries, customers will buy on the basis of price, and competitors will be forced to cut prices to grab customers from each other. The profit of every company will go down. Companies will not have the ability to differentiate their product as they will not have enough resources due to their dwindling profit margins. The only way out of this mess is that companies should arrange resources and start differentiating their products from each other. Price-based competition should be avoided.

For example, cellphone maker Nokia has introduced a stripped-down version of the touchphone for the entry level customer in India. The phone is a contrast to the ones that offer internet usage, m-commerce, camera, etc. It serves the basic purpose of mobile connectivity. Many customers are realizing that they do not need what they have bought and are switching over to these simpler phones. This phenomenon is likely to be repeated in many categories of goods once simpler options are available at lesser prices.

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2. Promotional differentiation

Promotional differentiation arises from unique, valued images created by advertising or superior services and provided by salespeople. People in different target markets are likely to react differently to certain stimuli like images, storylines, celebrities, etc. It is important to identify the stimuli that will evoke the desired response in the targeted customer group. It may be an extremely intricate task but it is imperative to find out whether the members prefer emotional or rational messages; whether they like humourous or sedate messages; whether they like narratives or musicals, etc. Unless the company has determined the choice of consumers on all the variables, it cannot create an advertisement that is suitable for members of the target market. Sadly, most advertisements look and sound similar and do not elicit the desired response. They are not suitable for any particular target market.

Similarly different target markets will require different types of sales presentations, persuasions and relationships with the seller.

3. Distribution differentiation

Distribution differentiation arises by making the buy situation more convenient for customers. Different target markets will require varying activities to make the purchasing experience more convenient for the customers. Buyers hard pressed for time have welcomed the introduction of automated teller machines (ATM). But some customers would still prefer to visit the bank to conduct transactions which can easily be carried out through ATMs. Cans of carbonated soft drinks from vending machines are finding favour with youngsters from the upper strata in India, who believe that this is the original Coke or Pepsi.

Different distribution channels like telemarketing, direct mails, Internet marketing and personal selling are used to lure customers of the same target market, resulting in irritability among customers, and duplication of efforts and high costs. This is particularly true of credit card markets, internet service providers, etc. The adequate strategy would be to identify the most suitable distribution channel for each target market and pursue it.

Lakme, the Indian cosmetic major, maintains three distinct distribution channels for its three target markets. The small neighborhood shops store commonly used skin care products, such as moisturizers and sunscreen lotions. The bigger shops in central marketplaces and specialty stores stock the complete range of personal care products. The exclusive salons target the elite group and stocks exclusive range of premium cosmetics, besides providing grooming services.

Sometimes customers would like to compare different brands before deciding on one. This is particularly true for high-priced items like cars which are mostly sold from one-brand stores. The company has to make it convenient for customers to compare brands. It would be a good idea to locate stores of different brands in the same neighbourhood or permit their brands to sell in multiple-brand stores. Customers will inevitably compare, and so a company might as well make it convenient for them and let it happen in its proximity so that it can exert some influence over the choice.

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For products that are bought on impulse, it is important to make it available widely as the consumer will buy the next preferred brand if his desired brand is not available. It is imperative for the company to understand that in the same product category, members of different target markets will buy differently. Therefore, it is important to tailor the distribution arrangements according to the way the target customer group shops.

4. Price differentiation

Price differentiation involves estimating price sensitivity of the target market and offering relevant values on the basis of such an estimation. A particular target market can be totally price insensitive and may desire value of the highest order. These values can be exclusivity, sheer luxury, symbol of status or royalty. They essentially signify 'belongingness' to an exclusive club and are often accompanied with the owner's passionate attachment to the product.

Another target market can be highly price-sensitive and will go for mere functionality of the product if it finds the price of available products high. Customers of this target market yearn for better products, but will not be willing to pay a price for it. If a company offers a better product at the existing price level, such customers would buy it.

A third type of target market is emerging. This market's price-sensitivity is moderate and is willing to pay higher price for more features and benefits. This would be a big market in the future because income and aspiration levels of customers are rising throughout the world.

Most segments desire the same values. What differentiates them is the manifestation of these values. For instance, luxury is a desirable value for all the above segments. But the way luxury is manifested, say, for the purchase of a product category such as automobiles, presents vast contrasts. The super luxury segment would be interested in the ultimate luxury statement, maybe a BMW 7i series. The highly price-sensitive segment may buy its first small car for the family, whereas the market with moderate price-sensitivity may purchase a mass luxury car. Therefore, it becomes essential to define the target market in terms of its price-sensitivity and its corresponding desire for high order values like royalty, mere functionality/benefits and more features.

2.4.4 Differentiation Along the Consumption Chain

While positioning a brand, the company must establish points of parity and points of difference to communicate the intended messages to consumers effectively. Points of differences must be constantly revisited and revised.

Marketers have concentrated on differentiating their brands from competitors. Brands have been positioned on the benefits that they can provide what the competitors cannot. It is true that customers remember the point of difference more than anything else about the brand. But managers also have to understand the frame of reference within which their brands work and address the features that brands have in common with competitors.

Effective brand positioning requires not only points of differences but also points of parity with other brands in the category. A fast-food restaurant may highlight 'nutrition'

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as the point of difference with its competitors but it has to realize that taste is more important than nutrition to core fast-food customers. The company should be able to compete on taste with its competitors and also realize that fast-food customers perceive good taste and nutrition to be at odds. A strong health-centered campaign might jeopardize the perception of the company as a fast-food restaurant. A company needs to differentiate itself from competitors but it cannot forget what business it is in.

Brand positioning starts with establishing a frame of reference which signals the benefits that consumers can get by using the brand. When a new product is launched, competing products are used as frame of reference so that customers can understand what the product is all about and what benefits can be expected from it. In some cases, the frame of reference is other brands in the same category. Coca-Cola is a soft drink. It competes with Pepsi. In other cases, brands from different categories can share the same frame of reference. A soft drink, a sports drink and iced tea, though belonging to different categories, are all thirst-quenching drinks.

For a very innovative product, it is difficult to fit it into an established frame and meet the frame's main requirements. Envoy was a personal digital assistant launched in 1994 by Motorola. It received messages like a pager, but no one viewed it as a pager because it was too large. It could send e-mails and faxes like laptops but it could not substitute for a laptop because it did not have a keyboard and sufficient storage. It could store calendar and contact information like an organizer, but was too expensive and cumbersome to be considered a part of that category. Envoy lacked sufficient points of parity to belong to any existing category. Without a clear frame of reference, customers did not know why they should buy the product. It failed. But PalmPilot 1000 was successful because it had points of parity with electronic organizers. It was able to claim this category as a frame of reference.

When considering brand extensions, it is important to focus on the frame of reference. When Nivea, which markets its skin cream as gentle and protective, started selling deodorant, establishing that their deodorant did what deodorants do was essential. Once that was established, it could think of associating the gentle and protective quality with the deodorant. But when Dove moved into dishwashing-liquid business, it claimed to soften hands as the dishes were cleaned. It was a failure because customers expected the dishwashing liquid to clean dishes rather than soften hands. Dove needed to establish points of parity with competitors before stressing its differences.

Established brands also need to reassess points of parity from time to time because attributes that were once differentiators, can become minimum requirements. Marketers will have to find new points of differentiation as the older ones are adopted by competitors, making them points of parity rather than points of difference. Marketers can hold off a competitor's point of difference by creating competitive points of parity.

Gillette is no longer the only company selling triple-blade razors. In this way, a company can establish parity in an area in which its competitor is differentiating. Then the company can explore some other areas. Take the example of Visa and American Express credit cards. Visa's cards can be used in many places, whereas American Express cards are associated with prestige. These two companies now compete by blunting each other's advantage. Visa offers gold and platinum cards to enhance the

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prestige of its cards and American Express has increased the number of vendors that accept its cards.

Establishing points of difference with competitors' brand is imperative for a strong brand. But before doing that, it has to convey to its customers its essential functions, benefits and features so that customers know why they should buy the product. Therefore, a brand first has to be at par with established brands of the category in features, functions and benefits before it starts differentiating.

2.4.5 Enhancing Customers' Experience

Most companies value and expend huge efforts in differentiating their offerings. They offer customers something that they value, that is not provided by competitors. But most companies, in seeking to differentiate themselves, focus their energy only on their products or services. But a company has the opportunity to differentiate itself at every point it comes in contact with its customers—from the moment customers realize that they need a product or a service to the time they decide to dispose it of. If a company opens up its creative thinking to its customer's entire experience with a product or service, they can discover new opportunities to position their offering.

The first step is to map the customer's experience with the product or the service. The company should perform this exercise for each customer segment. It will have to brainstorm how it can differentiate itself at each of the encounters it has with its customers.

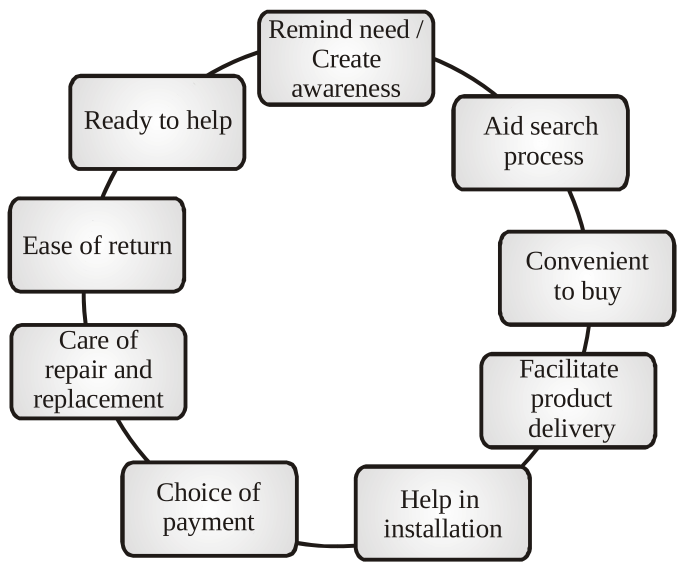

Fig. 2.8 *Differentiation Along the Consumption Chain*

- The customer has to be aware of his needs before he thinks of satisfying them. A company has to be creative at this step. A toothpaste manufacturer can pack the last few milligrams of the paste in the tube in a colour different from the rest of the paste. Jars of food-items and even other items like paints can have prominently displayed 'buy now' at the lower part. Equipments which are required to be serviced can have lights glowing when service is due. And if it is not possible to provide such indicators, companies can always keep a track of consumption rates and usage time and remind customers that they will soon require a refill or a new buy. The idea is to remove the customer's worry about his forgetting to procure products or services in time. The customer understands that he will be reminded when his insurance premium becomes due or when his car becomes due for service or before the food items in his kitchen run out.

- The customer will engage in a search process before buying, howsoever limited or extensive it may be, depending upon the product or the service he is buying. The company has to facilitate this search process. When a customer is buying a chocolate, the search process may entail just having a glance at all the jars containing different brands in the retail outlet. Thus, all the jars will have to be placed in a way such that customer is able to have an unobstructed view of all the jars. But when a customer is buying a car, he may like to test-drive a few cars of other carmakers before he settles down on one which he will buy. The car dealer will have to facilitate this process. The idea is not to circumvent the search process of the customer, as any effort to do so will annoy him. The process must be made convenient, less time-consuming and less costly for the consumer.
- The company has an opportunity to differentiate itself by making it convenient for the customer to buy the product. A company may accept the customer's order on phone or send a salesperson to place an order. In cases of routine purchases, a company may obviate the necessity of placing an order by monitoring the inventory of the buyer and sending replenishments automatically. Manufacturers may stock the shelves of their retailers, without the retailers having to place an order. The company should organize its interaction with its customers in such a way that the step of placing an order is seamlessly merged in the search process of the customer. The customer should not have to act deliberately to place an order. As soon as he has conveyed intentions to buy, he can assume that his orders have been placed. A company cannot expect its customers to comply with procedures that make no sense to them, though the company may have installed these to streamline its own working.
- The product or the service delivery can be managed in such a manner so as to provide real value to the customer. The promised time of delivery should always be adhered to. The company should arrange for the delivery of the amount, in the type of packaging and to the destination prescribed by the customer.

  In service industries, promptness and correctness of the service delivered can be a huge competitive advantage. Financial service companies like those dealing with insurance have immense potential to reduce the inconvenience of customers by improving their service delivery. In service sector, service delivery can be a major source of differentiation.
- Installation can be a major problem, especially with complicated equipments. The company should assume full responsibility for installation and commissioning of the equipment. The company should ensure help to customers in running the equipment in the beginning.
- The company should agree to be paid in the way the customer wants to pay, unless it is illegal or detrimental to its interests. A company can differentiate

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itself when the customer has to pay regular installments for long periods. The customer should not have to make special efforts to make payments to the company. Insisting on being paid in a certain manner and ruling out the possibility of accepting payments through other modes will give an opportunity to competitors to differentiate themselves by making it more convenient for the customer to pay.

- The way a product can be stored provides another opportunity for differentiation. The storage mechanism should match the physical surroundings of the customer. The storage mechanism should also ensure ease of taking out the product for use. Packaging has to be improved so as to facilitate storage as well as use of the product. Similarly, if the product has to be moved around, it should not be too cumbersome or difficult. Simple innovations can ease the life of customer by making it simpler for him to move the items. The customer may have to carry the product with him. The company can improve the design of the product in such a way that it is convenient for him to carry it, and also make it fashionable to carry in that way.
- The way a company arranges to get its customers' products repaired or replaced can also be a differentiating factor. The company should not let its customer worry about the malfunctioning of the company's product, and its effect on the company and his business. The company can install systems by which it comes to know of the malfunctioning of the product in the customer's premise and act promptly. Even if this is not possible, it should take complete responsibility for the rectification of the product and make sure that customer's interests are not harmed when the product is being repaired. It is never a bad idea to provide customers with a replacement product when the product is being repaired, so that the customer's interests do not suffer.
- If for any reason the customer wants to return the product, it should not turn into a nightmare for him with nobody accepting the product initially. And later when somebody picks up the courage to accept the returned product, there may be inordinate delays in getting his money back. As far as possible, a company should have a no-questions-asked return policy at a place most convenient for customers, with instant repayment. The customer may be returning the item, but the company should manage the exit process in a way that the customer will feel like coming back.
- And finally a company should design its product in such a way as to make it convenient for the customer to dispose it off and even earn something out of it.
- Any time, at any stage of the product's use, should a customer require help, the company should always be forthcoming. If nothing else, the company can at least differentiate itself by being nice and courteous, and offering to help in any way it can.

Through diligence, a company can unearth innumerable opportunities to differentiate itself. And when these differentiations play out at all the points of the customer's interaction with the company, competitors cannot hope to match the offering, as it will require the competitors to overhaul their entire business.

Check Your Progress

10. What are four methods of product standardization?
11. List three advantages of product standardization.
12. What are the major areas on which product standardization can be based?
13. Define the following terms:

    a) Innovator; b) early adopters, c) laggards
14. How does promotional differentiation vary from distribution differentiation?

2.5 MARKETING STRATEGY DEVELOPMENT

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Marketing strategy development begins with a detailed assessment of all the bigger forces that affect the business. Then decisions are taken, depending on the impact that it makes on the business. The various product strategies for growth are:

2.5.1 Ansoff's Matrix

With immense pressure to increase market share and profits, marketers are always on the lookout for ways to grow their businesses. Marketers have four variables to play with (i) existing market, (ii) new market, (iii) existing product and (iv) new product. Using these four variables, a company can have four strategies to pursue. They can increase their business by serving new products in their existing markets, existing products in new markets, new products in new markets, or existing products in existing markets.

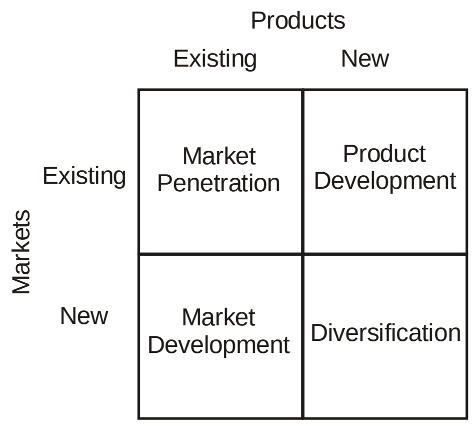

Fig. 2.9 *The Ansoff's Matrix*

The growth strategies

1. **Market penetration**: An attempt to increase penetration in the market with the existing products. Brand building is one method. Existing customers may become more brand loyal (less switching), new customers may buy the brand, or existing users may use the product more often and in greater quantity.
2. **Product development**: Improve present products or develop new products for current markets. By improving style, performance and comfort, the aim is to gain higher sales in its present market.
3. **Market development**: Current products are sold in new markets. The company may move into new geographic markets or move into new market segments.
4. **Diversification:** New products are developed for new markets. This is risky. But if there is synergy between the existing and new products, this strategy is likely to work.

2.5.2 Product Replacement Strategies

Product replacement is the most common form of new product introduction. There are eight strategies that a company can follow:

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	PRODUCT			
MARKETING	No exchange	No change	Facelift	Inconspicuous technological substitution
	Remix	Remerchandising	Relaunch	Conspicuous technological substitution
	New Market	Intangible repositioning	Tangible repositioning	Innovation

Fig. 2.10 *Product Replacement Strategy*

1. **Facelift:** Few minor changes are made in the product with little or no change to the rest of the marketing mix or target market.
2. **Inconspicuous technological substitution:** The company brings major technological changes with little or no changes in the marketing mix. The technological change is not brought to notice of customers by advertising profusely. Brand loyalty is retained through major technological processes and product changes with little attempt to highlight these changes through advertising.
3. **Remerchandising:** It is a modification of the distribution, packaging price, promotion and name, while maintaining the basic product.
4. **Relaunch:** Both the product and other marketing mix elements are modified.
5. **Conspicuous technological substitution:** This involves major technological change, along with heavy promotional and other marketing mix alterations for stimulating awareness and trial.
6. **Intangible repositioning:** The basic product is retained but other marketing mix elements and target customers are changed.
7. **Tangible repositioning:** Both the product and target market are changed.
8. **Innovation:** The company brings out the fundamental changes in the technology of the product.

2.5.3 Product Recall Strategy

Companies take all possible precautions to ensure that products that reach customers are of good quality and are safe. If customers find problems in the products they have bought and the companies do not react promptly and appropriately, there can be severe backlash and legal complications. Though this does not happen often in the lifetime of a company, it should always be ready to handle product recalls. An ill-managed product recall can destroy a brand or even a company. Smart companies have a well-crafted strategy for handling product recalls.

The company should understand the importance of always being ready for a product recall. Employees should understand the link between recalls and customer satisfaction and safety, and the effect of the recall on company success. The company should check if the company is suffering from 'kill the messenger' culture that prevents news of product problems from reaching the right people.

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The overall responsibility for product recalls should be assigned to one senior executive. He could be the chief of marketing. The recall manager should ensure the development and regular review of a recall manual that delineates the company's policies and guidelines in the event of a recall. A recall should be seen as a task to use marketing skills to retrieve the products from the customer. The recall manager will have to identify key managers throughout the organization who might have a role in the recall. It may be necessary to enlist the help of people outside the company.

In the event of a recall, the recall manager should appoint a response team to manage the recall on daily basis. The response team comprises members who were earlier identified by the recall manger from various areas in the company. The first task of the response team is to gauge the seriousness of the situation. Such an evaluation will help them determine the speed and the type of response required, and will be particularly useful when there is risk of customer injury or illness. After the team evaluates the situation, it should determine the scale of response and the type of recall to be adopted. The situation may require a full recall, a repair or retrofit offer, an optional recall, an offer to exchange the product, issue an advisory, refute the charges or a change in the production and distribution of the product. It is critical to arrive at a decision regarding the recall quickly, but the decision does not necessarily have to mean taking action. A recall made too soon can give credibility to unsubstantiated charges. Issuing recall amounts to admitting that there is a problem and may open the door to a flood of lawsuits. The response team should weigh all these factors carefully before arriving at a decision.

The recall manager should identify major stakeholders, besides customers, like distributors, dealers, service centres and keep them abreast of the company's plans and actions as the recall unfolds. It is important to build the organization's credibility among these stakeholders in the anticipation of a recall. The crisis-management team of the company should handle the communication effort on all the fronts.

If the response team concludes that a recall action is warranted, it should get into the act fast. It should decide who will make the announcement, when and what he will say. It also has to coordinate the field response program. It has to decide as to who will accept the faulty products, how the returned products will be monitored and who will provide the repairs or replacements. During the recall, the response team should keep customers properly informed and persuade them to complete the necessary exchanges. Customer communication can reinforce the company's image as a prompt and responsible organization. They can also plan an especially designed recall advertisement.

The logistics and information system should have the ability to accept notification of product defects. It is important to provide a toll free customer service line operated by people who understand how to react, and who to report to if a customer calls to tell that his product is faulty. Sensitive customer service personnel can help a company become aware of a problem early. The logistics and information systems should be able to handle the recall as well as its normal operations. The pipeline for products and parts has to accommodate a two-way flow of inventory as the company pulls in units to repair or replace even as it continues to release new or substitute models. During the recall, the logistics and information systems should be able to trace any product that they have handled. The system should be able to isolate a product defect by

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batch, plant, process or shift through use of identifiers such as serial numbers. The response team should have a plan to bring the recall to a satisfactory close, say, when a given percentage of distributed units have been returned.

After the recall, communication should focus on restoring and strengthening the company's reputation in the market, particularly regarding the product in question. The public relations department should lead the effort in restoring confidence in the product and the company. A reintroduction plan should be developed and implemented with the participation of people who originally designed and launched the product. There will have to be a relaunch marketing effort to reassert brand image.

But a recall should be avoided. Products should be very rigorously tested for all possible defects and safety hazards before releasing in the market. Though a company should always be ready for handling a recall, it should take all possible precautions to ensure that it does not have to handle one.

2.5.4 Role of Marketers in New Product Development Process

New product development is erroneously perceived as the exclusive domain of developers. If a company has to launch successful products, the role and importance of marketers have to be as important as that of developers during the product development process.

- Marketing should work with R&D to establish clear, mutually agreed project priorities to reduce chances of pet projects. Left alone, technical people will have plenty of fanciful ideas to pursue and marketers will have plenty of esoteric customer needs they would like to serve. Product development teams have to come up with solutions to customers' needs which can be sold profitably.
- The company should improve the provision of marketing information to R&D. The marketing team must give R&D people timely and quality information. Marketers should be very prompt in informing R&D of any change in customer needs that might have occurred, since they last gave them the required information. It is the responsibility of the marketing department to ensure that customers' latest needs are incorporated in the new product. Marketing research team must include members of the R&D team so that their doubts can be clarified. There would be nothing like product developers themselves researching customer needs. As a developer listens to customer requirements, he is able to play the possible solution in his mind and seek clarification from customers regarding its suitability. The iteration will go on in the developer's mind till he figures out the right solution.
- The R&D team should become more customer-centric and understand that the products developed by them must ultimately be accepted by the target customers of the company. The marketing department in the organization should undertake the responsibility of passing customer related information to the R&D team, and ensure that the R&D team interacts with customers as often as possible by participating in customer visits and trade shows. R&D people can find it irritating to incorporate customers' requirements in every idea they conceive. Customers' requirements constrain creativity of developers and they may start considering them an intrusion in their pursuit of the next big idea. R&D team has to be brought in touch with customers and their genuine needs to make them empathize

with their needs. When developers have empathy for customers' needs, they are likely to produce designs that are true to the customers' needs.

- There are important personality and value differences between R&D and marketing. The most important difference is that while marketers are fixated on customer requirements, developers sometimes want to pursue ideas which interest them. It is important for marketing to develop an informal relationship with the R&D department. At any one time, a developer is playing around with many ideas. A marketer should be in such a relationship with a developer, that he feels comfortable sharing these ideas, some of which he himself might consider too ambitious. The marketer can quickly gauge if some of the ideas incubating in the developer's mind can be helpful in serving any customer needs.
- It is important that marketers get over their technology phobia. Familiarity with technology makes communication between the marketing and the R&D department more effective, as marketers can understand the means by which the product design can create competitive advantages. They can also comprehend the limitations of technology in terms of developing new products, as product designs often involve trade-offs to be made. Technology savvy marketers would understand that some customer requirements cannot be met however legitimate or urgent they may be, because the required technology is not available or it would be prohibitively expensive to serve them. They would not constantly harp on profitable opportunities to serve some customer needs which the company is missing, because the R&D is not able to come up with solutions for these needs. They would also refrain from making exaggerated promises to customers because they would know that the company will not be able to fulfill them.

Marketing people are often preoccupied with present products while neglecting new products. Product development process should be formalized and the involvement of marketing should be mandatory. Marketers should be as fanatic about serving unmet customer needs as the developers are about pursuing their new ideas. Often the blockbuster product is developed when marketers and developers collaborate to give form to their common fantasy.

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2.6 NEW PRODUCT LAUNCHING: SUCCESSES AND FAILURES IN THE INDIAN CONEXT

The ultimate success of a business firm depends on its capability to develop and deliver new products within the shortest span of time. In a situation where companies are forced to operate at a breakneck pace, it is quite difficult for them to undertake qualitative and quantitative research which might help them in reducing risk and failure. Taking a long time to define and deliver a product is no longer a suitable option for the companies. In fact in some industries, the product must be conceived and developed within six months or even less to provide the company an edge by making it 'first-to-market'. In such a situation, the companies usually take more than the desired level of risk which ultimately goes against their interest.

New product launches have a significantly low rate of success rate and thus cause severe stress to the financial and technical resources of companies. Since the survival of many companies depends upon the success of their new products, there is

Check Your Progress

15. What are the four variables mentioned in Ansoff's Matrix?
16. What is the most common form of new product introduction?
17. What is product recall strategy?

an utmost need to be extremely careful while launching a new product in the market. Though there may be many reasons for failure of new product launches, there is consistency with regard to the companies having a constant track record of successful product launches.

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2.6.1 Success or Failure: 80:20 Rule

The 80:20 rule applies here. More than 90 per cent of the successful product launches usually come from a few companies and a large number of companies together contribute to less than 10 per cent of successful new products. The strategy adopted by successful companies while launching their new product is certainly different from others. The factors which are crucial for a successful product launch are strategic and technology choices based on the customer's current needs as well as the future evolution of needs.

2.6.2 Planning a New Product's Success

In the most successful ventures, planning for the new product launch should start with a preliminary design and development. Positioning of product, selection of sales channels and distribution network, and planning related to advertising and public relations should be given as much time and energy as the development and design stage. Synchronizing marketing activities with product development is critical for success.

Among the key components of a strong product launching plan are:

1. Well-defined sales objectives
2. Effective sales channel and distribution network
3. Effective sales promotion and advertising strategy
4. Execution planning

a) Production capacity

Many new product launches often fail because companies don't manufacture adequate quantities of the new product to make available to prospective customers. There is a need to create a launch team with the responsibility for ensuring that all levels of the company are prepared to handle the demand for the product and provide customer support service.

b) Product positioning

Positioning is like a message that differentiates the company's product from others in the marketplace. A unique product identity strengthens the consumer's perception of the product and in turn, reinforces the company's overall positioning.

Before launching a product, the following steps need to be taken:

(i) Identification of all necessary launching channels
(ii) Decision regarding the total number of units that the company plans to sell by a specific date
(iii) Preparation of the complete launching schedule
(iv) Placing sufficient stocks with key distributors

In order to establish the new product's identity in the marketplace, the core message must be repeated over and over again. This requires consistent positioning within all of the company's marketing communications.

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c) Execution

The company needs to ensure that its strategies are executed well.

(i) The company has to ensure that the new product is able to reach customers at the earliest possible. The established sales channels, including the sales force, the distributors, the dealers, etc., should be able to face new challenges. For example, if the new product is a reduced version of an existing product, there are some points that the company needs to take into consideration. The existing distributors should be in a position to serve mass marketing retail outlets.

(ii) The current pricing schedule should take into consideration factors such as market competition.

(iii) The company should be able to reach the entire market with its current sales force.

(iv) The company must determine its pricing strategy and review sales channels while the product is being positioned.

2.6.3 Formula for Product Success

A company can assess and boost the success of its product by studying four benchmarks:

(a) Price

(b) Benefits

(c) Ease of use

(d) Availability

Companies need to compare their new offering with what's currently available in the target market in all the four areas. If the company's new product or service does better than the competition across all of these dimensions simultaneously, then the target customer group will definitely buy it.

These dimensions can be divided into two categories: purchase motivators and purchase barriers. While the first two benchmarks—price and benefits—are purchase motivators, the latter two—ease of use and availability—are barriers. To become a winner, a product must clinch at least one of the two motivators. For example, many high-performance products still do well in the market despite their higher price.

However, sometimes it is seen that excelling in one or both motivators does not guarantee success. This is possible when barriers to usage are too high. The product or service is likely to fail if it offers lesser benefits and is more expensive than the current offerings.

2.6.4 Causes of Failure of New Product

A large number of new products are rejected by consumers even before the product completes its life-cycle. A large number of factors could lead to the fialure of a product. The major reasons of product failure are:

1. Inadequate market analysis

In some cases, when the product is launched without a proper market analysis or when the market analysis data is either incorrect or biased, the product usually fails in achieving its objective. The consequences of an incomplete market analysis are:

(i) Companies fail to correctly gauge consumer behaviour.

(ii) An incorrect estimate of sales.

(iii) Faliling to meet the standards of utility, etc.

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2. Poor pricing

The final higher cost of the new product, which is sometimes even more than the anticipated price, is another cause of new product failure. This can result due to wrong pricing policy or a huge escalation in the raw material cost.

3. Product defects

One fundamental reason for product failure is the technical flaw in the production process. Wrong product design, substandard raw material, poor packaging, etc., are the other reasons.

4. Inability to face market competition

New products face tough competition in the market, and some companies fail to sustain this pressure and get knocked out. There is a widespread recognition of the fact that it is the quality of the product that eventually helps it in withstanding strong competition.

5. Inadequate or incompetent sales force

Lack of proper product and marketing training of the sales force often leads to product failure. In spite of having good quality and being reasonably priced, products fail as they do not highlight the exclusive features. Sometimes the sales force of the company is so small that they are not able to understand the market and thus a huge business opportunity is lost.

6. Wrong product idea

A product often fails when the companies conceive of a wrong product idea. A good product idea can revolutionize the market but a bad one may give bitter experience to the firm or it may even backfire. For example, the launching of the 'Cool Cats' fans by Polar at a premium price failed to make a wave in teh market.The fan was decorated with cartoon characters and targeted children. The idea was to make the fan attractive for children since they were becoming increasingly influential in purchase decisions. The product failed in spite of its huge advertising budget because it didn't have any colour effect and customers could not justify its premium price.

7. Poor distribution network

When the product is not adequately supported with a well-established distribution network, it is likely to fail in the market. While launching the product, the distribution network must be given adequate consideration. The launching of new chocolates by 'Nestle' failed in the market due to the distribution problems. The company stipulated the product should be stored in refrigerators. This meant that a large number of retailers who didn't have this facility could not stock the product. The chocolate was not picked up by the customers as it was not adequately displayed in large number of retail shops.

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8. Poor launching time

The most common cause of failure of a product in the market is, either it's introduced too early or too late. Kinetic Merlin, a three–in–one sophisticated electronic gadget consisting of a colour television, a stereo with detachable speakers and a home computer was launched in 1991. The product was targeted at those Indian consumers who were fond of immediately adopting such an innovative idea. However, in reality, the idea was too advanced for the customers to adopt at that time.

9. Poor product positioning

Product positioning is concerned with putting the product into the pre-determined orbit. Improper positioning may affect the product life-cycle. For example, Tanishq introduced their 18-carat jewellery and the product was positioned at the premium and affluent segment. However, there was an inherent contradiction in the product as to why this elite segment should opt for low carat gold because the norm for gold in India at that time was 22 carat. The product failed. Later, Titan had to introduce 22-carat jewellery.

10. List of failed products in India

i. Pepsi Blue ii.Lifebuoy Talcum iii.Haier Refrigerators iv.Disposable Paper Clothing v. Ford Edsel vi.Chevrolet Corvair vii..Goodyear Tires Used on The Ford Explorer viii.Apple's Newton (Computer) ix.Chelsea—"Baby Beer" and x.Timex's Sinclair.

In addition to a faulty concept or product design, some of the most common reasons for product failures typically fall into one or more of these categories:

- High level executive push of an idea that does not fit the targeted market.
- Overestimated market size.
- Incorrectly positioned product.
- Ineffective promotion, including packaging message, which may have used misleading or confusing marketing message about the product, its features, or its use.
- Not understanding the target market segment and the branding process that would provide the most value for that segment.
- Incorrectly priced—too high and too low.
- Excessive research and/or product development costs.

2.6.5 How to Manage a Successful Product Launch

Throughout the world, business firms are witnessing cut-throat competition to increase revenues. All the companies are offering a wide array of products and the fight to have the optimal shelf space is becoming brutal with every passing day.

With the numerous products that are offered to customers, one of the most important aspects for a product that would influence the life-cycle of a product, is the product launch. Each company needs to focus on product launch in order to create an indelible mark in the minds of consumers.

A product launch essentially requires that all related activities marks the debut of a product to the customers. The points below can ensure that firms will a successful product launch.

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1. Need for a thorough market research

Before a product is launched, the company should conduct a thorough market research and ensure that the product is needed by the target customers. The market research can shed light on areas where there is an immediate need to be filled. Based on the research results, consequent actions of the launch can be put in place.

2. Clarity about the USP of a product

For every product launch, one thing that needs to be paid attention is that the product has a USP, i.e., its unique selling point. The product can have a successful product launch if it has some exclusive or unique qualities that will give it an edge above others.

3. A close study of competitor's offering

A product launch can be successful if the company has in-depth knowledge of the offerings of the competitor products. Presenting the market with a product that consumers desperately need is the key to success. By following this strategy, the success of the product is guaranteed.

4. Exciting launch offers

A product launch can be a successful if the company offers great deals and bargains. Irresistible offers at the launch ensure that the product gets maximum coverage. Free trials, demos and testers are some other options that can give the customers easy access to the product.

5. Product availability and visibility

Another aspect to ensure that the product launch is a mega success is the availability and the visibility of the product. Large-scale advertising, promotional campaigns and the visibility of the product in every outlet would ensure that the product is not only noted by the customers, but also bought by the same.

The various measures discussed above can ensure that the product is launched not just with a 'big bang', but it translated to great sales figures as well. The meticulous planning in the implementation stage would further contribute towards to the success of the entire launching plan.

2.7 CLASSIFICATION OF NEW PRODUCTS INNOVATIONS

However, it is clear that the classification of innovation from a firm's perspective can also be included in the earlier classification of discontinuous, dynamically continuous and continuous innovations. For instance, new-to-the-world products are discontinuous innovations, while product replacements are continuous innovations. Firms need to understand that continuous innovations, such as, adding a brand variant to an existing product line lacks significant risk, but offers less significant returns, while discontinuous innovations are extremely risky, but if successful, returns could be huge.

Check Your Progress

18. List the key components of a successful launching plan.
19. How can a company boost the success of its product?
20. Mention four factors that lead to product failure.

New products innovations offer new avenues of growth and thus secure the viability and sustainability of the firm. We have already learned in Unit 1 that new products can be divided into two groups, one arising out of technological innovation and the other out of mareket-driven modification.

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Newly made products which have new functional utility fall in the first category. These are truly unique products that bring in a change in lifestyle and satisfy a need that has not been catered to earlier. The second group involves changes and innovations within the existing products, which are necessary due to the marketing scenario. Under this category comes the new version of the old products. Let's take the example of changes in the design, colour, packaging, brand name or some other features in the product.

The newness can also be due to repositioning of the existing product. It can also be because of awareness among the consumers regarding the new use of existing products, resulting in a fresh sales appeal for a new segment.

A company defines an innovation based on what the company tries to achieve from the new product.

- **Product replacements** include revisions and adjustments of exiting products, repositioning and cost reductions. For instance, Tata Motors improved its first offering Indica after receiving customer complaints, and then relaunched it.
- **Addition to existing lines**, for instance, addition of new brands, new technologies (Pentium IV processor, an improvement over Pentium III, or Mach III over Mach II by Gillette), new varieties of flavours, fragrances, SKUs (size of the product, for instance, a 100gm toothpaste along with the existing 250 gm tubes), product forms (for instance, liquid soaps in addition to bars), etc.
- **New product lines**, are produced when the company launches new product lines and widens its product mix. For instance, LG has added product lines, such as, mobile phones and music systems to its product portfolio.
- **New-to-the-world products** are those products that create entirely new markets. These products carry the highest risk since it is difficult to predict customers' reaction. Marketing research will be unreliable in predicting demand since people do not really understand the full benefits of the product until they get a chance to experience them. It may take time for the products to be accepted. But if and when these products are accepted, the company's gains are huge. Successful new-to-the-world products are pure technological innovations, which serve a very strong latent need. There was always the need for mobile connectivity, but a simple marketing research exercise would not have revealed this need, as customers believed that this need cannot be met. The idea of mobile connectivity did not cross our minds because we believed that it was in the realms of infeasibility. But as soon as the relevant technology came forth to enable mobile connectivity, customers lapped it up. Probably, the diffusion of mobile connectivity among customers across the world has been faster than that of any other technology. Successful new-to-the-world products are the concurrence of strong latent needs and emergence of an enabling technology.

2.8 SUMMARY

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Some of the important concepts discussed in this unit are:

- New product development process consists of eight steps: (i) New product strategy, (ii) Idea generation, (iii) Idea screening, (iv) Concept testing, (v) Business analysis, (vi) Product development, (vii) Market testing and (viii) Commercialization.
- New product strategy involves a company's vision of a new product. The strategy provides guidelines about which the product is interested in serving.
- Idea generation, as the term clearly indicates, is the stage when an idea pertaining to a new product is generated after brain-storming sessions.
- The third step of new product development process is idea screening. A lot of ideas might rise about the same product. The company screens and selects the most feasible and innovative idea for its new product.
- Then comes concept testing, where the concepts of the products are tested with a small sample of customers. The company checks the degree of acceptance among the sample customers.
- After the concept succeeds in bringing a positive feedback, the company makes an estimate of sales, costs and profits that the new product is likely to generate.
- The product concept that gets the best votes is developed into a new product. At this stage, the new product goes through tests that analyseits functional performance.
- The next step involves market testing of the product. The company has a limited launch to derive feedback from original customers. The results of the test help in evaluating the market scenario.
- Based on the consumer feedback, the company decides the consumer sets and focusses on that target market.
- Every organization needs to design and develop new product. Product design means developing the idea of a product in terms of specifications that are required to transform the idea into that product. And product development process is related to creating new products or modifying existing ones within a stipulated time and cost without altering preset qualities.
- The objectives for which a company designs and develops a new product are:
    - o Introduce new products
    - o Modify existing products
- A good design of a product is based on the following factors: (a) Functionality, (b) Reliability, (c) Productivity, (d) Quality, (e) Standardization and simplification (f) Maintainability, (g) Cost effective.
- A product design is based on various concepts: (a) Research and development, (b) Reverse engineering, (c) CAD and CAM, (d) Concurrent engineering, (e) Life-cycle of a product.
- The process of product development involves conducting various tests to ensure that nothing goes wrong while the product is produced. The following things are

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taken into account: (i) Exploration, (ii) Feasibility study, (iii) Detailed Engineering Phase, (iv) Ramp up and (v) Commercialization.

- There are three techniques that are commonly used while selecting and developing a product. (a) Quality Function Development (QFD) helps transform customer needs into engineering characteristics for a product or service. (b) Design for Manufacturing and Assembly (DFMA) helps in simplifying a product design or manufacturing process and achieve cost savings. (c) Value analysis or value engineering is the application that identifies the function of a product and calculates the value for the function.
- A product can be developed in two designs: modular and reverse engineering. Modular design arranges a complex system as a set of distinct components that can be developed independently and then plugged together. Reverse engineering takes an object apart to see its mechanism and then makes a strategy to enhance it.
- A company needs to set uniform characteristics for its good or service. This process is called product stadardization. It can be useful for consumers because it permits competition among various suppliers.
- Product standardization is classified into four types. (a) Positive, (b) Negative, (c) General and (d) Private. There can be various reasons why a product is standardized: (i) Lower manufacturing cost, (ii) Lower research and development and product adaptation cost, (iii) Marketing convenience, (iv) Consumer mobility, (v) Brand image, (vi) Impact of technology.
- The various advantages of product standardization are: (i) Saves duplication of product design, (ii) Reduces burden on product process, (iii) Simplifies material planning, (iv) Reduces storage cost and production cycle, (v) increases goodwill of the company
- Product standardization affects certain areas: Components, packaging and quantity. Companies can modify their products so that similar components can be used across several units. Companies can standardize their products for foreign markets by adding a minor change in packaging, if they have a standard packaging for its goods. And product standardization can be achieved in terms of quantity by selling the same products in various quantities to suit each customer segment.
- Based on the knowledge when customers buy a newly launched product, they can be differentiated into various groups: Innovators, early adopters and laggards.
- The lifecycle of a product and the diffusion curve are related. At the beginning, the product is purchased by innovators. During the growth stage, early adopters purchase it. It is only in the late maturity that laggards enter the market.
- To survive in the market, a company needs to differentiate its product from its competitors. Companies use marketing mix to create special items and attract customers. Products are differentiated on various factors: (i) product, (ii) promotion, (iii) distribution and (iv) promotion.
- While positioning a brand, a company needs to establish points of parity and difference so that customers can relate and differentiate the product from the rest. Customers remember the point of difference more than anything else about the brand. So firms position their products on the basis of benefits that it intends to provide to the market.

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- Marketing strategy development begins with a detailed assessment of all the bigger forces that affect the business. Then decisions are taken, depending on the impact that it makes on the business. The various growth strategies are: (i) Market penetration, (ii) Product development, (iii) Market development, (iv) Diversification.
- The most common way to introduce a new product in the market is product replacement. The eight strategies of this form are: (a) Facelift, (b) Inconspicuous technological substitution, (c) Remerchandising, (d) Relaunch, (e) Conspicuous technological substitution, (f) Intangible repositioning, (g) Tangible repositioning, and (h) Innovation.
- To retain its customers, companies need to attend to consumer complaints. Product recall strategy involves the process of reclaiming defective goods from consumers and providing them with replacements or compensation.
- Companies rely heavily on their new product. So it's important for them to launch their product well, so that there's visibility in the market. Certain points that need to be taken care of while launching a product are:
    - o Well-defined sales objectives
    - o Effective sales channel and distribution network
    - o Effective sales promotion and advertising strategy
    - o Execution planning
- A company can boost its success rates by concentrating on four factors: (a) Price, (b) Benefits, (c) Ease of use, (d) Availability

2.9 ANSWERS TO 'CHECK YOUR PROGRESS'

1. (i) New product strategy, (ii) Idea generation, (iii) Idea screening, (iv) Concept testing, (v) Business analysis, (vi) Product development, (vii) market testing (viii) Commercialization and diffusion of innovation
2. The factors that make a company look for new designs are: (i) Develop and introduce new products, (ii) Modify existing products.
3. The characteristics of good design are:
    (i) Functionality
    (ii) Reliability
    (iii) Productivity
    (iv) Quality
    (v) Standardization and simplification
    (vi) Maintainability
    (vii) Cost effective
4. The various concepts related to product design are:
    (i) Research and development,
    (ii) Reverse engineering,
    (iii) Computer-aided design/Computer-aided manufacturing,
    (iv) Concurrent engineering,
    (v) Life-cycle of a product

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5. Every product has a certain lifetime. A product can remain in the market for a period of time. After that, the product's demand begins to decline and finally the demand stops. After customers stop buying a product, the company removes it from the market.
6. After the most viable ideas are selected a company may employ more scientific and less risk-prone process to make the selection full-proof. All quantitative and qualitative information are checked and the product's objective is also taken into account. This, in other words, is a study of the feasible conditions to produce the new product.
7. (a) QFD or Quality Function Development is the process of transforming customer needs into engineering characteristics for a product or a service.
   (b) DFMA is the method of determining the ways to simplify an existing or future product design or manufacturing process to minimize costs.
8. Value analysis and value engineering is usually done by various teams that may range from materials, manufacturing, product design, production, production engineering, maintenance and accounts.
9. Modular designs involve developing a complex product from smaller units that can function together. Whereas, reverse engineering means creating a product virtually with physical prototypes and design flexibility before it is released in the market.
10. Products may be standardised by the four methods: (i) Positive standardization that mentions the positive quality of a product, (ii) Negative standardization that justifies the lack of certain qualities, (iii) General standardization that defines what features or qualities need to be present in products of the same categories and (iv) Private standardization which considered to be private when an individual prescribes certain standards for his product, such as, shoes, sewing machine, etc.
11. Product standardization helps in: (i) Reduces storage cost, (ii) Simplifies material planning, (iii) Reduces difficulties involved with drawing, specifications, designing, etc.
12. Product standardization can be based on the following factors: (i) Components; (ii) Packaging and (iii) Quantity.
13. (a) Innovators: The first set of customers which buys a product right after it is launched. This set does not do any product research and are usually economically well-off.
    (b) Early adopters: The early adopters follow the innovators. They risk buying a new product, but do so only after someone has preceded them.
    (c) Laggards: A set of customers which buy a product only after it has acquired status in the market.
14. Promotional differentiation aims to lure a target consumer segment with unique images created by advertising and provided by salespeople. Whereas, distribution differentiation is the method of making the purchase situation easier and more accessible to the consumer.
15. The four variables mentioned in Ansoff's Matrix are: (i) existing market, (ii) new market, (iii) existing product, (iv) new product.

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16. The most common form of new product introduction is product replacement strategies.
17. Product recall strategy is the process of reclaiming defective goods from consumers and providing them with replacements or compensation.
18. The key components of a successful launching plan are: (i) Well-defined sales objectives, (ii) successful sales control and distribution network, (iii) effective advertising strategy and (iv) Planning of execution of strategies.
19. A company can boost the success of its product by paying attention to four factors: (a) Price, (b) Benefits, (c) Ease of use, (d) Availability.
20. Four causes of product failure are: (i) Inadequate market analysis, (ii) Poor pricing, (iii) Inability to face market competition, (iv) Wrong product idea.

2.10 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What are the various ways in which a company can ensure that its team generates the best and most innovative ideas? Support your answer with suitable examples.
2. Why is it important to do a business analysis before a product goes into the development process?
3. Market testing is important before a product is released in the product. Do you agree? Give reasons.
4. How is the integrator's approach different from the orchestrator and licensing approach?
5. List the various reasons why an existing product is modified.
6. What role QFD and DFMA play in developing a new product?
7. Describe value engineering.
8. Why are innovators so important for a company's new product?

Long-Answer Questions

1. Describe the eight-step new product development process.
2. Describe the process of innovation, diffusion and adoption. Explain how they are linked to each other.
3. Modular designs can increase the rate of innovation. Discuss.
4. How is role reverse engineering used in developing a product?
5. Discuss product standardization. Explain how this process helps a company in the global market.
6. Elucidate why differentiation of a product is so necessary along the consumption chain. Support with suitable examples.
7. What are the eight strategies of product replacement? Explain them.
8. How is product recall strategy different from product replacement strategy?

UNIT 3 CREATIVITY AND INNOVATION FOR NEW PRODUCT DEVELOPMENT (NPD)

Structure

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3.2 Concepts and Contours of Creativity and Innovations
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  3.2.2 Defining Innovation from Various Perspectives
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3.7 Answers to ‘Check Your Progress’
3.8 Questions and Exercises

3.0 INTRODUCTION

In the previous units, we had discussed how the new product development process begins with innovative ideas. Every organization needs creative inputs to develop ideas. In this unit, we shall discuss how creativity is nurtured to support innovation in a company. Also, we will learn in detail how every successful organization invests a lot of time and money to encourage creativity inside the firm.

A product, no matter how successful, cannot be sacrosanct to any company. In such a scenario, creativity becomes an integral part of every company. To nurture creative people, a company needs to encourage its employees.

At the ideating stage, a company needs to take into account the perspective of innovation: the customers’ and the company’s. The customers’ perspective depends

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on how much the innovation has changed their existing habits. The company's perspective looks at the objectives of the firm that it tries to fulfill with the new product. In terms of a new product development process, innovation can be derived from various sources and can be divided into several levels.

Depending on the R&D feedback, and the demand of the market, a company might have various innovation types. These innovations are based on: product, process, position and paradigm. We know that innovation gives a competitive advantage to a product or service. But not all innovations succeed in the market.

It will be interesting to learn about disruptive innovation — the type that enters the market stealthily but changes the dynamics of the market. The entrance of cellular phones in the market is a very apt example of disruptive innovation. We shall also dwell on open-market innovation too, in which a company exports and imports ideas to check its feasibility in the real market.

It's also imperative for a company to keep a tab on the customers' feedback. Unless a company finds out its drawbacks, its innovation is not going to work. In other words, a company needs to champion its new product. A mere innovation can't take a product to the next level. Customers are more prone to be attracted to new-generation products. And for this, a company has to provide out-of-the-box products that have an edge over their competitors.

There's a whole set up of organization for new product development. There are project teams and brand managers who work together to ensure that innovation goes hand-in-hand with other company processes, such as R&D, finance and marketing and engineering. We will also study how McKinsey's 7-S framework helps in evaluating a company's new product development. This model examines whether a company has the necessary conditions to implement innovation.

3.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Understand how creativity plays a major role in the new product development process
- Evaluate how innovative ideas are nurtured in an organization
- Discuss the various types of innovations
- Explain the role of various teams in idea innovation
- Apprise the use of McKinsey's 7-S framework in new product development process

3.2 CONCEPTS AND CONTOURS OF CREATIVITY AND INNOVATIONS

Corporate success depends on introducing new products in the market. Companies can no longer rest on the success of its past product. Though successful innovations are few, companies need to develop a failure-tolerant culture while developing and launching new products in the marketplace. A company's real test lies in the number of successful products that it is able to launch. Innovation is the discovery of new ideas and methods. It occurs when an invention is commercialized by bringing it to the market. Companies have to be active on both these fronts.

3.2.1 Nurturing Creativity

Creativity in an organization has to be nurtured. Truly innovative ideas often come from creativity rather than from market research.

A new product is not creative if it does not shock people who see for the first time. Creativity should not be compromised right at its inception. Managers should not seek to change an idea right at the beginning. The idea creator should be allowed to play around with even the craziest of ideas. If the manager of a creative process thinks and acts like a typical manager around his people–with rules, policies and data on customer preferences, he will quickly kill their talent.

A creative process cannot be initiated by talking about the bottom line. Artists and designers should be given complete freedom to invent. Managers need not worry about the commercial viability of the artist's creations. The most successful creative people want to see their creations on the streets. They do not invent just for the sake of it. The major responsibility of the manager in a company, dependent on innovations, is to pick the right creative people—the ones who want to see their designs on the streets. But most creative people will not say that they care immensely about the commercial success of their inventions. In fact, if you ask them, they would say they do not actually care if people buy their products. But they are passionate about seeing their inventions as commercial successes. The manager has to have the ability to sense the commercial instincts in a creative person.

To encourage generation of more ideas, a company has to have several managers who have a certain love for creative people. If managers deeply love and appreciate what creative people do and how they think, which is usually in unpredictable and irrational ways, then they can start understanding them. Finally, they can see inside their minds.

Some companies are very market-driven. They follow the consumer. They go out, test what people want and then make it. But that is not true innovation which will drive growth and profitability. A company cannot charge a premium price for giving people what they expect. Novel products will be created only when complete freedom is given to creative people.

3.2.2 Defining Innovation from Various Perspectives

Innovation may be looked at from various perspectives. The following classification presents the perspectives of the customer and the target market.

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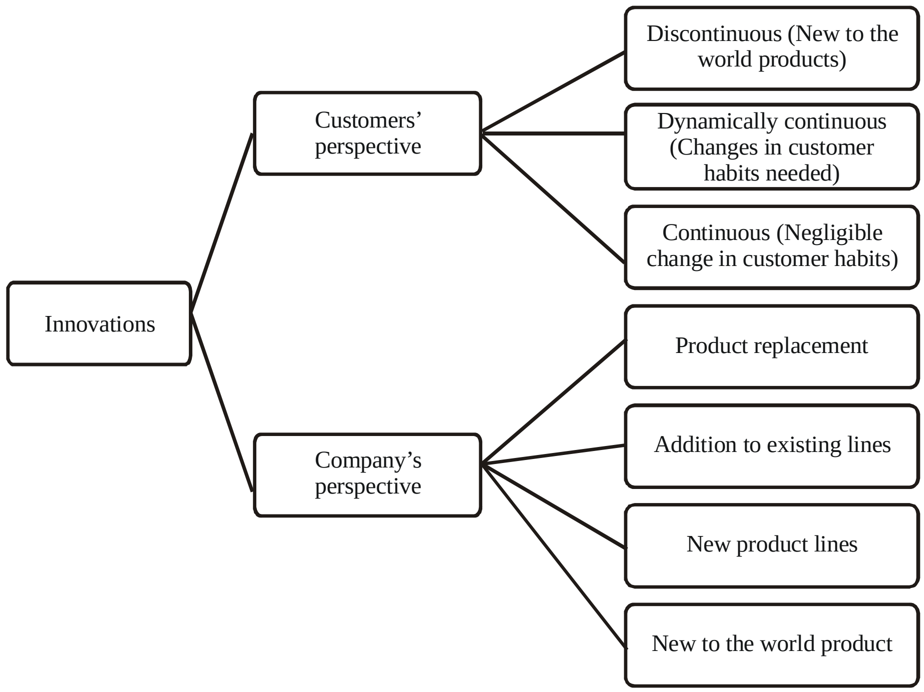

Fig. 3.1 *Types of Innovations*

(a) Customers' perspective

On the basis of the extent of change an innovation causes in consumers' existing habits, innovations can be of three types: 1. Discontinuous innovations, 2. Dynamically continuous innovations, 3. Continuous innovations. Since the classification of an innovation is done on the basis of the extent to which the innovation causes change in consumers' existing habits, the innovation group is dependent on the type of customer towards which it is aimed at. The same innovation may be continuous for one segment of customers and dynamically continuous for another.

1. **Discontinuous innovations:** By their very nature, these innovations are discontinuous to every customer segment, since they comprise new-to-the-world products only. These new products are so fundamentally different from the existing products that they reshape markets and competition. For instance, mobile phone technology and the internet drastically changed the way people communicate.
2. **Continuous innovations:** In continuous innovation, an existing product undergoes marginal changes, without altering the customer habits. Sometimes, the customer may not even perceive these products to be new, though the company may have invested a lot of money to improve its existing products. For instance, a shampoo which is different from existing products only in its brand name, fragrance, colour, or packaging, is also a new product. But it does not change customers' habits in a big way. The continuous innovation should be above the perceptual threshold of the customer, i.e., there should be a 'Just Noticeable Difference' (JND) between the continuous innovation and the existing options for the customer to perceive this innovation as an improvement. Put simply, the customer should find the new product different from the existing options that he is aware of.

3. **Dynamically continuous:** Dynamically continuous innovation falls between the discontinuous and continuous innovation. The changes in customer habits caused by such an innovation are not as large as in a discontinuous innovation but not as negligible as in a continuous innovation. The progression from a manual to an electronic typewriter and the advent of cable and satellite television are examples of dynamically continuous innovations.

(b) Company's perspective

This is already dealt with in detail under section 2.7 of the previous unit.

3.2.3 Sources of Innovation

1. Competition

Peter Drucker mentions seven sources of innovation in his book *Innovation and Entrepreneurship*:

(i) The unexpected success
(ii) Incongruities
(iii) Process need
(iv) Industry and market structures
(v) Demographics
(vi) Changes in perception
(vii) New knowledge

Other scholars and researchers have discussed the various sources of innovation under the following heads:

Competition is perhaps the most compelling reason for product innovation. In order to defeat their competitors, every business enterprise aims at capturing a major marketing segment. It is therefore necessary for these companies to present their product in such an attractive manner that it creates an impression of some sort of innovativeness and thereby help in boosting the demand of the product.

2. Business growth

Product innovation is a necessary tonic for the growth of both business and business enterprise. In case there is a rapid growth of business, the company feels inclined to introduce more and more innovative products to attract their customers. Only those firms that adopt innovation, succeed in achieving their business objective.

3. Market changes

Marketing conditions and environment keep on changing due to the impact of globalization and changing technology. This automatically leads to changes in customer habits, tastes and preferences. These changes prompt these business enterprises to innovate their products to suit the changing needs of consumers.

4. Risk minimization

Every product goes through a life-cycle. When a product reaches its saturation or decline stage of life, it is necessary for the company to innovate its product in order to prolong its life. Thus, product innovation is necessary to minimize the risk of total product decline.

5. Technological changes

Due to the scientific and technological revolution, people always expect greater innovations in a product. If the companies do not adopt changing technologies, they will soon have to exit from the market.

6. Other reasons

The other important reasons that prompt companies to adopt innovation are:

(a) Using innovation as a part of their marketing strategy

(b) To raise the standard of living

(c) To complete the product line

(d) To increase product efficiency

(e) To enhance product quality

3.2.4 Major Levels of Innovation

There are several major levels of innovation. Some of them are as mentioned below:

(i) A modified version of an existing product

(ii) A new model in the existing product range

(iii) A new product in the similar field of technology but outside the existing range

(iv) A totally new product in a new field of technology

A large number of companies get their substantial sales volume through an innovative product that did not exist earlier. Growth industries are innovation-oriented. Innovativeness is not confined to products and markets. There are other dimensions that include process innovativeness, strategy innovativeness and structure innovativeness. In today's world of competitive business, if companies decide not to innovate, they expose themselves to a great risk of perishing. While taking a decision on its product range, the company needs to keep pace with changing consumer needs, technology and the length of the product life-cycle. Though product innovation is necessary, it is not without risk.

Product Innovation: Changes in the product or service that a business firm offers

Process Innovation: Changes in the ways in which a product or service is created and delivered

3.2.5 Types of Innovations

The various types of innovations are:

1. **Product Innovation:** Changes in the product or service that a business firm offers. Examples: new designs on a car or bike, a new home theatre system or a new insurance package.
2. **Process Innovation:** Changes in the ways in which a product or service is created and delivered. Examples: changes in the manufacturing method to

make a home theatre system or car or a new way of sequencing the insurance cases.

3. **Position Innovation:** Changes in the context in which a product or service is introduced in the market. Example: a glucose-based sickness drink is re-introduced as a health drink in the growing fitness market.
4. **Paradigm Innovation:** Changes in the mental models that change the consumer's perception about the product or service. Examples: shift to a low cost airlines, the provision of online insurance and hotel and railway reservation.

3.2.6 Barriers To Successful Product Innovation

Some of the factors which act as barriers to successful product innovation are listed below:

- Short-term focus on operations
- Lack of time, resources or staff
- Lack of a systematic innovation process
- Leadership expects payoffs sooner than expected
- Management incentives are not structured to reward innovation
- Lack of ideas
- Social and government constraints
- Prohibitive cost of development

3.2.7 Innovation and Competitive Advantage

Companies need to ensure that their existing product range keeps pace with changing technology and consumer needs. The success of a business firm depends on its capacity to innovate. The competitive advantage of the firm is derived from their knowledge, technological skills and experience to create uniqueness or novelty in its product and services. There is a strong co-relation between market performance and new products. Innovative products help the firms in capturing and retaining market share and increasing profitability.

Competitive sales growth is derived from various non-price factors like design and quality. In a world, where the life-cycle of a product is gradually becoming shorter, the survival of business firms depends on their ability to replace products with better versions as quickly as possible. Here, the example of particular models of TV sets or computers, whose life is measured in terms of months, may be cited. The growing competition puts immense pressure on the firms not only to introduce new products, but to do so faster than its competitors.

While new products are considered as cutting edge, but the strategic role is that of process innovation. For example, Japanese predominance in the late 20th century in several sectors like automobiles, electronics and shipbuilding. was the result of a consistent pattern of process innovation which helped them in achieving superior manufacturing abilities.

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Paradigm Innovation: Changes in the mental models that change the consumer's perception about the product or service

Competitive advantage also comes from the ability of the firm to bring innovation in its service delivery system, i.e., being able to provide a better service in terms of quality and the pace of delivery and reasonable price. For example, CitiBank was the first bank to offer the ATM service and this helped it in developing a strong market position as a technology leader. The credit of success goes to process innovation.

It should also be borne in mind that the advantages that come from these innovative steps are gradually copied by others. Unless a firm is able to introduce innovations constantly, there is always a risk of being left behind as competitors now take the lead in exchanging their offerings with new innovative models. For example, Citibank is no longer a leader in the banking sector. This title has now been passed on to others. With the rise of Internet, the scope of service innovation has grown enormously.

3.2.8 Innovation: From Incremental to Radical

The level of innovation depends on the degree of novelty or uniqueness of the product or services offered by a business enterprise. For example, changing the interior and styling of a car is certainly not the same as launching a new concept car which has an electrical engine. Thus, the degree of novelty is different in this example. Sometimes, the innovation is so radical that it changes the way we think about a product. The innovation of steam power during the Industrial Revolution was a radical innovation.

i. Incremental innovation

Most of the product innovations are incremental in nature. In other words, products are rarely new. Automobile manufacturers have come out with models which may seem to have a different style, but se the common components and chassis. To take another example, the Walkman, a music player which was launched and developed by Sony, was later followed by other versions like CDs, DVDs, and MP3 players.

ii. Innovation in a global environment

In the 19th and early 20th century, technological development was only confined to developed countries. But now, it has expanded globally. These days, a large number of business firms are outsourcing their components to small firms in different countries. For example, in the automobile industry, components of a car made in Japan are now sourced from India. Software production of the CitiGroup and many other companies are handled by software firms in Bengaluru (India).

3.2.9 Reasons for High Failure Rate of Innovations

Quite often, there are gaps between a new product development team and the prospective customers. Due to these gaps, developers fail to understand the customers' perspective in adopting innovations. This factor leads to an increasing rate of new product failures.

Most of the new products are failures. The main reason for these failures is a fundamental customer bias to overvalue the benefits of existing alternatives to a new alternative. Nobel prize winners Daniel Kahneman and Amos Tversky explained decision-making among individuals. They explained how people actually made decisions, and not how economists thought they should do so. The main proposition of their theory (Prospect Theory) was that, an individual's objective gains and losses were very different from their psychological gains and losses. What drives behaviour actually are these psychological gains and losses, not the objective gains and losses. This has significant implications for marketers struggling to get their new product accepted by customers. The adoption of new products always involves giving up existing options.

For instance, a customer may be offered a new electric car. The new car has some obvious advantages over the existing options; it is more energy-efficient, involves lower cost of operations and does not pollute the environment. However, it is a well-established fact that electric car adoption rates are not very high. The reason is that the customer has to give up size, convenience and cruising range, all that the customer has in his present option. Therefore, the tradeoff does not seem to be attractive enough. Therefore, the customer is likely to overemphasize his losses rather than the gains due to adoption of the new vehicle.

The implications seem to be too glaring for the new product developers to ignore. Yet, so many innovations fail. It happens because developers are ill-equipped to judge the tradeoffs in benefits that the customer will have to make if he buys the new product and discard the existing one.

There are three reasons why development teams are disconnected from their customers:

1. Development teams like to develop products that they believe in, or would like to use. However, it is not necessary that the values sought by the development teams would be widely shared by a majority of the customers. In many cases, development teams could comprise members who are lead users of the product that customers cannot identify with. Such a team has advantages, since it helps the developer to identify new products and develop them before others can even think of such options. But the obvious disadvantage is that their values may be far off from the typical customer. For instance, the environment-conscious developer may want to develop an electric car, but would the typical customer value the features of this car when it is launched in the market?
2. The reference points of the customer and the development teams do not match. The reference point for the customer is obviously the existing option. For the development team, however, it is the new product. The development team is involved with the new product for a considerable period of time. During this time, they become extremely familiar and comfortable with the idea of using the new product, and in fact, may have mentally developed strategies to overcome any usage obstacles. Over a period of time, therefore, the new product becomes their reference point. For the customer, when the new product is introduced, there is a huge gap between the existing options as his reference point and the new product. This magnifies the gap between the customer and the developer.

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3. Development teams credit customers with having more knowledge about the product category than customers actually possess. Therefore, the new product, when introduced in the market, would be up against a typical customer who sees a new technology for the first time, and is unaware about the need for it. Contrast this with the developer who has already spent enough time with the new product to attain a comfort level far higher than that of the customer.

Given the above arguments, inference can be drawn that the more innovative a new product is, the more resistance it is likely to face from the customer. Yet, marketers expect new products to be instant successes. Marketers must never underestimate customers' resistance to new products. Rather than start with the mental frame that customers would readily adopt the product, developers must try to develop innovations expecting maximum customer resistance.

Another method by which failures can be reduced, is by including typical customers in the development process. At every stage, the customers can serve as reference points for the product development team. However, after some time, this team of customers may also become too familiar with the new product. Therefore, development teams must constantly change their teams of customers to include those customers who are absolutely unfamiliar with the new product, to get a real picture of their accepting the product.

Once the product is launched, it has to be offered to the customer for an extended trial period. The company can offer the product on lease with the option that the customer can return the product after paying some usage fees. This will reduce the risk for the customer and he will be more willing to use the product.

A company can gradually increase the technical sophistication of the product and if technically feasible, offer to upgrade it to the next level. This can be particularly suitable for software products.

The company should expect resistance from customers and should not rush to withdraw a product from the market if initial acceptance is low. Customers will eventually learn about the product if they are exposed to it for a long time and their reference point would undergo a change. The new product would then become their new reference point.

A company should understand that if customers were allowed to have their way, they would want all possible benefits in their products and services. In consumer markets, customers would want high power and fuel efficiency in the same car. In industrial markets, customers would want high rate of production and quality from the machine that they plan to buy. Some of these benefits are mutually incompatible. For instance, if a car has to have high power, it cannot be fuel-efficient. No matter, how much a customer would like to have a high-powered, fuel-efficient car, designers cannot provide such a model. It is important that the customers understand and accept these inevitable compromises in the benefits that the designers have to make. If customers can be made to go through the design process, they will appreciate these compromises better and the acceptance rate of the product will improve. This is especially possible in industrial markets where there is already some form of collaborative design taking place between the seller and customer.

Because of the multitude of customers, it may be difficult to involve them. But companies should not forgo the idea. It is especially difficult to comprehend the compromise among benefits in new product categories. Therefore, it would be helpful to invite prospective early adopters to go through the design process and understand for themselves, the compromises that designers are being forced to make. When the product category is established, customers are able to accept the compromises more readily.

3.2.10 Disruptive Innovations

Disruptive innovation usually makes a stealthy entry and changes the industry's structure and dynamics. Dominant players are intently focussed on doing better in the present , and so lose out on such new opportunities.

A disruptive innovation can creep into any industry. It usually happens that the lead players of an industry are focussed on improving the benefits and features of a product. There comes a stage when an average customer does not need such advanced features and benefits, and is unnecessarily paying for them. And then a disruptive innovator launches a product with just the features and the benefits that the average customers want, at a much lower price. Sophisticated users of the product do not like the new product, but slowly, the product gets better, and eventually, a vast majority of users adopt the new product. This is how it happens.

Lead players of the industry introduce more new and advanced products to serve the sophisticated customers. The pace of innovation nearly always outstrips the ability of the customers to absorb it. Innovations overshoot the need of the average customers.

The healthcare industry is spending money on conducting research to find cures for uncommon ailments, whereas the most common ailments are much simpler. Most patients do not need the sophisticated equipment and the expensive care that big hospitals provide. Such a situation provides an opportunity to a new player to introduce a simple product to meet the needs of average customers. This simple product can be operated by average users, and they do not need elaborate training to use the product. The product becomes acceptable to a larger number of customers. For example, in the early 1960s, only data-processing specialists could work on the main frame computers in their centres and average employees had to seek their help to get their things done. But mini computers and personal computers enabled the less-skilled people to compute. At the outset, they were not as capable as mainframes, and professionals who operated the sophisticated computers and the companies that supplied them discounted their value. Similarly, George Eastman's camera made amateur photography common. The healthcare industry is witnessing some disruptive innovations. For example, using cheap eyeglasses to correct their vision or opting for angioplasty instead of open-heart surgery are already becoming commonplace.

The capability of the disruptive innovation remains low during the introduction phase and the more sophisticated users are not attracted to it. But there is rapid improvement in the capability of the disruptive innovations to the point, where it is good enough to serve the needs of most of its customers. The capability of personal computers improved at a very rapid pace. At this point, there is mass switching of customers from the old technology to the new one. If the incumbent players of the previous technology do not anticipate this change, they would soon become extinct.

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3.2.11 Open-market Innovations

A large number of companies are using licensing, joint ventures and strategic alliances to increase output from their innovation processes. They are including their customers, vendors and even their competitors in the innovation processes. This open-market approach to innovation improves speed, cost and quality of innovation. It lets companies set realistic market values for their internal ideas.

- Importing new ideas is a good way to enhance the innovative capability of a company. Companies that collaborate with outsiders on their R&D, have more ideas to choose from and different kinds of expertise are available to them. Tetra Pak took help from outsiders in developing its breakthrough product, Tetra Recart, which makes it possible to sterilize paperboard containers filled with soups, sauces, fruits and vegetables. Tetra Pak collaborated with its paper and polymers supplier to make the paperboard package capable of withstanding high temperatures, humidity and rigours of commercial sterilization. It worked with another company in sterilizing hospital equipment to help it figure out how to sterilize the food inside a package. The company could move fast by outsourcing crucial elements of the new product and thus saved many years of development time.
- Exporting ideas is a good way to earn revenues and keep creative people motivated. IBM earns huge amount of revenues in royalties from the patent it exports. People in IBM understand that if they do not act fast on a promising idea, it will be offered to outsiders, even its competitors. Exporting ideas adds urgency to the innovative process and creative people feel motivated with the knowledge that their good ideas will not be discarded but may be commercialized by some outside company. Bellsouth, the telecommunications company, sells its technologies to its competitors because it understands that they are going to develop it anyway.
- Exporting ideas gives companies a way to measure the innovation's real value and to ascertain whether further investment is justified. Eli Lily offers licenses for compounds under development, when the therapeutic and business value of the drugs is still unclear. When outside laboratories do not show interest, the company knows there is not much potential in the compound. Free markets tell what a product or technology is worth. A company may be very upbeat about a technology but when it takes it to the market, no one may want it. The company is able to save a lot of money and effort it would have expended on the technology.
- Exporting and importing ideas help companies clarify what they do best. Companies often believe that their core business is broader than it really is. A sustainable core competency lets the company produce something at a lower cost or at higher quality than other companies in the open market can. When a company tries to weigh its capabilities relative to competitors, it discovers that it is strong in some areas, which it should pursue, whereas it should withdraw from the rest. Boeing discovered that its true comparative advantage lay in system integration and not in manufacturing. Large suppliers were much better in manufacturing but Boeing understood the design and integration complexities of airplane components better than anyone else. It became designer and system integrator of its planes, as well as many of the systems that go in them and withdrew from manufacturing.

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- But there are real dangers in sharing innovations. Xerox gave away a stream of innovations from computer mouse to the graphical user interface and other companies capitalized on them. But companies should not be dismissive of the open-market innovation approach. The buyer of an innovation takes time to bring the idea to market and by that time, the seller can introduce the next level of innovation. Buyers may not be able to capture the full value of innovation transfers. Disney has developed a superior service model and it is so confident that its system for delivering service cannot be copied by competitors that it makes money by sharing its innovations with them. And even when an innovation is not shared, there is very little chance that competitors will not be able to come up with a similar innovation by reverse engineering. A tweak here and a tweak there will save them from the risks of patent infringements. An innovator will generally make more money and build mutually beneficial relationships by licensing an innovation than by suing for patent infringements. The real risk in sharing innovations is in the structuring of the deals. If Xerox had structured their transactions to adequately share in the upside of its innovations, it could have reinvested that money in additional research.
- Open-market innovation approach is suitable when the economies of innovation are low, i.e., a few people working independently can produce innovations as good as or better than corporate R&D labs. Linux development effort drew thousands of independent software writers to its help. The approach is also suitable when unpredictable situations arise that require new competencies fast and when it is not clear as to which direction the technology would evolvein. Cisco explores multiple product strategies with outside partners until one emerges as the most likely one. This approach also makes sense when innovations from disparate sources must come together to bring a promising idea to market. A joint venture between Cargil and Dow has been set up to make plastic from renewable crops.

3.3 NEW PRODUCT CHAMPIONING

It is almost a dictum that companies will have to innovate profusely if they want to grow. But companies need not splurge on their innovation creating processes. They can organize their innovation creating process in a manner, which will allow them to extract maximum mileage from their investments.

Companies rely on a few people to make innovations. They are people from the research and development department and product and process developers. A vast majority of the employees supposedly cannot innovate. This cannot be true. It is the responsibility of the company to bring out the dreamer in their employees. The company should ask for new ideas from their employees. Once employees begin to believe that their ideas will be seriously evaluated and will be implemented if found to be useful to the organization, they will come forward to proffer their ideas. The company should train employees in innovation techniques and provide adequate tools to make their innovations work. The company should consistently strive to increase the percentage of their employees who are involved in innovations.

Even if every employee of the company becomes an innovator, it cannot match the reservoir of talent that lies outside its shores. Several companies have had productive

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relationships with research laboratories of universities and governments. These research laboratories work on cutting-edge technologies, and their inventions have been commercialized by corporations. This arrangement should continue. But there is another opportunity waiting to be realized.

Now, it is possible for a company to be connected to any individual via the internet, who will be of help. And the number of people who want to work independently in their area of interest is also increasing. The company has to reach out to these creative geniuses. Companies will have to create tools with which such people can contribute to the research, development and design efforts. Financial and other incentives have to be worked out for the contributors.

Companies remain obsessed with breakthrough technologies and products but there are less risky ways to pursue radical ideas. In every category of products and services, customers are experiencing inconveniences that they believe nobody can solve. They are habituated with these inconveniences and do not reveal them in normal surveys, questionnaire and interviews. It will take empathy and intuition to unearth the inconveniences that they are facing while using the products and services. Solutions to these inconveniences and compromises are available in other categories of products and services.

For example, banks have maintained limited time for interaction with their customers. Customers could mostly transact with banks during daytime but there have always been establishments like restaurants which have dealt with customers during night hours.

Take another instance. Pen and pencil have different benefits and features. It is possible to endow one with the features and benefits of the other. It is important that developers and designers question their own assessment about the benefits and features that they have assumed cannot be part of their products and services. It is also important that designers and developers keep experimenting by incorporating benefits and features in their products and services that are a part of a standard product and service of some other industry or category.

Sometimes, the resultant product or service may look very ludicrous but this is probably the only way to break through the apathy of customers who have resigned to their fate of making do with products which are good enough but do not meet their exact requirements. One of these ludicrous experiments may serve a strongly felt but non-verbalized need and become a hit. This method is less risky than going for a breakthrough product and it is much more exciting, productive and useful than incessant tweaking of features and benefits.

Companies should develop a habit of experimenting incessantly. No product, service, process or business model should be so sacrosanct as not to invite experimentation. Companies have to develop methods to carry out experiments cheaply, without hurting current operations and customers. Companies have to find cheaper methods to put the new product in the hands of limited number of consumers and get their response early. These experiments seek to explore the merits of a number of interrelated changes to a company's business model or product. They are designed to create opportunities for iterative learning. Wherever possible, experiments are conducted in the commercial settings where customers can buy the product or service. The goal is to learn how customers interact with all the elements of the redesigned business model or product.

Innovations take time. Learning comes from iterative experiments. Success of a project depends on learning from similar other projects. Therefore, it is important that a company sticks with its innovation priorities for long time periods. If a company keeps on shifting its priorities and shuffles from one project to another, learning from projects of the past cannot be put to use. This is a huge waste of resources. So a company should carefully select its innovation priorities and remain committed to it for a long time.

It is no more optional to innovate. When an activity becomes central to an organization, it cannot be allowed to guzzle precious resources. The innovation process has always been judged on whether it has been effective in bringing out successful products, services, processes and business models without much regard to the expenses incurred but it can no longer be allowed to be inefficient.

3.3.1 Experimentation in Innovation

Experimentation is vital for innovation. The systematic testing of ideas enables a company to create and refine its products. An idea is converted to a product through the process of experimentation. In the past, it was expensive to conduct experiments iteratively. But new technologies like computer simulation and rapid prototyping allow experiments to be carried out faster and at a much lesser cost.

- As developers conceive diverse ideas, rapid experimentation can provide the faster feedback necessary to shape those ideas by reinforcing, modifying, or complementing existing new knowledge. To test a new design for safety, BMW had to build expensive physical prototypes. Data from crash tests arrived late and their findings could not be incorporated in the early stages of product development. The designs had to be reworked at a later stage to incorporate the results of the crash test. But now, these tests are conducted virtually on powerful computers which is quicker and cheaper. It is possible to try many combinations of configurations and see which one is the best. Designers can incorporate the feedback from experiments in their later versions of designs and can commit to a design early. But to conduct rapid experimentation, there has to be change in process, organization and attitude. At BMW, engineers did not want to release a less-than-perfect data. They wanted to monitor output from other groups before submitting their own, because the group that submitted its data first, would quite likely have to make the most changes because it would have got the least feedback from other areas. But now engineers have to release rough data so that experiments can be conducted early on and then get it refined.
- Experimenting with many diverse ideas is crucial to innovation. When a new idea fails in an experiment, the failure exposes important gaps in knowledge. Such experiments are particularly desirable when they are performed early on, so that unfavourable options can be eliminated quickly and people can refocus their efforts on more promising alternatives. IDEO understands that more radical experiments frequently lead to more spectacular failures. People who fail in experiments can be viewed as incompetent, and this may discourage them from experimenting. A company will have to overcome ingrained attitudes to remove the stigma of failure. But it is important that people do not fear failure if a culture of rapid experimentation is to be built. As soon people get ideas, they should be rushing to conduct experiments to test its feasibility rather than pondering over it.

- When projects fail late in the development cycle, the damages are enormous. In the pharmaceutical industry, most molecules are discarded during the clinical trial phase by which time more than half of the total project cost would already have been incurred. Companies can save lot of money and time if problems are detected and solved early. In software development, late-stage problems are more than hundred times as costly as early-stage ones. In pharmaceuticals, shaving six months off drug development means effectively extending patent protection by six months when the product hits the market. New technologies can help in identifying and solving problems upstream. In the automotive industry, crash simulations on computer can help companies avoid potential safety problems downstream. Such simulations are not as perfect or complete as late-stage prototypes, but the results of such simulations force downstream groups to participate in the rectification of the problem early. In addition to saving time and money, early information helps product developers to be aware of customer preferences that might be evolving. Software companies show incomplete prototypes to customers and take their suggestions and are able to make changes without incurring heavy expenditure.
- A new technology may reach the same performance of its traditional counterpart much more quickly and at a lower cost. But the new technology may perform at only 70–80 per cent of the capability of established technology. A new chemical synthesis process might be able to obtain a purity level that is just three-quarters of a mature technology. By combining new and established technologies, a company can get the desired performance faster and at lesser expense. In pharmaceutical industry, drug developers create one compound at a time, and for one successful drug, at least a thousand compounds have to be synthesized. By using combination chemistry, drug developers can quickly generate numerous variations of a few basic compounds, reducing the cost of development of a compound from thousands of dollars to a few dollars. But the purity of compounds was poor compared to traditional synthetic chemistry. Most pharmaceutical companies are using the new and the old technologies to complement each other.

3.3.2 Next Generation Products

It is imperative for technology-based companies to be focussed on meeting their customer's evolving needs. These companies have to focus on technologies and customer needs that will emerge in the future. But in today's environment of rapid change, most industries have become akin to technology-based products and are also keen on developing next-generation products. The stakes in terms of investments and the continued success of the company are huge and hence companies have to get their process for creating next-generation products right.

The first task is to create a list of products that companies would have to develop in the near, intermediate and distant future. The products on the list should be distinctly prioritized. The investments and technology requirements for each of these products should also be clearly delineated. These decisions should be taken collectively by executives of all functional areas with the chief executive heading the exercise so that all functions specialists are in clear understanding and agreement of their roles in the creation of next-generation products. This group should be meeting regularly to check if any changes are to be made in the list of products or their priorities. All the while, the

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company remains a keen observer of changes occuring in the market place and technology arena. It makes changes in the product definition if there are any change in customer needs or if technologies warrant it.

The new-generation products will be different from the ones that the company is marketing currently in terms of technologies, architecture and target customers. It is wise to create a separate unit for the development of these products. This unit, without being unwieldy, should have adequate representation of all the required functions. This should comprise the company's most knowledgeable engineers and marketers. Such a step will ensure early and effective definition and development of the product.

The resources required at different stages of a product development process are different. At the initial stage, marketers are busy finding out customer requirements, while engineers are comparatively free. But in the next stage of product development, stage engineers are busy freezing specifications and marketers can cool their heels. In the third stage of product launch, marketers become very busy again. In the phase of product development, when the marketers are comparatively free, they, with help of some engineers, can focus on finding the requirement of derivatives and ancillary products that the launch of the product will create.

Engineers can work on these findings to design derivatives and ancillary products at the last stage of the development when they are comparatively free. This will ensure rapid launch of the required derivatives and ancillary products.

It is important to monitor the progress of the development process in terms of investments being made and targets achieved on a continuous basis. The company will be able to avoid cost and time over-runs. It can take corrective steps to develope the product on time and within budget, instead of getting into a few millions cost overrun. Though the development team can be protected from the bureaucracy of the company by stationing it away from the company headquarters, the top management should be in touch with the development team. The management can guide the developers when a design can be frozen or when to delay its freezing, due to changes in technologies or customer needs. A complete hands-off approach and a constant meddling approach are harmful. The former approach gives the developers self-perceived permission to play in the sand for ever and delay the project inordinately in the process, whereas the second approach smothers the creative urges and entrepreneurial energy of the team making it listless and ineffective.

Developing early prototypes of subsystems and the final product helps in assessing the workability of technologies and customer acceptance of the subsystem or the product. Cheaper and quicker methods of building prototypes should be conceptualized before the product gets underway.

The company should not shy away from using relevant competencies of their suppliers and should make them a part of the development process. Exchange of engineers between the two companies helps erase differences in style, priorities and motivations between the two companies. Competent suppliers can be given total responsibility for development of particular subsystems. Inclusion of suppliers will hasten the development process.

The next-generation products are vital for continued success of technology-based companies as well as traditional businesses. It is important that the company ensures success in this effort.

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3.3.3 Commercialization of Technology

It is imperative that companies decrease the time-to-market period for technology products. The life-cycle for high-tech products is decreasing drastically. Companies can obtain competitive advantage by reducing the time-to-market phase of their technology innovations, maintaining a wider product line to spread risks, investing in simultaneous development of promising products, constantly engaging in research to develop the next level of technology and serving larger markets.

Many major market innovations appear to be technologically driven, i.e., a technology is seeking a market application rather than market opportunity seeking a technology. Marketing provides insight as to how the technology may provide customer benefits within a prescribed target market.

There are severe limitations in using marketing research in developing new products. Customers cannot talk beyond the realms of their experience about the products that they use. Most of the time, they are oblivious of the products' underlying technologies. Therefore, their views are confined to the narrow realm of knowledge and experience, and feedback from such customers will not lead the company to the next level of technology. Therefore, innovations that are based on customers' feedbacks are incremental and so are the revenues. Companies take customers' feedback during the new product development process, but unless customers use the product in the real environment, using customers' feedback to drive product development process can be extremely risk. Unless a customer has paid for a product, he is never too eager to delve deep into its functioning and find problems in it. Customers cannot easily add value to a product that the company is developing, and therefore, pricing strategies for new products are difficult to formulate.

The most fundamental question that the marketer needs to ask himself is, 'What distinct relative advantage does the new product provide, for which I should buy it?' This question should be asked at each stage of the new product development process to prevent the developers from going overboard in their technical pursuit.

Diffusion process of the technical product also has to be studied. As with other products, it is important to target the innovators and early adopters. Radically new technologies may be difficult to understand, even for these consumers. Therefore, diffusion may be slow initially. It takes time for consumers to understand and adopt these technologies. Companies must constatntly pursue consumers to make them understand and adopt the new technologies.

Check Your Progress

1. What are the two perspective of innovation?
2. List the various sources of innovation.
3. What is disruptive innovation?
4. How does open-market innovation help a company?
5. How can a company bring out the most effective innovation process?

3.4 ORGANIZATION FOR NEW PRODUCT DEVELOPMENT

3.4.1 Project/Venture Teams

Project teams bring together staff from areas such as R&D, engineering, finance and marketing, to work on a new product development project. Companies must move from rigid functional organizational structures to integrated ones. The project team is linked directly to the top management to avoid having to communicate and get approval from several layers of management. Such teams have been used by IBM and Mahindra&Mahindra (for the launch of their SUV Scorpio) in India. The team may be physically separated from other employees to avoid bureaucratic intrusions.

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Members of the project team may continue to manage the product after commercialization. By bringing together design and manufacturing engineers, the product development cycle is reduced. Such teams are capable of bringing out novel products as they are not committed to any existing product. This is quite common in the technology sector.

1. Product and brand managers

In some companies, the people managing the products are also responsible for developing new products. They have the task of co-ordinating functional areas. Support of functional areas like market research and R&D operations is required for creating new product ideas, improve existing products and brand extensions. A new product development manager may help the product and brand managers in generating and testing new product concepts. This arrangement is not likely to create a hit product, because the product manager is too close to the existing product to think of something that is dramatically different from it. At best, they can manage to develop good revisions of the existing product.

2. New product committee

The review of new product projects is normally carried out by top functional managers, who listen to progress reports and decide whether the next round of funds should be disbursed. Project teams have to demonstrate that the idea is worth pursuing.

3.4.2 Team Working

Whichever method is used, effective cross functional teamwork is crucial. There has to be effective co-ordination and teamwork between R&D, marketing, operations, finance, etc. The challenge is to prevent technical people from developing things that only interest them professionally, and to get them to understand the realities of the marketplace. Technical people should be in constant interaction with marketers and seek continuous feedback as they work on their ideas. Sometimes, it may happen that the proposed technologies may not be perceived as useful by customers. Technical people have the right to believe that these technologies will revolutionize the market, but at some point, they have to consult other people or at least espouse what they want to achieve for customers. Even for the most fanciful of ideas, the company should ensure that there is a debate and initiators are made to substantiate their claims. This is not to say that every idea should be evaluated on the basis of its commercial feasibility in the immediate and near future. Some new products will create new markets and it will be no one's wish to kill such products because marketing research does not reveal demand for the product. The idea is just to check product developers' convictions one more time.

The product development team should also collaborate with the operations people. It does not serve any purpose to design a product that the operations cannot manufacture, or can manufacture only at a cost which it will not be able to recover. The design team should let the operations people evaluate its design before freezing it. The two teams should be in constant touch so that designs do not need to be reworked.

Team Collocation

When a team is formed, it is extremely valuable to collocate the team into a project area. Collocation is placing something so that it is next to or close to something else.

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This physical proximity of the team members will provide a number of benefits. It will allow interpersonal relationships to develop more quickly leading to more effective and timely communication of information. This proximity will provide a greater opportunity for feedback and discussion of the design requirements and design issues. Collocation facilitates better coordination and results in less demanding infrastructure requirements (e.g., document distribution, meeting room requirements, local area networks, workstation and software requirements, etc.). Finally, it allows more rapid response to issues and enables processes and tasks to be streamlined.

Team Leadership

A team leader needs to be appointed for each team. The team leader is not the manager of the team, but can better be described as the chairman, facilitator, or coach. This distinction is important for the team to effectively operate in a balanced, self-directed way. The role and responsibilities of a team leader are diverse.

Team Planning

In addition to organizing itself, one of the first steps for the PDT/IPT is to obtain a thorough understanding of the task at hand. They need to understand the project objectives, the specifications/customer requirements, design targets, cost, and schedule. This information should be provided to the team(s) by the program manager or management team, and the team(s) must thoroughly review these requirements and raise any questions or issues before they proceed. While the project goals will always be aggressive, the team must “buy-in” to these goals.

Team Building

As teams are formed, there is a need to recognize the interpersonal dynamics that exist in an effort to make the team process effective. People assigned to the PDT/IPT will represent a variety of personalities and styles. The different perspectives that the people bring to the team can enhance its vitality and creativity. However, team members need to have or develop a basic orientation towards working in a team environment and toward group problem solving.

Underlying the PDT’s/IPTs tasks are interpersonal dynamics which can severely affect the team’s performance. Most people have spent the majority of their career performing tasks as individuals with specific assignments outside of a team or group structure. Many will never have participated in a team or group other than serving on a committee - which is a very different concept. It is important to recognize this fact and understand the barriers that need to be overcome and the stages of growth in moving toward effective team operation. PDTs/IPTs will typically go through four stages of development in moving toward becoming productive groups: forming, warming, storming, norming, and finally performing. This interpersonal development process can take several months.

Team Empowerment and Self Direction

Functional department managers should empower the people assigned to the PDT to represent the department’s interests as the individual serves on the team. This implies that qualified people will be assigned to the team. By empowerment, as the individual serving on the PDT is part of a consensus decision on a design approach or issue, that individual is committing his or her functional organization to support that design approach. Functional department managers should avoid second-guessing or having to review every action taken by their PDT/IPT members. However, functional department managers can and should provide guidance and direction to the PDT/IPT members assigned from their department as those team members seek this guidance.

Teams should be self-directed. This will maximize the contribution of the team members. It provides a mechanism for balanced, consensus decision-making without undue outside influence which might bias the result and without second-guessing which disables the concept of empowerment. Empowerment and self-direction lead to greater motivation, ownership and development of each individual's capabilities.

The team concept is not without challenges. Many organizations are only beginning to develop the experience to operate teams effectively. Functional managers used to operating in a hierarchical organization can feel threatened by self-directed teams that appear to work outside of their control.

Other Requirements

Effective teams require a significant investment in training. This includes team building training, cross-functional training, training in various integrated product development techniques such as design for manufacturability or quality function deployment, and minimal technical training to allow the non-technical members to effectively participate in product and process design.

Performance measurement/appraisal systems and reward and incentive systems, such as compensation adjustments, need to be re-oriented away from rewarding individual achievement of departmental objectives and toward measuring and rewarding team performance in achieving enterprise objectives. If this is not addressed, it can undermine the effective operation of a team.

A positive culture oriented toward continuous improvement and team-based approaches must created. Management must provide leadership and define the required culture. Management needs to guide this move toward effective product development teams by explicitly defining roles, and responsibilities of team members, functional managers, and program managers.

3.4.3 Top Management Contribution in New Product Development

- The senior management plays a critical role in facilitating cross-functional communication in the new product development process. Marketing, R&D, production, finance, IT, operations and human resources must constantly interact to make innovations successful. Such interactions imbibe a sense of ownership of the innovation, forcing all departments to co-ordinate and attain the desired results. The management must also try to do away with bureaucratic hurdles that come in the way of ensuring faster time-to-market arrival of the new products.
- The management should be personally involved in the new product development process. A development team often requires the co-operation of other functions

and when the senior management shows interest in a project, the functional experts will be more willing to co-operate with the development team. The management management will also have to protect the development team from undue interference from other people in the organization.

- They should provide strategic direction. The development team should know what it has to achieve for the company. It should know whether its agenda is to find a solution for an unmet customer need, or to improve an existing product, or to develop a product to match a competitor's product. Though a development team without an agenda may chance upon a great product, the productivity of the development team is greatest when its activities are focussed. It is important that the development team is pursuing limited number of ideas and is not spreading its resources too thin.
- It does not serve any purpose if the senior management merely exhorts its developers to create the next hot product. Product development is a costly exercise and it is more than dreaming up of ideas. Expensive equipments have to be installed, people with diverse skills have to be assembled, and the project has to be supported for long periods even when no tangible outcome may be promised. To be able to commit such resources, the top management has to be convinced that its survival and prosperity depends on generation of new products and that its development team is capable of creating such products. Investment in R&D is a matter of faith more than anything else.
- The marketing department should collaborate with the R&D team right from the beginning of the product development process so that customer feedback can be incorporated in the product. The senior management must facilitate formal and informal interactions between the marketing and the R&D departments to increase the probability of the success of an innovation.

3.5 7-S FRAMEWORK: ITS USE IN NEW PRODUCT DEVELOPMENT

The **7-S framework of McKinsey** is a Value Based Management (VBM) model, which is used in organizations to analyse the environment and see if the company is achieving its intended objectives. The model describes 7 factors to organize a company in an effective way. The 7-S framework suggests that effective organizational change can be understood in terms of a complex relationship among Strategy, Structure, Systems, Style, Skills, Staff and Shared values—the seven Ss.

The model was developed in the 1970s by McKinsey & Company, a consultancy firm in the United States. The framework was developed by Tom Peters & Robert Waterman, consultants at McKinsey.

The success of any organization, including product organizations, depends on the 7 factors working in sync. Any organizational change or review should be backed up by the elements that make up the McKinsey 7S model.

7-S framework of McKinsey: A Value Based Management (VBM) model, which is used in organizations to analyse the environment and see if the company is achieving its intended objectives

Check Your Progress

6. What does a project team do?
7. What roles does a new product committee perform?

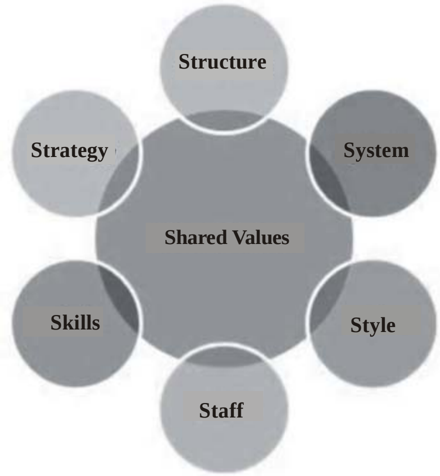

Fig. 3.2 *McKinsey's 7-S Framework*

The 7-Ss of the McKinsey model are discussed here:

- **Shared values**: The centre of McKinsey's model is shared values. These are the core values of the company that are seen in the work culture and the general work ethic. It evaluates what the organization stands for and what its central beliefs and attitudes are.
- **Strategy**: The plan devised to maintain and build advantage over the competition.
- **Structure**: It evaluates the way in which the organizational units relate to each other, and who reports to whom.
- **Systems**: The routine activities and procedures that the staff engages in to get the job done.
- **Staff**: Denotes the numbers and types of people within the company.
- **Style**: The style adopted by the leaders in an organization to achieve organizational goals.
- **Skills**: The actual skills of the employees of the organization as a whole.

Importance of McKinsey's Framework

McKinsey's framework is recognized as a powerful tool as it focusses on several organizational interconnections: staff and skills; strategy and systems, which have great significance for dynamic organizational change. It highlights the importance of action plans in the seven factors, exhibiting a company's capability of bringing about shifts in strategy. The various benefits of the 7-S model are:

1. Helps in diagonising the ineffective factors of an organization
2. Guides in bringing about organizational change
3. All Ss are interrelated, which can evaluate the success of a compnay.

3.6 SUMMARY

Some of the important concepts discussed in this unit are:

- The success of a company is no longer limited to the success of existing products. It needs to constantly innovate in order to keep pace with the changing trend.

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Check Your Progress

8. What are the seven factors of 7-S model?
9. What do shared values of the 7-S model stand for?

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Innovation occurs when an invention is commercialized by introducing it to the market.

- A new product needs to shock and surprise people. And for that, a company needs innovative ideas to work on. Unless a company provides creative freedom to its people, it can't come with breakthrough innovations. It will have to nurture the creative talent.
- Innovations are classified into two types: Customers' perspective and company's perspective. The first part is further divided into three groups: i) Discontinuous, ii) Dynamically continuous and iii) continuous. Company's perspective is further divided into four sets: i) Product replacement, ii) addition to existing lines, iii) New product lines, iv) new to the product world.
- Innovations can result from various sources: i) Business growth, ii) Market changes, iii) Risk minimization, iv) Technological changes. Apart from these, there are also various reasons that can give rise to product innovation.
- There can be various levels of innovation. 1. There can be a modified version of an existing product. 2. There can also be a new model in the existing product line. 3. A new product with the same set of technology but from outside the existing range. 4. Lastly, an entirely new product in a different field of technology.
- Innovations are likely to be based on four different factors: product, process, position and paradigm.
- There are several obstacles to the successful implementation of innovation. Short-term focus or restrained time and manpower can lead to the failure of a product. If the innovation process is conducted haphazardly, it can lead to failure too. Also, the management's overlooking the innovative ideas can act as a big hindrance. Excessive development costs and social or government constraints are other hindrances to the successful implementation of innovation
- Innovation gives a competitive edge to an organization. Competitive sales growth is derived from various non-price factors, such as, design and quality. Companies need to replace their existing products within a short time period because with the advent of technology, the life-cycle of a product has become shorter.
- Innovation level depends on the degree of uniqueness of the product. Incremental innovation is merely changing a few features of a product. But the radical aspect involves changing the mindset of the consumer drastically.
- Quite often, in spite of great innovations, new products fail in the market. Nobel laureates Daniel Khaneman and Amos Tversky have explained that people's decisions vary from the way economists plans. Similarly, the product developer's idea might not be able to grasp the consumers' psyche.
- Disruptive innovation, like the term suggests, upsets the entire market. Such an innovation doesn't impact the market initially. Simplification of a product sometimes attracts huge number of customers and then it becomes the norm.
- It is imperative for a company to exchange ideas before it freezes the specifications of a product. And sometimes, they exchange these ideas in the market, without charging any fee. After all, free markets tell what a product or technology is worth.
- A company needs to champion its new product. It can do so by gauging how customers interact with the modified product. It is also important for a company

to stick to its innovation priorities for longer periods, because it takes into stock the customers' changing demands.

- The innovation process involves a lot of money and time. So it is important for a company to test its ideas before it starts working on the project. Experimentation in innovation is necessary so that developers and other departments work in sync. Experiments will not only minimize costs at the final level, but will also let the company rectify its faulty model.
- Customers' needs keep evolving. Every company strives to create next-generation products but the investments that a company needs to make are enormous. So it's important for a company to prepare a list of products that it plans to produce and delineate investments and technology for each group, based on priority.
- While producing technology products, a company needs to decrease the time-to-market period. The life-cycle of high-end technology products is shorter and companies need to release their products in the market before it becomes obsolete.
- To produce new products, companies need to organize their teams. There are various teams who work together to make a product. For example, the project teams bring the staff of various departments together. The product and brand managers co-ordinate the functional areas, such as market research and R&D operations. Product managers usually bring a good revision of the existing product.
- Committees comprising top managers are also formed to review the new product projects. They keep a tab on the product's progress and decide the financial disbursement.
- To assess the new product development process in an organization, companies use the 7-S framework of McKinsey. The model is based on the 7 factors: Strategy, Structure, Systems, Style, Skills, Staff and Shared values. The model analyses the environment and sees if the company is achieving its intended objectives.

3.7 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The two perspectives of innovation are: Customers' perspective and Company's perspective.
2. The various sources of information are: (i) Business growth, (ii) Market changes, (iii) Risk minimization, (iv) Technologial changes
3. In simple terms, disruptive innovation is an improvement that improves a service or a product in a way that has never been thought.
4. Open-market innovation improves speed, cost and the quality of a product.
5. A company can bring out the most effective innovation process by follwoing the simple steps:

   (a) Experimenting with innovation, (b) Focussing on the next-generation products, (c) Developing a more technology-driven appraoch to produce new products
6. A project team groups people from various teams, such as R&D, engineering, finance and marketing to work on a new product development process.

7. A new product product committee comprises people from top functional management. They are responsible for assessing the progress of a new product and demonstrating that the idea is going to succeed.
8. The seven Ss of a 7-S model are: (i) Strategy, (ii) Structure, (iii) Systems, (iv) Style, (v) Skills, (vi) Staff and (vii) Shared values
9. Shared value is the core factor of a 7-S model. It interconnects the other six factors and highlights what the organization stands for.

3.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. List the differences between customers' perspective and a company's perspective.
2. What are the various sources of innovation for a company?
3. What is incremental innovation?
4. Give three examples of product/services that are results of disruptive innovation.
5. Cite two examples where open-market innovation helped a company.
6. What is new product championing?
7. What do you mean by is cross-functional team working?
8. List the importance of the 7-S framework.

Long-Answer Questions

1. Explain in detail the various perspectives of innovation.
2. What are the various sources of innovation? Discuss them in detail.
3. How is product innovation different form process differentiation?
4. There is an increasing rate of new product failures. What are the reasons behind these?
5. Describe disruptive innovation. Why does it happen and how does it affect the market?
6. Open-market innovations improve speed, cost and quality of innovation. Do you agree? Give your reasons.
7. Explain the process of commercialization of technology.
8. Discuss the use of 7-S framework in the new product development process. Draw a diagram to show the interconnectivity between all the 7 factors.

UNIT 4 PRODUCT AND BRAND POSITIONING

NOTES

Structure

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4.0 INTRODUCTION

In Unit 3, we had discussed how companies need to extend product lines with new brands. We had also read how brand managers are responsible for ensuring that the product has a good visibility in the market.

In this unit, we will delve into the details of product positioning and dwell on the importance of this concept in the market. Also, we will be familiarized with product branding. A company needs to position its product in the market, and to do this, the firm needs to consider various elements–the target market, the differential advantage and most importantly, communicating the differential advantage to customers to prove how it's better than the competitor.

But the positioning of a product has to be strategic, i.e., there has to be certain plan to influence the customer. It can be done in three ways. Firstly, the company aims

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only to produce a subset of products or services. This leads to specialization, and is not time-consuming. Secondly, a company's objective may be to serve a specific customer group's needs. In this case, the company will only aim that customer segment's taste and preferences. The third basis of positioning is dividing customers into different sets, but for selling the same product. The approach is different for diverse groups.

Positioning alone is not enough for a product to grab the customers' attention. It also needs branding. Companies develop their products into brands by assigning them a unique name, distinct packaging or design, and most importantly, raising customers' expectation about the product. A brand could be both abstract and real. Besides representing customers' expectations, a brand also sums up what the company offers through the brand. Based on who creates the brand, it is divided into two groups: manufacturer brand and own label or distributor brand.

A brand is not built in a day. There are several factors that contribute to the making of a brand. A product needs a good balance all these things to succeed as a brand: quality, positioning, repositioning, well-balanced communication, being a pioneer, long-term prospective and internal marketing.

Sometimes, instead selling its products as numerous brands, well-known companies promote its product as a unified product. The item is endorsed as one-of-its-kind, as it absorbs the characteristics of the parent company. This sort of branding is called corporate branding.

Brand image: It develops the product's character in a unique way, and this image is promoted as the differential advantage over its competitor

Brand image makes or breaks a company, because it's considered a company's character. It develops the product's character in a unique way, and this image is promoted as the differential advantage over its competitor. Companies also measure a brand's financial worth and power. This valuation is termed as brand equity. When a brand becomes successful, companies leverage the brand equity. In other words, firms capitalize on their brands and launch new products under the same name.

Brand valuation, unlike brand equity, evaluates all the aspects of a brand. It has certain ways to determine the brand value of a product. Packaging plays a major role in the way a product attracts customers. Apart from design, colour and size, packaging also protects the item and makes it convenient for carrying. Companies need to embrace the emerging trends in packaging to keep ahead of its competitors too.

4.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Describe the concept of product positioning, and the various aspects associated with it
- Discuss why branding is necessary for a product
- Evaluate how organizations use brand to leverage their products
- Identify the differences between brand equity and brand evaluation
- Explain how packaging plays an important part in the market

4.2 PRODUCT POSITIONING: CONCEPTS AND PROCESS

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4.2.1 Elements of Positioning

A company has to select the target market in which it will offer its products. It will have to determine the differential value that it will provide to customers to make the product attractive to them and communicate to customers the differential value it intends to provide to them. The various elements of product positioning are:

Target market

Where does the company want to compete? The company has to select the segments to which it will offer its products. It is very tempting to select the largest segment or the most profitable segment. The company should possess special competencies and resources to serve its target market, which means that before a company can zero on to its target markets, it should have done a comprehensive research of requirements of customers of various segments and an honest audit of its own resources and competencies. Quite often a company believes that it will be able to develop or acquire the required resources and competencies after identifying a target market. But it is never easy. A company should have a clear roadmap of how it will acquire or develop the required competencies and resources.

Differential advantage

How does the company want to compete? The company has to provide an answer to, 'Why would a customer of the target market want to buy my product, and not those of competitors?' A company which is able to furnish an unambiguous answer has a clear positioning strategy.

Communicating the differential advantage to customers

A company may have created the appropriate offering for its target market but its customers should know that it has. Most companies are content using advertisements to convey their positioning. Advertisements have become glossier and most advertising agencies do not understand the positioning of their client company emphatically enough to be able to convey it in the ads that they make. But even when an honest attempt is made to convey a company's positioning through advertising, it cannot be done due to the short and impersonal pitch of advertisements. A company has to use all promotional means like publicity, sponsorship, personal selling and direct mails to inundate customers with messages of its positioning. Of course, these messages emanating from the various sources should be consistent. In addition, every contact between the customers and the company should be so structured that its positioning is unambiguously conveyed. The first products should reach customers who are likely to be very exuberant upon finding a good product. Word-of-mouth promotion will ultimately cement the company's positioning in the customers' mind.

The objective of positioning is to create and maintain a distinctive place in the market for the company's products. Target market selection is a part of positioning. But to compete successfully in a target market involves providing customers with a differential advantage. This involves giving customers something better than what the competitors are offering.

4.2.2 Strategic Positioning

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Creating a strategic position is essential for business. A sustainable strategic position requires a distinct set of tasks which are different from those of competitors.

A company can perform better than its competitors if it can establish a difference and then maintain it. It must either deliver greater value to customers or comparable value at lesser cost, or both. Delivering greater value allows a company to charge a higher price and greater efficiency results in lower costs.

Cost is generated by performing tasks, and cost advantage arises from performing particular tasks more efficiently than competitors. Similarly differentiation arises from both the choice of tasks and how they are performed. Tasks are the basic units of competitive advantage. Overall advantage or disadvantage results from all tasks of a company. Operational efficiency results from performing similar tasks better than competitors. Strategic positioning results from performing different tasks than competitors or performing similar tasks in different ways.

Constant improvement in operational efficiency through new technologies and better practices is necessary to achieve high profitability. But a competitive advantage in operational efficiency is not sustainable because technologies and best practices diffuse fast and every company comes to have them after some time. All the players of the industry become more efficient and start competing on the same parameters as they benchmark with each other. The profitability of the industry goes down as the companies reduce price to attract customers and spend money on new technologies and benchmarking. The extra value generated due to improved operational efficiency is captured by customers and suppliers of technologies and equipments, and not by the companies themselves.

Strategic positions emerge from three separate sources which are not mutually exclusive and can often overlap. First, positioning can be based on producing only a subset of the industry's products or services. This may be called variety-based positioning. Jiffy Lube International specializes in automotive lubricants and does not offer other car repair or maintenance services. It is able to provide faster service at a lower cost. Customers divide their purchases and buy oil change from the focused competitor and other services from a different provider.

A second basis for positioning is that of serving most or all the needs of a particular group of customers. This may be called need-based positioning. It arises when there are groups of customers with differing needs, and when a tailored set of tasks can serve the needs of a particular group. But differences in needs will not translate into meaningful positions unless the best set of tasks to satisfy them are different from the set of tasks needed to serve other groups. Bessemer Trust Company targets families with a minimum of $5 million in investable assets. It assigns one sophisticated accounts officer for every 14 families and offers a wide range of services to its clients. In contrast, Citibank's private bank serves clients with minimum assets of $250,000 and it appoints one accounts manager for 125 clients, who works primarily as a lender.

The third basis of positioning is that of segmenting customers who are accessible in different ways. Although their needs are similar to those of other customers, the best configuration of tasks to reach them is different. Access can be a function of geography or scale or anything else that requires a different set of tasks to reach customers in the best way. Rural versus urban-based customers are one example of access driving differences in tasks.

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Whatever the basis, positioning requires a tailored set of tasks. Strategic positioning is the creation of a unique and valuable position, involving a different set of tasks. The essence of strategic positioning is to choose tasks that are different from rivals. In choosing the set of tasks, a company will have to make trade-offs because some of the tasks that it could choose are incompatible. An airline can choose to serve meals but the result will be higher costs and slow turnaround time at the gate. Different positions require different product configurations, different equipments, different employee behaviour, different skills and different management systems. When a company fails to make trade-offs, it will employ the same resources for serving different levels of need. This is wasteful. Value is destroyed when an activity is overdesigned or underdesigned for its use. If a salesman is capable of providing high level of assistance to one customer and none to the other, the salesman's talent would be wasted on the second customer. Moreover, productivity can improve by limiting the variation of an activity. By providing a high level of assistance all the time, the salesperson can achieve efficiencies of learning and scale. By clearly choosing to compete in one way and not the other, management makes organizational priorities clear and employees can take appropriate day-to-day operating decisions. Making trade-offs also helps in providing consistent image to customers. It decides to serve its target customers in one way and scrupulously keeps away from other customers and other ways of serving.

Companies dangerously believe that they can avoid making trade-offs. They believe that they can provide high quality products and lot of associated services to customers at a low price. They cannot. This may be possible at a stage when many company operations are inefficient and it is possible to make improvements on all fronts simultaneously. Therefore, when there is massive cost mismanagement and poor quality, it is possible to make improvements in cost and quality simultaneously. But when such inefficiencies are eliminated, it is not possible to reduce cost and improve quality simultaneously. The essence of strategic positioning is choosing tasks which the company will not do. A company has to categorically choose the tasks it will do and the ones which it will not do, depending on the position it has chosen.

These tasks should fit with each other and reinforce each other. Every activity matters. Southwest's rapid gate turnaround is a result of well-paid ground crews, no meals, no seat assignment and no interline baggage transfers. It selects routes and airports in a manner that can avoid congestion that introduce delays. The company's strict limits on the type and length of routes make standardized aircraft possible. Every Southwest aircraft is a Boeing 737. Southwest's tasks complement one another in ways that create real economic value. One activity's cost is lowered because of the way other tasks are performed. One activity's value to customers is enhanced by other tasks of a company.

It is harder for a competitor to match an array of interlocked tasks than to merely imitate a particular salesforce approach, match a process technology, or replicate a set of product features. Positions built on systems of tasks are far more sustainable than those built on individual tasks. The more a company's positioning rests on activity

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systems with second-order and third-order fit, the more sustainable its advantage will be. It is difficult to untangle such systems from outside and therefore hard to imitate. A competitor seeking to match an activity system gains little by imitating only some tasks and not matching the whole. The performance of such a competitor can even decline.

Strategic positions should have a horizon of a decade or more. Continuity fosters improvement in individual tasks and the fit across individual tasks, which helps in building unique capabilities tailored to its strategy. Frequent shifts in positioning are costly. A company must reconfigure individual tasks and also must realign entire systems after each shift in the strategic position.

Pursuit of growth is likely to dilute the strategic position. Trade-offs and limits appear to constrain growth. Serving one group of customers and excluding others places a limit on revenue growth. Strategies emphasizing low prices result in lost sales with customers sensitive to features or service. Differentiation loses sales to price-sensitive customers. Companies are constantly tempted to take incremental steps that surpass those limits but such steps blur a company's strategic position. Eventually, pressures to grow, or apparent saturation of the target market lead managers to broaden the position by extending product lines, adding new features, imitating competitors, matching processes and making acquisitions. Compromises and inconsistencies in the pursuit of growth erode competitive advantage. Companies fail to make choices as they try to serve wider constituencies.

Companies seeking growth should create stand-alone units, each with its own brand name and tailored tasks. Each unit must have a unique strategic positioning.

4.2.3 Criteria for Successful Positioning

Ries and Trout suggest that marketers are involved in a battle for minds of target customers. Successful positioning is creating favourable connotations in the minds of customers. Mercedes is associated with sophistication, prestige, world class German engineering and class round the world. McDonald's is associated with cleanliness, consistency of product, fast service and value for money. These add up to a differential advantage in the minds of target consumers.

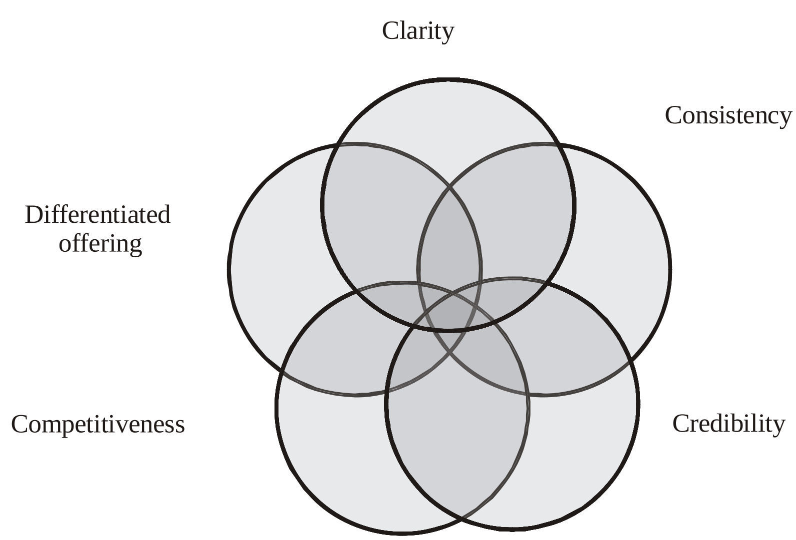

Fig. 4.1 *Successful Positioning*

1. Clarity

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The positioning idea must be clear in terms of both target market and differential advantage. The target market should be clearly demarcated and identifiable in terms of demographic or geographic parameters, or a combination of both. Each target market of the company should be different from the other. The target market should be clearly defined in terms of being served by a distinct value proposition. The value proposition should be clearly communicated.

Most companies do not clearly communicate the corresponding value proposition because they also want their offerings to be acceptable to customers other than those in their target market. They feel that defining value propositions narrowly will restrict their market.

Sometimes companies may not have researched their target markets well enough to know their requirements. So the value proposition that they communicate and deliver is not suitable for the intended market.

The value proposition is communicated mostly through advertising. Advertising agencies are responsible for communicating the value proposition. Though the company briefs the agency, a third party can never completely understand the subtle elements embedded in the value proposition. Therefore, advertising may do a poor job of communicating the value proposition. Advertising, in an effort to be more creative, tries to create images, stories, jingles and these cannot truly convey or represent the value proposition. In fact, the more 'creative' the advertisement, the more likely it is to deviate from its intended goals of effective communication of conveying the value proposition to the intended target market.

2. Consistency

Confusion will arise if changes in positioning planks occur frequently. For instance, if a company positions on quality of service in one year, and then next year it changes its positioning to superior product performance, the consumer would not know what to expect from the offering of the company. Customers who were attracted to the previous positioning of the company now desert it. New customers do not find the new positioning of the company credible, as their image of the company being something other than what it is claiming to become, persists.

A company which changes its positioning planks frequently will leave customers confused about its real identity. Customers will not know what the company stands for. A company has to stick to a positioning plank, for a reasonable length of time so that the new image sinks in with customers. A company feels that all that a new positioning requires is an ad campaign posturing the new status. But positioning is just an external manifestation of what the company really is. So if a company changes its positioning plank it has to transform itself to become true to its new positioning. No company can transform itself completely so frequently. And if the company has not been able to align itself with its new positioning, customers will not get what they have been promised in the new positioning plank.

But consistency does not mean permanence. A company may change its initial positioning either because customers demand different value proposition, so it has to be different now, or because the company may have acquired new resources enabling it to be something else.

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3. Credibility

The differential advantage must be credible to customers. Credibility means believability and trustworthiness. Positioning is a promise made to the customer. The customer must believe that the company will deliver what it promises, and is capable of delivering the promise. Through advertisement and its public relation efforts, the company should be able to demonstrate its capability to deliver the promised utility. Every time a customer buys the company's product, he should have got what the company promised in its positioning strategy. Through word of mouth, the company develops a reputation for delivering its promised value. Credibility built through personal use of the product and word of mouth are stronger than credibility built through advertising and public relations.

4. Competitiveness

The differential advantage should offer something of value to the customer which the competition is failing to supply. The company should be able to develop or acquire distinct set of resources and processes. This unique set of resources and processes are used to deliver a distinctive value which no other company can possibly deliver, since they lack the set of resources and processes used to create it. Therefore the key to be able to provide differential value to customers is to possess a distinctive set of resources and processes which competition does not possess.

5. Importance of positioning

Positioning is not an abstract art. It is important for firms to understand and implement a few fundamental dos and don'ts to attain successful positioning.

- The positioning of a corporate or a brand should be clear and precise. The unique proposition made to the customer should be brief and catchy. Instead of overloading customers with a maze of complicated information, companies should be precise and concise.
- A company cannot hope to reach out to the entire market with one positioning appeal. The target audience should be determined, and the positioning appeal and message should be tailored to it.
- The product or service should be set apart from what competitors are offering. If the product or service being offered by the company is not better than or different from that of the competition, why should customers buy it? It is extremely important to state that one compelling reason why the company's product is the best for the target customers.
- The positioning statement should clearly reflect what the organization stands for, and what it is about. Its values, intent and offering should be clear from the positioning statement.
- Positioning should address the felt needs of the customer. Customers should be told as to how the company's product will fulfil these needs. Such benefits should be stressed in the positioning statement. These needs should be specific, measurable and something that customers really want. Instead of being vague that the company offers a lot of variety or selection, a company should say that it has 25 different models and five colours in each model.

- Positioning appeals should be specific. One unique value proposition that customers desire the most must be present in the product.
- The company should also be able to deliver what it promises to the customer as its success depends on its credibility.

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4.2.4 Dilution of Positioning

An effective positioning ties a company's product to a segment. The product is suitable for the customers of the target market but is singularly unsuitable for customers of other segments. Unless there is lack of effective competition, a strongly positioned product would appeal only to a limited number of customers because it will have the benefits that the target market requires in an exaggerated form, while other benefits would hardly be provided. So customers desiring benefits other than what the target market requires will not value the product. In an ideal situation, there would be a plethora of strongly positioned products, each serving a small set of customers.

Most companies want large number of customers for their products. To become attractive to a larger segment or multiple segments, the company provides an average level of all the benefits that the customers of the large segment or multiple segments desire from the product. This average product is not particularly suitable for any set of customers, but it is also not very unsuitable for most of the customers. In the absence of a product which will fit in with their requirements better, disparate sets of customers buy the product. By diluting its positioning, the company has been able to sell to larger number of customers. But a more narrowly positioned company can come and attract sets of customers who find its product more suitable than the average product. More of such focused companies will come, eating into the market of the average product.

It is enticing to be able to serve a large or multiple segments with one product. But it turns into a dangerous strategy when other companies are willing to serve very small segments. When such focused companies spawn the market, the average product which was supposed to mean something to every customer will not mean anything to any customer. It is wise to be, and remain focused.

4.2.5 Position Mapping

Using a positioning map you can observe through your customers' eyes, how your product matches up to with all its rivals in a market. A positioning map may be drawn cheaply, quickly and objectively; it does not involve any costly, time-consuming consumer surveys or subjective estimates of the quality of your product and the weaknesses of the products of your competitors. Creating a positioning map involves the following four steps:

- **Step 1:** First of all, you need to define your market to include everything your customers might consider to be your product's competitors or substitutes.
- **Step 2:** Now you need to follow or track the price your customers actually pay.
- **Step 3:** You have to identify what your customers think is the primary benefit of your product.
- **Step 4:** Finally, you need to draw the map by plotting on a graph the position of every product in the market you have chosen in accordance with its price and

Check Your Progress

1. What are the three elements of positioning a product?
2. List the three sources of strategic positioning.
3. Name the important aspects of successful positioning.
4. Define dilution of positioning.

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Branding: Branding is the process by which companies distinguish their product offerings from competition

its level of fundamental benefits, and draw a line that runs through the middle of the points. This gives you a picture of the competitive setting of your market.

Figure 4.2 shows one possible way in which the chocolate bar position could be mapped against two dimensions — quality and price.

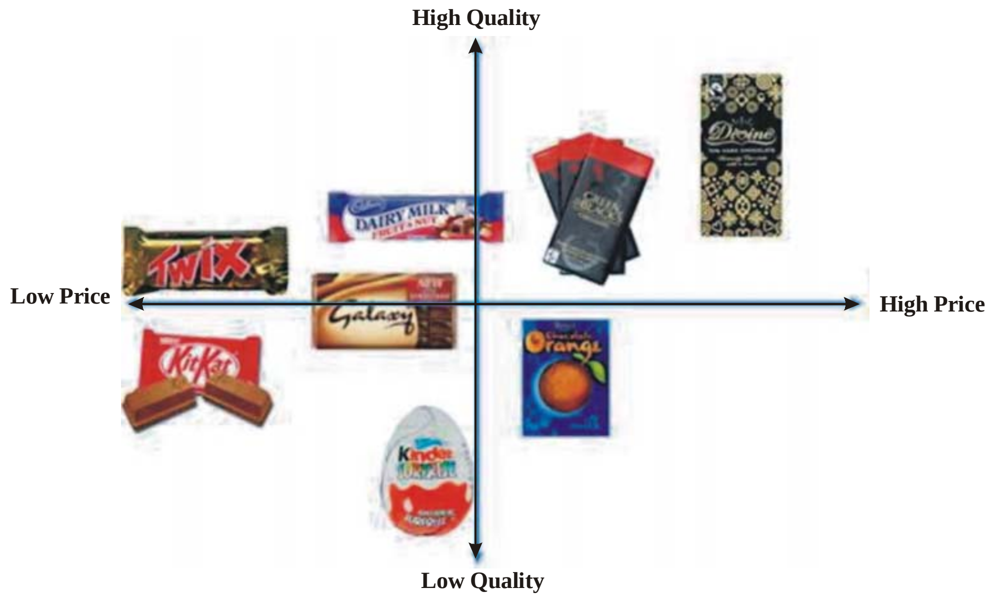

Fig. 4.2 *Position Mapping*

4.3 BRANDING: AN OVERVIEW

Branding is the process by which companies distinguish their product offerings from competition. Marketers develop their products into brands which help to create a unique position in the minds of customers. A brand is created by developing a distinctive name, packaging and design, and raising customer expectations about the offering. By developing an individual identity, branding permits customers to develop associations like prestige and economy with the brand. Buying a brand reduces the risk of the customer and eases his purchase decisions. Branding shapes customer perceptions about the product. Brand superiority leads to high sales, the ability to charge price premiums, and the capability to resist distribution power.

4.3.1 Understanding a Brand

A brand is both abstract and real. At one level, it represents customer expectations, and at another, it encapsulates whatever the company has to offer through the brand.

- A brand is not a name, term, sign, symbol, or any combination of these. A brand is an assurance or guarantee that the product will perform as the customer thinks it should, which means that the brand has already shaped the expectations of the customer. The brand embodies some values that remain consistent over a period of time. The customer expects these values to be delivered to him during each encounter he has with the brand. Therefore, the company must realize that building a brand is not a short-term activity. Consistency is the most valued quality of a brand. It takes a long time to build a consistent brand image and it is

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extremely hard to sustain this image. After a period of consistent performance, the brand is in the customer's memory as an accumulation of associations. These associations are summations of the customer's interactions with the brand over a period of time.

- Branding should be an indispensable activity of any organization. However, it is imperative for organizations to remember that branding is only an outcome of various other activities. A brand is an external manifestation of what happens inside the organization. It is important to align all activities in an organization, and the behaviour of all employees towards the values embodied in the brand. Many companies believe that branding only comprises the product and communication. Hence, it is also believed that branding is the responsibility of the marketing department only. It is the duty of every department and each individual to shape the perception of the customers in sync with the desired brand values. Every department and individual of the company has to identify as to how he will contribute to shaping the perceptions of the customers. Branding is too important to be the sole prerogative of the marketing department.
- The sole purpose of branding is to create differentiation, and the brand name by itself cannot act as a differentiator. The brand as a label merely acts as a distinguished name to convey this differentiation. Therefore, the brand is the culmination of all activities of an organization. The brand name conveys the set of values and attributes embodied in the brand. As soon as a customer hears the brand name, the attributes and values of the brand should conjure before his eyes like a motion picture. This can only happen if the brand has lived its values for a long time. Strong brands just cannot be created overnight. Human behaviour is inherently distrustful. A brand has to live up to its promises consistently before customers start taking its values and attributes for granted.
- The strength of the brand is directly proportional to the expectations of the customer. Therefore, the first task of branding should be to raise customer expectations about the product. The communication efforts of the company do raise expectations and thus contribute to branding, but personal usage of the product by the customer or recommendations from a personal source are decisive sources for raising expectations. It means that, ensuring that the product performs well is the most important branding exercise. But companies have to exercise some caution. In an effort to raise expectations about the brand, a company may hype the brand in its communications effort and customers can form exaggerated expectations from the brand. If the brand does not deliver the heightened expectations of the customers, they are disappointed and they can tarnish the image of the brand by talking badly about it. Such a brand will find it difficult to be accepted until the market forgets the fiasco. Any renewed bout of advertising will only enhance the cynicism of the customers towards the brand. The company should wait for a considerable period of time before renewing the effort to arouse expectations among customers again.

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But if the company is too conservative in making claims, customer expectations would not be aroused and they will not buy the brand. It is a delicate balance but companies will have to manage it. The communication efforts of the company should arouse just enough expectations among customers that they become interested in buying the brand. And when the brand delivers more than what the customers expected, they generate positive word-of-mouth publicity, thus starting the spiral of 'moderate expectation-superior delivery' which will ultimately create a strong brand.

- One interaction alone cannot build or tarnish the brand image, unless it is particularly strong. The whole idea of giving consistent performance is that if once in a while the brand does not perform up to expectations, customers do not start feeling negative about the brand. Customers should be willing to give benefit of doubt to the brand if its performance slips once in a while. It is very important that a brand owns up to such onetime lackluster performance and promises to make amends. A brand which chooses to remain in a state of denial or ignorance about its bad performance gives the signal that the brand no more cares about living the values embodied in the brand, and nor does it care about customers' sentiments. It is usually useless arguing with customers. Customers will interpret a brand's performance in their own way and the company's interpretation of the situation has no relevance to the customer. Instead of arguing against customer's interpretations of the brand's performance, a company should try to understand the process by which the customer arrived at the interpretation. This would often include an impartial assessment of the brand's performance and the customer's existential situation in which he was using the brand. A customer should never be allowed to have a perception about the brand which is different from the perception that the company wants its customers to have. A company's first task is to manage the perceptions of customers about the brand and not let customers develop their own perception. Every activity of the company should be assessed in terms of its influence on customer's perception about the brand.

4.3.2 Brand Attributes

A successful brand has several essential attributes. The presence of most of these attributes can guarantee long term eminence of the brand.

The world's strongest brands have the following attributes:

- **The brand provides the benefits that customers desire:** Customers buy a brand because its attributes, its image, its service and many other tangible and intangible factors create an attractive whole. Sometimes customers cannot even verbalize what they actually want. They feel the brand is just right for them. Starbucks gives a complete experience to the customers through the aroma of the beans, the rich taste of the coffee, the product displays, the attractive artwork on the walls, the contemporary music playing in the background and the cozy, clean feel of the table.
- **The brand stays relevant:** Brand equity is tied to both the actual quality of the product or service and to various intangible factors. Those intangibles

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include the imagery related to the type of person who uses the brand, to the type of situations in which the brand is used, to the type of personality the brand portrays (sincere, exciting, competent, rugged), to the type of feeling the brand tries to elicit in customers (purposeful, warm) and to the type of relationship it seeks to build with its customers (committed, casual, seasonal). Strong brands stay on the leading edge in the product arena and tweak their intangibles to fit their times. Gillette always employs superior technology and its long-running ads, 'The best a man can get' are tweaked to reflect contemporary times. Besides advertising, customers' perceptions of a company as a whole and its role in the society affect a brand's strength as well. Their advocating some social cause helps.

- **The pricing strategy is based on consumers' perception of value:** The company has to arrive at the right blend of product quality, design, features and price. Value pricing should not be adopted at the expense of essential brand-building activities. There is nothing intrinsically right or wrong with low or high price. Whatever price the company decides to charge, it should be able to demonstrate that customers are deriving value from it in proportion to the price they are paying.
- **The brand is properly positioned:** Successful brands keep up with competitors by creating points of parity in those areas where competitors are trying to find an advantage, while at the same time creating points of difference to achieve advantages over competitors in some other areas. They are similar to and also different from competing brands in certain reliably identifiable ways. Sony holds clear advantages in product superiority and matching competitors' level of prices. The task is much more difficult when a brand spans many product categories. The mix of points of parity and points of difference that works for a brand in one category may not be right for the same brand in another category.
- **The brand is consistent:** Maintaining a strong brand means striking the right balance between continuity in marketing activities and the kind of changes needed to stay relevant. The brand's image should not get muddled by a spate of marketing efforts that confuse customers by sending conflicting messages.
- **The brand portfolio and hierarchy should make sense:** Companies create and maintain different brands for different market segments. Single product lines are often sold under different brand names, and different brand names within a company hold different powers. Each brand should have a distinct image and its own source of equity. Brands at each level of the hierarchy should contribute to the overall equity of the portfolio through their individual ability to make consumers aware of the various products and foster favourable associations with them. Each brand should have its own boundaries. It is dangerous to cover too much ground with one brand or to overlap two brands in the same portfolio.
- **The brand makes use of and coordinates a full repertoire of marketing activities to build equity:** Strong brands mix and match trademarked

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marketing elements like logos, symbols and signage to perform brand related functions like enhancing or reinforcing consumer awareness of the brand or its image and to protect the brand both competitively and legally. Marketing activities play specific roles in building brand equity. Advertising is used to create consumer demand for a given product. Trade promotions are designed to push products through distribution. A brand should make use of all its resources and should ensure that the essence of the brand is the same in all its activities.

- **Brand managers understand what the brand means to consumers:** Managers of strong brands understand the totality of their brand's image, i.e., perceptions, beliefs, attitudes and behaviour customers associate with their brand. If it is clear what customers like and do not like about a brand, and what core associations are linked to the brand, then it will be clear whether any given action will synchronize with the brand or it will create friction. Bic was very successful with its non-refillable ball-point pens, disposable cigarette lighters and disposable razors, but when it used the same strategy for marketing perfumes, the effort was unsuccessful. Bic had developed a utilitarian and impersonal image with its earlier offers. But this image did not gel with marketing of perfumes which is tied to customers' emotions. In contrast Gillette has been protective of the name carried by its razors, blades and associated toiletries. The company's electric razors use the Braun name and its oral care products are marketed under the Oral B name.
- **The brand is given proper support and that support is sustained over the long run:** A firm foundation for brand equity requires that customers have the proper depth and breadth of awareness and strong, favourable and unique associations with the brand in their memory. Brand managers should not resort to shortcuts and should follow all the brand building exercises starting from those which will achieve the necessary level of brand awareness to those which will build an image of the brand. It is also necessary that there is no complacency once the brand has become strong. The company should maintain a level of brand building activities, especially a decent level of advertising, for all times.
- **The company monitors various sources of brand equity:** A company should periodically conduct audit of its brands. A brand audit is an exercise designed to assess the health of its brand. It consists of detailed internal description of exactly how the brand has been marketed and a thorough external investigation, through focus groups and other consumer research, of exactly what the brand does and could mean to consumers. Finding out customers' perceptions and beliefs uncovers the true meaning of a brand and reveals where corporate and consumer views conflict. It shows the company where they have to refine or redirect their branding efforts.

Building a strong brand involves maximizing all these characteristics. But in practice it is difficult, because in many cases when a company focuses on improving one, others may suffer. The idea should be to know the brand's performance on all the attributes and then to evaluate any marketing activity from all possible perspectives.

4.3.3 Types of Brands

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Traditionally, manufacturers branded their products and sold them to customers by using the distribution channel. Wholesalers, distributors and retailers sold only the manufacturers' brands. Manufacturers were thus able to exert control over these distribution channel members. In the past few decades, some distribution channel members, particularly retailers, have started selling their own brands, called private labels. These brands are usually of comparable quality with the manufacturers' brands, though they are priced lower. These private labels are given more prominence in the retail stores, thus enabling the transfer of power from manufacturers to retailers.

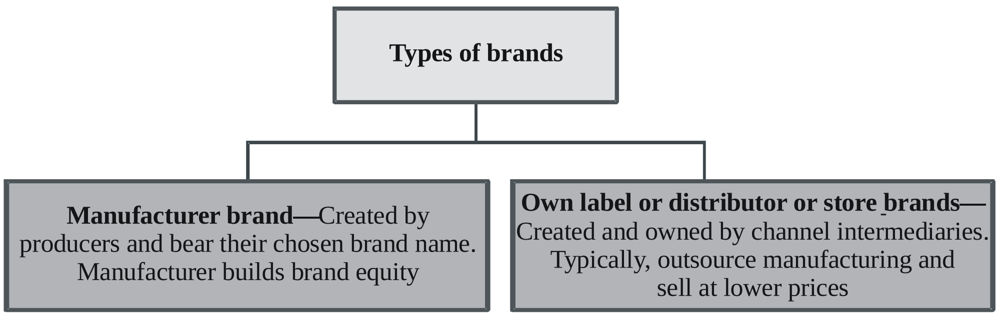

Fig. 4.3 *Types of Brands*

1. Manufacturer brands

They are created by producers and bear their chosen brand name. The responsibility for marketing the brand lies with the producer. Most manufacturer brands are supported by massive advertising budgets. They also have to manage long distribution channels to reach the final customers. The producer is an expert in designing and manufacturing the product. Though the producers may eventually become great marketing organizations, like Proctor & Gamble and Unilever have, their main advantages lie in technologies and processes underlying the product. A manufacturer brand is likely to be more advanced and may have more innovative features than other brands in its category.

Manufacturer brands: They are created by producers and bear their chosen brand name

2. Own label or distributor or store brands

They are created and owned by channel intermediaries. Most of these brands are owned by big and powerful retailers. The retailers do not manufacture these brands and may not have any knowledge about the underlying technologies and processes of the product. Retailers almost completely outsource manufacturing. Since retailers are in contact with customers, they can give very important information about the preferences of customers, which the manufacturers of distributor brands can incorporate in the products they manufacture for the retailer.

Store brands: They are created and owned by channel intermediaries

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The prestige and power of the brand is dependent on the brand equity of the retail store. The retail store is the main brand. The retailer gives preference to his brands in placement of products on the shelves. The retailer does not need to promote the brand very extensively and mostly resorts to in-store promotions and promotions in the local media. Since the retailer does not incur much distribution and promotion costs, the retailer brands can be sold cheaper than comparable manufacturer brands.

For a very long time, customers believed that retailer brands do not match the quality levels of the manufacturer brands. This had some linkage to the lower prices at which retail brands were sold as compared to manufacturer brands in the same product categories. Retailers worked on the quality of their brands to change customers' perceptions. Now even premium brands in some categories are retailer brands. Instead of considering the business of own label brands ancillary to the main business of retailing, some retail chains see this as an important part of their business and a significant contributor to their revenues. Customer perceptions about retailer brands have changed to the extent that they find the prices of the manufacture brands too high compared to those of retailer brands, whereas they find the quality of the two to be comparable. Customers have become sophisticated enough to understand that the reason for lower prices of retailer brands is the lower cost incurred by retail chains in distribution and promotion and not because they are of lower quality.

The power of low price of own label brands has forced many producer brands to introduce so called fighter brands or their own low price alternatives to retailers' brands. A major decision that producers have to face is whether to agree to supply own label products for retailers. The danger is that should customers find out, they may believe that there is no difference between manufacturers' brand and its equivalent which is being produced by the manufacturer, but being sold under the brand name of the retailer. For some producers supplying own label goods may be a means of filling excess capacity and generating extra income. But manufacturers should view manufacturing for distributor brands as a more strategic decision. They should see it as an opportunity for cementing their relationship with retailers. They can choose to manufacture those retailer brands which are in alignment with their operations strategy and from whose manufacturing they can learn something which they can apply in making their own brands better. If they do not manufacture, someone else will, but by being in the loop of distributor brands, they will have a better idea of the strategies being employed by the retailers and how they can counter it.

4.3.4 Product Branding and Brand Positioning Strategies

Core benefits derive from core products. Toothpastes clean teeth. But all toothpastes do that. Branding allows marketers to create added values that distinguish one brand from another. A brand is created by augmenting a core product with values that distinguish it from competition. Brand building involves deep understanding of both functional and emotional values that customers use when choosing between brands.

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Brands are built by a combination of seven factors:

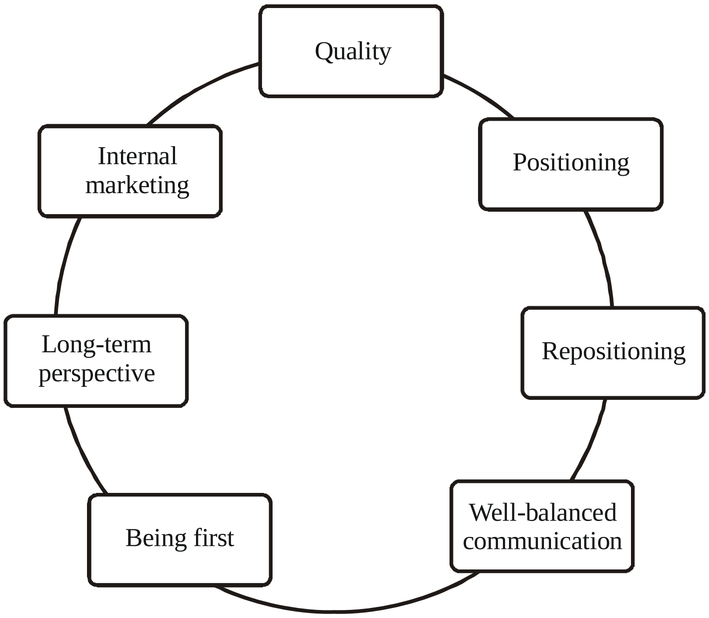

Fig. 4.4 *Building a Brand*

1. Quality

Building quality into the core product is vital. The core product must achieve the basic functional requirements expected of it. Higher quality brands achieve greater market share and higher profitability than their inferior rivals.

It is important to understand as to how customers judge the quality of a product. Most customers do not do detailed evaluations of the performance of the product when they buy. They categorize a product to be of high quality when they find it performing well on the parameters that are important to them or when the product performs well on the parameters that they understand well. Customers rely on cues to determine the quality of the product. A company should provide exaggerated performance in those product attributes which customers use to judge the quality of the product.

2. Positioning

Creating a unique position in the marketplace involves the careful choice of target market and establishing a clear differential advantage in the minds of these customers. This can be achieved through brand name and image, service, design, guarantees, packaging and delivery. Unique positioning will require a combination of these factors. Viewing markets in novel ways can create unique positioning concepts.

Positioning is an opportunity for the company to communicate to customers as to what it strives to achieve for them, i.e., functional needs, and what it wants to mean to them, i.e., emotional needs. Unfortunately, customers' functional and emotional needs vary widely and one positioning plank will not be attractive to the whole market. A brand which wants to achieve very specific things for its customers and wants to mean just a particular thing for them will only have a small segment of customers who will be attracted to the brand. The rest of the customers would not find the brand

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useful. It is always tempting to dilute a brand's positioning to make it attractive to a large segment. A company should resist this temptation. A brand focused on the functional and emotional needs of a small set of customers will be more successful in fetching a premium price as it will be greatly valued by its target market. A focused brand is more likely to enhance its value proposition than a less focused brand because the focused brand knows very precisely what it has to achieve for its target market, and puts its resources to achieve it. A less focussed brand will dissipate its resources in trying to serve varied needs of too wide a segment.

3. Repositioning

As markets change and new opportunities arise, repositioning is needed to build brands from their initial base. A successful brand may be rendered irrelevant if needs and circumstances of customers in its target market change. If this change is gradual and perceptible, the company can change its offerings and communications gradually and manage to keep itself acceptable to the target market. But if the change is sudden and the company finds itself out of tune with its market all of a sudden, the company has two options. It may start targeting a different market where its positioning plank is still relevant, or changes its offerings and communications drastically to make itself relevant to its original target market again.

But companies have been guilty of changing their positioning planks unnecessarily and far too frequently. A decision about the positioning of brand should be strictly dependent on the choice criteria of customers and the capability of the company. A company should arrive at a positioning strategy after conducting thorough research of customers' choice criteria and an audit of its resources and capabilities. A positioning plank is a reflection of the company's ability to serve a single or few elements of the customers' choice criteria. The capability of a company and choice criteria of customers do not change as frequently as companies change their positioning. A company which repositions its brand frequently confuses its customers about what it is really capable of achieving and being. The brand loses its credibility among customers in the target market.

4. Well-balanced communication

Brand positioning shapes customer perceptions. A brand needs to communicate its positioning to its target market. Awareness needs to be built, brand personality projected and favourable attitudes built and reinforced among customers. The brand theme needs to be reinforced by advertising, salespeople, sponsorship, public relations and sales promotion campaigns.

Companies have often relied on advertising in the mass media to communicate brand positioning. While some amount of advertising may be necessary to get the target market's initial attention, advertising in the mass media is too impersonal and ephemeral for building a relationship between the brand and its customers. The purpose of brand communication is to make customers feel attached to the brand. The ultimate purpose is that customers should start considering the brand to be an important part of their being. For such an attachment to develop, customers have to participate physically and emotionally in the activities and celebrations of the brand. The company has to provide opportunities for such participation to customers. Sponsoring an event about which customers feel very strongly will move the brand closer to the customer. Joint participation of customers and the brand in some social cause also cements the relationship between the two. Public relations campaign celebrating the contribution and successes of customers rather than extolling the company's achievement will make customers feel proud of their association with the brand. Whenever customers come in contact with the company, the contact employees should be living the brand values during their interaction with the customers. The idea is that the company should be relentless in communicating its brand values to its target market and never miss an opportunity to impress customers about what it stands for and what it can do for them.

5. Being first

Pioneer brands are more likely to be successful than follower brands. Being first gives a brand the opportunity to create a clear position in the minds of target customers before competition enters the market. It gives the pioneer the opportunity to build customer and distributor loyalty. But it requires sustained marketing effort and the strength to withstand competitor attacks.

The pioneer gets an opportunity to shape expectations of the customers about the product category. If the pioneer is uncontested in the market for a considerable period of time, the pioneer's product becomes the benchmark against which products of late entrants will be evaluated. The pioneer gets time to know the needs of the customers and develop capabilities to serve those needs. Most pioneers cannot resist the idea of serving the whole market and make the mistake of targeting the whole market by very diffused positioning. Pioneers serve the whole market successfully with a compromise product for some time, but late entrants are able to discover segments with needs that the compromise product is not serving. Late entrants carve out segments from these unmet customer needs. Late entrants change the structure of the market from one big market with supposedly uniform needs to a market consisting of many segments, each with a different set of needs. The pioneer may find that its compromise product is not particularly suitable for any segment and the mass market in which the compromise product was acceptable is no more there.

Pioneers should resist the temptation of serving the whole market with a common product. They should focus on a particular segment of the market in very early phase of market development, or identify segments and serve them with different products positioned differently from each other. It is suicidal for pioneers to allow late entrants to discover segments in the market.

6. Long-term perspective

Generating awareness, communicating brand values and building customer loyalty takes many years. There must be a consistent, high level of brand investment. If investment is cut, sales are unlikely to fall substantially in the short term, but it will erode brand equity in terms of awareness levels, brand associations, intentions to buy, etc.

Customers fondly remember brands which may not have sold for years. In fact, some of the customers refuse to believe that the brand is not selling. Customers grow up and live with their favourite brands and though they may not be able to verbalize their relationship with their favourite brands, they are always there in their memory. Companies should remember that there is nothing short-term about a brand, because the strength of a brand is dependent upon the strength of association between the brand and its customers. This association or any association for that matter takes time to build. The brand has to establish credibility and trust with

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consistent performance and behaviour before customers start associating with it. And companies have to ensure that this trust is not breached. Therefore a company has to invest in the brand building process for a long time. But the payoff is also for a long time. Long after the company has stopped promoting the brand, customers continue to buy it. Investment in a brand never goes waste. If a company has some extra resources about which it is not sure where to invest, it should go ahead and invest them in strengthening its brand.

7. Internal marketing

Many brands are corporate brands, i.e., the marketing focus is on building the company brand. Most service brands are marketed as corporate brands. Training and communicating with internal staff is crucial because service companies rely on personal contact between service providers and service users. Brand values and strategies must be communicated to the staff.

Whenever customers come in contact with the company, they should experience the values embodied in the brand being played out in real. For such an experience to take place, employees should understand as to what type of interaction will reinforce the customers' convictions in the brand. All employees should know what customers expect from the brand and try to fulfil those expectations. All employees should be explicitly told about their roles in the brand building exercise and they should be expected to perform these roles.

4.3.5 Building a Corporate Brand

The traditional branding idea is that each product needs a unique identity. Ideally a brand should become so strong that it should become a synonym for the product itself. Companies like Procter & Gamble and Unilever have followed the strategy of creating and nurturing separate brands for each of their businesses.

Some other companies like Microsoft and Sony promote a corporate brand instead of branding individual products. The corporate brand is a single umbrella image that permeates all the businesses of the company. But corporate branding is not simply designing a new logo and attaching it to every product. There is more to corporate branding than coining an attractive slogan, tacking it on a wide range of products, and hoping that it will mean something to customers and employees.

To create a corporate brand, the company has to take concerted steps to align vision, culture and image of the company. Vision is the top management's aspirations for the company. Culture is the organization's values, behaviours and attitudes, i.e., the way employees feel about the company. Image is the outside world's impression of the company. This outside world includes all stakeholders of the company like customers, shareholders, the media, the general public and so on. The process of alignment will start with exposing gaps between vision, culture and image.

- The misalignment between vision and culture develops when the management moves the company in a strategic direction that employees do not understand or support. The gap usually emerges when senior management establishes a vision that is too ambitious for the organization to implement. In such situations there is gap between reality and rhetoric. Management blames employees for resisting change and employees are suspicious and cynical. Such scapegoat finding and mistrust will wither the corporate brand from within. Three issues need to be addressed: (1) Does the company practice the values it promotes?

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The downsizing that took place at IBM in spite of the company's promises of lifelong employment created anxiety, depression and fear among its employees. In such situations employees will not believe that the company will abide by the promises made to the customers via the values of the corporate brand. They will not feel the pressure to live by the values of the corporate brand. (2) Does the company's vision inspire all subcultures? The engineers in R&D will have different set of values and priorities than those held by the marketing department. An organizational value like 'customer care' should be shared across the organization. The value 'customer care' should guide the work of accounts department as much as it does the marketing department. If a common value does not permeate all the departments, the customer will not get what has been promised by the corporate brand. The brand's promises to customers can be fulfilled only by a concerted effort of all the departments of the company. (3) Are the vision and culture of the company sufficiently differentiated from those of competitors? The vision and culture is the DNA of the company, which helps in standing out from competition. The vision and culture will decide what the company will achieve for the customer. If the vision and culture of the company is not different from those of its competitors, customers will not encounter unique experiences with the company.

- The **image-culture gap** arises when customers are confused about what the company stands for. This happens when a company does not keep its promises. A company needs to compare what its employees are saying and what its customers and other stakeholders are saying. Following issues need to be addressed: (1) What images do stakeholders associate with the company? The images are both real and perceived and emanate from an individual's feelings, thoughts and opinions as well as from the facts of the company. The image of stakeholders can be different from what the company seeks to project. Stakeholders may discover that the culture of the company is different from the one that is needed if the company has to achieve the desired image. A company trying to project an image of being customer focused will be thwarted in its attempt if employees continue to treat customers as intrusions in their lives. Customers will easily see through the facade. (2) In what ways do employees and stakeholders interact? Advertising and public relations shape a company's image, but stakeholders' direct and personal encounters with the organization seal or destroy a company's image. Such interactions should be carefully planned and staged till the desired behaviour becomes intuitive. (3) Do employees care what stakeholders think of the company? The employees should feel hurt if important stakeholders, like customers, hold an opinion contrary to what they expect them to believe about the company. There is not much chance of an alignment between the image and culture of the company if employees are not concerned with what their customers think about them.

Image-culture gap: Image-culture gap arises when customers are confused about what the company stands for

- The most brilliant strategic vision will fail if it is not aligned with what customers want from the company. The following issues are important while addressing the image vision gap: (1) Who are the stakeholders? Many companies discover that their products reach a very different market than the one they are targeting. Nike saw itself as a high-performance athletic shoe company

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that attended only to the needs of top athletes. But half of Nike's sales were coming from people who were wearing Nike shoes as a substitute for casual shoes. Though such untargeted markets obviously find something attractive in a company's offerings, the company can cement its relationship with them by aligning its strategies more strongly with their interests. (2) What do stakeholders want from the company? After their discovered that its shoes were sold as substitutes for casual shoes, it produced a line of conventional casual shoes. But customers wanted the same shoes that their athletic heroes were wearing and rejected the new line. Companies have to probe deep to find customers' expectations and align their strategic vision with them. (3) Is the company effectively communicating its vision to its stakeholders? Customers are attracted to a company when the company's communications are able to create certain expectations in their minds. The expectations of the customers and the strategic vision of the company should align for a profitable relationship between them. The company should be able to clearly communicate as to what it wants to achieve for its customers.

4.4 BRAND IMAGE AND EQUITY

Brand image: Brand image is the existing perception of customers about a brand

Brand image is the existing perception of customers about a brand. It is a set of notions held about a particular brand. A brand's image depends on the way a specific brand is placed in the market. It conveys emotional value too.

Simply put, brand image is nothing but an organization's character. It is regarded as the observation of people external to the organization. The brand image includes the product's appeal, functionality, social status and the general perception.

It underlines an organization's mission and vision. A positive brand image would generally include the following things: a logo reflecting the company's image, a slogan stating the organization's motto in brief and brand identifier that support the key values.

Consumers develop a unique association with the brand. Brand image is formed on the basis of perceptions of associations of customers that the consumers have experienced about the brand. For example, Dettol soap is associated with hygiene and Dove with soft skin.

When consumers buy a product or a service, they consider the brand's image in the market and in the society. Brand images need be positive, and capable of producing an instant rapport with the customer. A company can make a positive impact about its brand by using brand communications, such as advertising, packaging, word-of-mouth publicity, etc.

Brand image also creates a unique character that differentiates it from the competitor. It consists of several attributes and benefits that the consumers have in their minds. The functional and mental connections with a brand comprise the attributes. They can be detailed or abstract. Benefits are the base on which customers make their buying decision. A brand image has three benefits: functional benefits, in which the product is better than its competitor. Emotional benefits means how a particular brand makes the customer feel at advantage. Rational benefits reflect why the consumers trust the particular brand more. The total assessment of a brand made by the consumers is called brand attributes.

Check Your Progress

5. What does branding means?
6. What are the two types of brands?
7. Name the factors that affect brand building.
8. Define corporate branding.

Brand image cannot be design. It happens automatically, depending on how the brand impacts the customers. Positive brand image boosts the brand value of an organization.

4.4.1 Brand Equity

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Brand equity: Brand equity is the value and power of the brand that determines its worth

A brand is an intangible asset for an organization. The concept of brand equity originated in order to measure the financial worth of this significant, yet intangible entity.

Brand equity is the value and power of the brand that determines its worth. It can be determined by measuring:

- The price premium that the brand charges over unbranded products
- The additional volume of sales generated by the brand as compared to other brands in the same category and/or segment
- The share prices that the company commands in the market (particularly if the brand name is the same as the corporate name, or customers can easily associate the performance of all the individual brands of the company with the financial performance of the corporate)
- Returns to shareholders
- The image of the brand on various parameters that are deemed important;
- The future earnings potential of the brand
- Or a combination of the above methods. Some methods of measuring brand equity involve the formulation of a multiplier by using a combination of the above methods. Such multipliers as brand strength or brand esteem can be determined by combining several variables to ultimately arrive at the brand equity

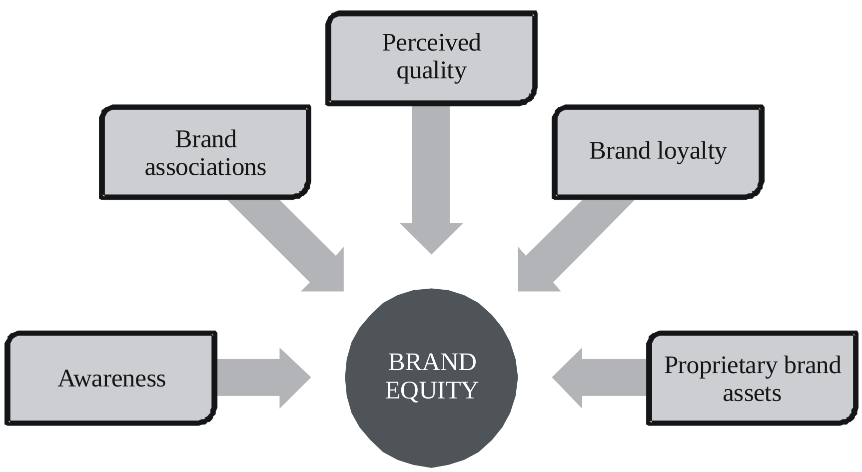

Fig. 4.5 *Elements of Brand Equity*

Brand equity comprises the following elements:

1. Awareness

Awareness of the brand name among target customers is the first step in the equity building process. Awareness essentially means that customers know about the existence of the brand and can also recall what category the brand is in. The lowest level of awareness is when the customer has to be reminded about the existence of the brand,

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and that it is being a part of a particular category. In aided recall, the customer can recognize the company's brand from among a list of brands in the category. In unaided recall, the customer himself mentions the company's brand. The highest level of awareness is when the first brand that the customer can recall upon the mention of the product category is the company's brand. This is called top-of-mind recall.

Awareness of the name acts as an anchor to which everything else about the brand is linked, much like the name of a person acting as an anchor for tying all associations about him. Building awareness involves making the brand visible to the relevant target audience by various promotional methods such as publicity, sponsorships, events, advertising, instigating word-of-mouth promotion, etc.

2. Brand associations

Anything that is connected to the customer's memory about the brand is an association. Customers form associations on the basis of quality perceptions, their interactions with employees and the organization, advertisements of the brand, price points at which the brand is sold, product categories that the brand is in, product displays in retail stores, publicity in various media, offerings of competitors, celebrity associations and from what others tell them about the brand. And this is not an exhaustive list.

Consumers add to brand associations with each and every interaction they have with the brand. All these associations are not formed only due to their interactions with the organization. Many associations are formed from what others tell customers about the brand. It is absolutely crucial that the company plan each interaction with every customer and relevant others (media, shareholders, employees, government) so as to eliminate even the slightest chances of any negative associations that can emanate from any of these sources.

Associations contribute to brand equity, as strong, positive associations induce brand purchases, besides generating good word-of-mouth publicity. Such associations can also help the company in leveraging the brand, create strong barriers to entry for competitors, give trade leverage to the company and enable the company to achieve differential advantage.

3. Perceived quality

Perceived quality is also a brand association, though because of its significance, it is accorded a distinct status while studying brand equity. Perceived quality is the perception of the customer about the overall quality of a brand. In assessing quality, the customer takes into consideration the performance of the brand on parameters that are important to him, and makes a relative judgment about quality by assessing competitor's offerings as well. Therefore, quality is a perceptual entity, and consumer judgments about quality vary.

Quality perceptions influence pricing decisions of companies. Better quality products can be charged a price premium. Quality is one of the main reasons for consumer preference for a brand in any product category. Thus, superior perceived quality can also be used to position the brand.

4. Brand loyalty

A customer is brand loyal when he purchases one brand from among a set of alternatives consistently over a period of time. In the traditional sense, brand loyalty was always considered to be related to repetitive purchase behaviour. For some products, such as, purchasing a house or an automobile, repetitive purchase behaviour may not occur.

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In these situations, attitudinal brand loyalty, i.e., consumer feelings about the brand that was purchased, and their inclination to recommend the brand to others are measured. Brand loyalty is usually rated as the most important indicator of brand equity because loyalty develops post purchase and indicates a consistent patronage by a customer over a long period of time whereas all other elements of brand equity may or may not translate into purchases.

Brand loyal customers form the bedrock of a company. Higher loyalty levels lead to a decrease in marketing expenditure as such customers act as positive advocates for the brand. Besides, a company can introduce more products in its portfolio that are aimed at the same customers at less expenditure. It also acts as a potential barrier to entry for new players and gives time to the company to respond to competitive threats. The bargaining power of the company with the trade channel members is stronger when there are many loyal customers who would only buy the company's brand. In this case, the retailer merely distributes the manufacturer's products.

5. Proprietary brand assets

Proprietary assets include patents, trademarks and channel relationships. These assets are valuable as they prevent competitors from attacking the company and prevent the erosion of competitive advantages and loyal customer base.

All activities of the firm determine brand equity. These activities may enhance or diminish the brand value. Activities that are synchronous with the overall vision for the brand enhance equity, and any activity that goes against this overall vision reduces brand equity.

4.4.2 Leveraging Brand Equity

Companies that build brand equity capitalize on such strong brands by using them to launch new products in other categories, or serving other customer segments in the same category, or serving the same customers in the same category better. The main purpose of using the same brand name is to take advantage of the value and power that the brand commands, rather than building a completely new brand, which would entail a huge expenditure, and would take time.

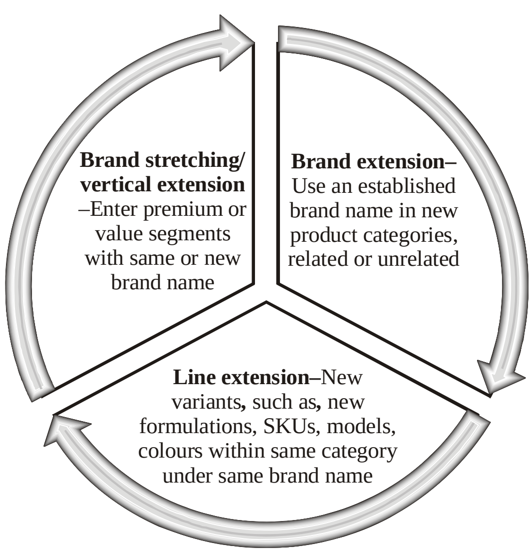

Fig. 4.6 *Leveraging Brand Equity*

NOTES

Brand extension: Brand extension is the use of an established brand name in new product categories

1. Brand extension

Brand extension is the use of an established brand name in new product categories. The category to which the brand is being extended can be related or unrelated to the existing product categories.

Brand extension in unrelated markets may result in loss of credibility if a brand name is extended too far. A company has to find out the product categories in which the established brand name will work and the product categories in which it will not work. To be able to do that, the company has to find as to why the brand name is successful in its current business. It may find out that customers in the current business desire luxury and exclusivity, and the brand is correctly positioned. It is offering luxury and exclusivity. If the customers of the new business also desire luxury and exclusivity, the brand name will work in the new business. If values and aspirations of the customers of the new business match those of the original business and if these values and aspirations are embodied in the brand, it is likely to be accepted by customers in the new business.

Advantages of brand extensions in releasing new products are that it reduces risk and is less costly than alternative launch strategies. Customers appear to attribute the quality associations they have of the original brand to the new product. An established name enhances consumer interest and willingness to try the new product bearing the established brand name. Since the established brand is already well known, the task of building awareness for the new product is eased. Advertising, selling and promotional costs are reduced. There is likelihood of achieving advertising economies of scale since advertisements for the original brand and its extensions reinforce each other.

But brand extensions that offer no functional, psychological or price advantage over rival brands in the new category often fail. There is also the danger that management may not provide enough funds for the launch believing that the spin-off effects from the original brand name will compensate. This can lead to low awareness and trial. Also, bad publicity for one product affects reputation of other products under the same name. A related problem is the danger of the new product failing or generating connotations that damage the reputation of the core brand.

A major test of any brand extension opportunity is to ask if the new brand concept is compatible with the values inherent in the core brand. Brand extension is not viable when the new brand is developed for target customers who hold different values and aspirations from those in the original market segment.

2. Line extension

New variants, such as, new product formulations, flavours, SKUs (sizes), models or colours within the same product category are launched bearing the established brand name.

Line extensions can be useful to reach out to new customer segments who seek new benefits, hitherto not being offered by the brand in the category. For instance, launching a new shampoo variant aimed at consumers seeking solution for a dry, itchy scalp under the existing shampoo brand name makes sense. Line extensions are also useful in reviving consumer interest in a dull product category. In some categories, variety is a desirable attribute for consumers.

However, line extension leads to managerial focus on minor modifications, packaging changes and advertising rather than on real innovations. Cannibalization can also occur, i.e., the new brand variants gains sales at the expense of the established variants of the same brand.

3. Brand stretching or vertical extensions

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The company may sense an opportunity in the premium or/and value segments of the market, besides its existing markets. The company enters into these premium or/and value segments as well. These movements are called upscaling and downscaling respectively.

Companies engage in brand stretching because:

- Existing markets may be saturated
- They sense new opportunities in the premium or popular segments of the market
- Competition in the existing segments is intense

Brand stretching strategy can be practised in three ways:

(i) Upscaling or downscaling the entire brand.

(ii) Introducing a totally new brand in the upscaled or downscaled position.

Both the above techniques represent extremes. Almost all companies tread the middle path.

(iii) Treat the original brand as the 'mother brand' and introduce its offshoots in the form of 'sub-brands'. These sub-brands can be added as:

(a) Prefixes or suffixes.

(b) Describe the calibre of the stretched brand by using appropriate numbers/symbols/text abbreviation/words/names.

When upscaling is done using existing brands, it might not be successful as customers in the premium segments may not accept the brand that was present in the popular segment earlier. Though upscaling an existing brand may not necessarily fail, the customers in premium segments will not like to associate with popular brands. To overcome such associations is an onerous task. Using sub-brands with clearly distinguishable personality and values, or introducing a completely new brand may be necessary in this case. A new brand is the safest option for upscaling as it does not carry any baggage of associations with existing market segments. However, it is the riskiest and most expensive option as well.

Downscaling, on the other hand, can be accomplished easily with an existing brand, as customers in the popular segment are glad to buy a brand that is hitherto aspirational, due to its presence in the more upscale market segment. But the current customers of the premium brand may not like to see their brand being associated with a downscale market and will in all probability, stop patronizing the brand. They will switch to some other premium brand. The company has to decide if the downscale segment is really big enough to take the risk of losing customers of the upscale segment.

Most companies have been enamoured with the prospect of serving mass markets and have downscaled premium brands that they had so painstakingly built for decades, sometimes even centuries. They have lost it all in a few years. And the mass market for which they took this hit, is so littered with entrenched competitors that after the initial hype of customers being able to own brands that they never thought they would own, the erstwhile premium brands have become just one of the competitors. And since the downscaled brand does not have experience of doing business in the mass market, it has even been muscled out of the mass market by the big fish here. Mass markets operate by a different set of machinations of scale, quality and price, which premium brands find very difficult to master. Parker pens and many other iconic brands have followed the above script and dug their own graves. Mass market has been the graveyard of many illustrious brands.

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Using sub-brands are also likely to have similar effects. The mother brand, still in the more premium segment, can face repercussions if it is not appropriately distinguishable from the sub-brand in the popular segment. Many consumers from the premium segment can move to the popular segment, thus resulting in losses. A completely new brand for downscaling is a better option than using sub-brands for a firm that wants to be active in both the premium and the popular segments.

4.5 BRAND VALUATION

Brand valuation examines the value of brands. The value of brand has been acknowledged for over a century. Brands are valued for many different reasons: legal disputes, planned management, internal communications, managing business, or brand securitization. With the passage of time, the techniques to quantify brand value have evolved.

IBM's brand value is put at $39.14bllion. The value of TCS brand name is put at $ 5.2 billion in 2012. Tata Consultancy Services (TCS) has added 1.18 million dollars in brand value during 2012.TCS also retained its position among the 'Big 4' most valuable IT services brand worldwide based on ranking by brand valuation firm Brand Finance. According to Enterprise Innovation, David Haigh, CEO and founder of Brand Finance said that the company's strong performance across brand-related activities such as client engagement, community development, sponsorships, and employee satisfaction has earned TCS a place in the elite club of only three AA+ rated IT Services Brands. Brand Finance assesses the dollar value of the reputation, image and intellectual property of the world's leading companies. TCS is also the single-largest contributor to the overall Tata Brand, which is now ranked as the world's 39th most valuable brand with a combined brand valuation of 18.17 million dollars, it added.

The ISO 10668 standard set out an appropriate process to value brands. The six important factors considered while evaluating a brand are: i) transparency, ii) validity, iii) reliability, iv) sufficiency, v) objectivity and financial, vi) behavioural and legal factors.

Valuation Methodolgies

There are several methods to value brand: 1. Cost approach, 2. Market Approach, 3. Income Approach.

The Cost Approach

It calculates the value of a brand as the cost incurred during the production and development. It is based on the concept that an investor is generally not willing to pay more for a brand. Since this concept is based on retrospective data, it does not include a company's future earnings.

Creation costs method: this brand valuation methodology estimates the amount that has been invested in creating the brand.

Replacement value method: this brand valuation method estimates the investment required to build a brand with a similar market position and share.

Check Your Progress

9. What do you mean by brand image?
10. List the various elements that affect brand equity
11. Why do companies resort to brand extension?

The Market Approach

The brand's value is tested on what customers have paid for similar products. This approach is not commonly used because very few many brands are bought or sold to provide a comparative benchmark.

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P/E ratios method: the P/E (price to earnings) brand valuation method multiples the brand's profits by a multiple derived from similar transactions of profits to price paid based on the value of reported brand values.

Turnover multiples method: this brand valuation method multiplies the brand's turnover by a multiple derived from similar transactions.

The Income Approach

This method tests the value by referring to the existing value of financial benefits over the rest of the life of a brand. There are six ways to use the income approach. (i) Price premium, (ii) Volume premium, (iii) Income split, (iv) Multi-period excess earnings, (v) Incremental cash flow method (vi) Royalty relief method.

(i) **Price premium method** - estimates the value of a brand by the price premium it generates when compared to a similar but unbranded product or service. This must take into account the volume premium method.

(ii) **Volume premium method** - estimates the value of a brand by the volume premium it generates when compared to a similar but unbranded product or service. This must take into account the price premium method.

(iii) **Income split method** - this values the brand as the present value portion of the economic profit attributable to the brand over the rest of its useful life. This has problems in that profits can sometimes be negative, leading to unrealistic brand value, and also that profits can be manipulated so may misrepresent brand value. This method uses qualitative measures to decide the portion of economic profits to be accredited to the brand.

(iv) **Multi-period excess earnings method** - this method requires a valuation of each group of intangible assets to calculate the cost of capital of each. The returns for each of these are deducted from the present value of future cash flows and when all other assets have been accounted for, the remaining is used as the value of the brand.

(v) **Incremental cash flow method** - Identifies the extra cash flow in a branded business when compared to an unbranded, and comparable, business. However it is rare to find conditions for this method to be used since finding similar unbranded companies can be difficult.

(vi) **Royalty relief method** - Assume theoretically a company does not own the brand it operates under, but instead licenses the use from another. The royalty relief method uses available data of similar arrangements in the industry and assigns the value of the brand as the present value of future royalty payments.

Purpose of Brand Valuation

Brand valuation has certain functions. It checks value reporting and the licensing of a brand. It helps is tackling brand disputes and smoothens legal transaction. Valuation of a brand also keeps a tab on the accounting and helps in strategic planning. Managing information about several brands becomes easier with valuation. A company can plan tax issues when it knows the value of its brands.

NOTES

Packaging: Packaging is a part of product planning and involves activities like designing and producing the container or wrapping paper for the product

Check Your Progress

12. How is brand equity different from brand valuation?
13. What are the three types of brand valuation methods?

4.6 PACKAGING

In the recent times, packaging has become a very crucial aspect of product management. Due to increased competition in the market, manufacturers now need to be more innovative while selecting packaging for their products so that they can establish a distinctive edge in the market. Apart from providing value addition, packaging also plays a significant role in enhancing the brand value of a product. Besides this, packaging is used as a medium of communication to explain the product. Now a days, companies put a lot of emphasis on packaging as it helps them in attracting consumers.

4.6.1 Concept of Packaging

Packaging is a part of product planning and involves activities like designing and producing the container or wrapping paper for the product. Packaging is also a kind of branding activity as it helps in creating some sort of image for the product in the minds of consumers. Due to its advertising appeal, the packaging is often considered as a 'silent salesman'. The packaging is also used as an effective selling tool. Packaging two bottles of juice together in one container is more beneficial for the seller as it helps him in selling two bottles instead of one.

4.6.2 Role and Importance of Packaging

The basic function of packaging is to protect the product from any kind of physical damage during transit and in the store. Depending on the nature of the product, adequate care should be taken to prevent damage from moisture, insects or exposure to sunlight. Packaging also adds value through aesthetic appeal. Besides this, good packaging also involves an image regarding the quality of the product. Other major functions performed by packaging are as follows:

(i) To assemble and arrange the content in the desired form.
(ii) Physical safety of the contents from the stage of production till its final consumption.
(iii) To identify the product content, brand and the manufacturer.
(iv) To facilitate transportation, storing and warehouse handling.
(v) To provide value addition to the product.
(vi) To encourage customers to re-purchase the product.
(vii) Packaging also helps in preventing the loss of product quantity.
(viii) It performs a promotional function by attracting the consumer's attention and gives confidence to consumers.
(ix) Good packaging is capable of projecting various qualities of the product.
(x) Packaging reinforces the brand identity of the company.
(xi) Packaging helps the companies in being more innovative in order to attract the consumers.
(xii) Packaging is a symbol of consumer affluence. The prestige of the product is maintained with the help of attractive and innovative packaging.
(xiii) Packaging helps in product positioning and differentiation of a particular brand.

Due to the above crucial functions performed by packaging, today we have reached a stage where companies are sometimes forced to give more importance to the packaging than to the product.

4.6.3 Advantages of Packaging

The following are the advantages of packaging:

(i) Packaging of the product is something that conveys the brand image. Keeping in view the fact that more than half of all purchases are impulse purchases, consumers are highly affected by well-designed packaging that has an extraordinary appeal on the mind of consumers. Packaging also helps in competing with other brands.

(ii) Packaging helps in quickly communicating brand identity of the product. When consumers find it difficult to remember a product of a particular brand, they are reminded of the product by seeing a particular kind of packaging. For those brands that are heavily advertised, packaging provides a link between advertising and the product.

(iii) Packaging also helps in visually communicating with the consumers and thereby persuading them to buy.

(iv) Packaging can help value addition of the product. For example, 'Nescafe' or 'Horlicks' bottles are being reused at home and thus such products provide additional value to consumers over and above the premium attached to it.

(v) Packaging provides a hygienic condition for the product. Without proper packaging, food products may come in direct contact with germs and dirt that may be very harmful for health.

(vi) Packaging also provides information about the ingredients inside a package. It is a source of information regarding product care instructions, shelf life of the product, weights and measures, etc.

(vii) Packaging makes it convenient to transport the product from the manufacturer's warehouse to the consumer. Packaging ensures portability of the product. It is due to advancement in packaging that even the liquid based products like milk and oil can be transported great distances to reach markets in faraway areas from the place where the product was manufactured.

4.6.4 Disadvantages of Packaging

Packaging improves the physical safety of the product apart from offering convenience to the consumers, but it also comes with a number of disadvantages.

(i) Due to packaging, sometimes it is not possible for the consumers to see the actual product. They do not even know what are they are actually buying. There always remains some possibility of the consumers being cheated. You may find an inferior quality product behind an attractive packaging.

(ii) Packaging makes the product more expensive due to the additional packaging cost. It is ultimately the consumers who have to bear the cost of packaging. Sometimes packaging represents 40 per cent of the selling price of the product. This holds true especially for the cosmetic sector.

(iii) Packaging can also limit the consumer's choice regarding size or quantity or weight of the product. You may require only one or two Kg of flour but due to packaging you will have to buy five or ten Kg of flour.

(iv) Packaging is responsible for a significant portion of municipal waste. Though some waste can be recycled, a majority of it cannot be. Much of this waste becomes a source of environmental pollution.

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4.6.5 Types of Packaging

The kind of packaging to be used for different products depends on the nature of the product , the length of the distribution channel, the kind of handling required, weather conditions, etc. For example, for liquid products glass containers may be used and to protect fragile articles, we should select wooden containers.

The types of packaging can be classified as follows:

(i) **Transit Packaging:** It is a kind of packaging that keeps the product safe from the production to the consumption stage in the process of distribution. Sometimes it is also known as protective packaging. Great care should be taken keeping in view the extreme weather conditions, temperature, etc. Materials used for this kind of packaging are wooden containers, drums, tins, etc. The main stress is on the safety of the product.

(ii) **Consumer Packaging:** Consumer packaging is used for delivering the goods to the consumers. Materials used for this kind of packaging are plastic bottles, glass bottles, poly bags, etc**.**

(iii) **Reusable Packaging:** This involves the kind of packaging which can be used for some other purposes after the packed goods have been consumed. Under this category come oil containers, jars, etc. The fact that these packages can be reused, increases the sales value of the product to a great extent.

(iv) **Multiple packaging:** Under this kind of packaging system, several units of the same product are placed in a single container. Here we can take the example of packaging of candy bars, toffees, cricket balls, towels, etc which are sold in multiple units. Multiple packaging helps in increasing the sales volume of the product.

4.6.6 Materials Used in Packaging

The material used in packaging a product depends on what the product is. Different goods have different needs which have to be looked into before assigning the packaging material.

(i) Plastic

Plastic is one of the most commonly used packaging materials due to its light weight and low cost. As it can be manufactured in a variety of shapes and sizes, it allows manufacturers to make convenient packages for users of different items. Single-serving food items are a good example of how plastic packaging can be used to improve the convenience of a product.

(ii) Boxes

Another most commonly used packaging material is cardboard boxes which are cheaper to manufacture and easier to handle than wooden crates. These days, boxes are usually made out of corrugated board to add strength and stability without increasing the box's thickness or weight. For additional protection, double-walled boxes are also used.

(iii) Bubble wrap

Bubble wrap is used as packaging material because of its effectiveness in protecting fragile items without increasing weight or cost. For those small items that require additional protection, the bubble wrap can simply be wrapped to provide extra cushioning layers.

(iv) Shrink wrap

The commercial products such as CDs or DVDs that require tamper protection are usually packed in shrink wrap. After wrapping the item, heat is applied to make the wrap shrink to fit. Shrink wrap can also be used for packing perishable food items as it creates a tight seal and keeps moisture out.

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(v) Tissue paper

Tissue paper is used in wrapping fragile items like glass to fill empty spaces inside a container so that the packed items do not shift in transit. Only after these items are wrapped in tissue paper are they put inside another type of protective container for shipping.

(vi) Tin containers

These are used for packing liquids like oil, *ghee*, etc.

Earthenware

It is an old method of preserving products of liquid nature. Even today liquor is kept in such containers for improving the quality.

4.6.7 Factors in Packaging Decisions

Packaging trends are influenced by changing consumer behaviour and environmental factors. Packaging should be such that the products are easy to carry and store, and do not require difficult disposal procedures. The following aspects should be kept in mind while taking packaging decisions.

(i) Physical protection

The basic purpose of packaging is to ensure the physical protection of the product. It should also be able to withstand stresses such as shock, vibration, compression, dropping, etc. The packaging should also provide protection from heat, cold, humidity, dampness, dryness, light, oxidation and contamination, to protect the shelf-life, colour and flavour of the product.

(ii) Product promotion

The packaging should also be able to project a quality image for the product. There should be space to display the product information regarding such matters as weight, contents, shelf life, names of the manufacturer and instructions for use. It should also carry safety warnings, if necessary.

(iii) Convenience of storage

The package should be such that it can be conveniently stacked and should easily be transported.

(iv) Package size

The size of the packaging differs from product to product, depending on the size and nature of the product and quantity that is to be packed in each packet and depending on the quantity usually demanded by the consumer.

(v) Packaging cost

The packaging cost adds to the product cost and thus care has to be taken to ensure that it does not adversely affect the economy factor.

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4.6.8 Packaging Strategy

Packaging plays a very significant role in promoting products. For a manufacturing company, packaging is an important part of its strategic marketing mix. Packaging of consumer products is designed keeping in mind the following purposes:

(i) To improve the packaging of an existing product

(ii) To add a new product to an existing product line

(iii) To pack an entirely new product

There are several reasons for the redesigning existing package.

- Sometimes, a company may decide to redesign the packaging in order to give a new lease of life to a maturing product by updating its image or adding a new feature to the package.
- A company may redesign the package as a response to a competitive threat from a new product that is more visible on the shelf.
- Another strategic reason for package redesign is the changes in the nature of the product.
- Sometimes economic factors may require less or more expensive packaging.
- Product line restructuring and alterations in market strategy like segmenting the product for different age groups.
- Promoting new uses for a product may also compel a company to redesign the packaging.

Another reason for package redesign can be the company's decision to extend a product or brand line. The packaging strategy may reflect an effort of the company to integrate the benefits of the new feature into the existing package in such a way that customers will be able to easily differentiate it from other products in the line. However, in this strategy there is always the risk that the new package may confuse the customers and retailers.

Package designing for an entirely new product may require the packaging designer to instill consumer confidence in an unknown product or brand, and to inform the buyer about the product's uses and benefits. The most challenging task is to develop packaging for products and brands that are entirely new to the marketplace. In contrast, packaging for goods in the product categories that are already established in the market is relatively easy and requires less education. However in this case also they need to overcome competition from other established products.

Types of packaging strategies

There are various factors that influence the strategy that a firm uses while taking packaging decisions. These are discussed below:

(i) Money-off pack: A 'flash' of quiet on a distinctive colour is superimposed, highlighting the special price discount being offered

(ii) **Pack in premium:** Under this strategy, a gift is packed inside the original product package to attract the customers. For example, a tooth brush is packed inside a tooth paste pack or a shaving brush is packed inside a shaving cream pack.

(iii) **Coupon pack:** Under this promotional strategy a coupon of certain value is placed inside the product package and is usually redeemed from the company through the retailer.

(iv) **Premium packaging or reuseable packaging:** Under this strategy, a specially developed package is offered to the consumer along with the product. For example some companies offer tea or washing powder inside a re-useable jar or bucket.

(v) **Self-liquidator:** Under this product promotional technique, the buyers are required to send to the company a fixed number of packages or product wrappers as evidence of having bought the product and in return the consumers are offered products at a discounted price or they are rewarded with some other product of the company.

(vi) **Multiple packaging:** While using this strategy, more than one unit of the same product is placed inside the pack. This strategy helps the company in increasing sales volume.

(vii) **Odd-size packaging:** Odd-size packaging is used when the companies want to avoid any direct comparison with competing products. For example, while the standard size for ketchup packaging is 500 grams bottle, Maggi ketchup was launched in 400 grams bottles.

However the companies need to be careful when they are making even small packaging changes for established brands and products due to the fact that a great deal of the company's investment may be at risk if such a decision alienates or confuses customers.

4.6.9 Emerging Trends in Packaging

Packaging trends keep emerging. Some of the new packaging trends are:

1. Using green alternatives and reducing weight of packaging due to environmental rules
2. Using Retail Ready Packaging (RRP) due to cliental obligations
3. Using anti-slip paper to stabilize cartons
4. Using load securing techniques to minimize delays and prohibit accidents
5. Using green polymers
6. Reducing packaging volume
7. Using time temperature indicator (TTI) for food security. It prevents food contamination or poisoning

4.7 SUMMARY

Some of the important concepts discussed in this unit are:

- Companies need to communicate the differential value of their products to the customers. For this, companies position their products after considering three major elements: (i) Target market, (ii) Differential advantage and (iii) highlighting the differential advantage to create a unique identity.

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Check Your Progress

14. What are the ways in which a company can use packaging?
15. List the various types of packaging.
16. How is money-off pack different from coupon pack?

NOTES

- It is very important for companies to create strategic positions for their products. The strategy should comprise a unique set of tasks that will set it apart from its competitor. There are three ways to strategically position a product, depending on how it is based: (i) variety-based, (ii) need-based and (iii) different customer groups-based
- Successful positioning of products need to set certain mindsets among customers: (i) (clarity), (ii) consistency, (iii) credibility, (iv) competitiveness, (v) differentiated offering.
- It is also important for company to position its product for various customer groups, and this can't be possible without diluting the positioning.
- Companies develop their products into brands to make a greater impact on customers. They assign certain design, packaging and benefits to a product to raise customer curiosity. Once customers start approving of a brand, it becomes a reputed brand. The brand eventually becomes the character of the product or the company.
- The presence of various factors is necessary for a brand to stay in the customers' minds. The attributes are: i) brand benefits, ii) brand relevance, iii) balanced pricing strategy, iv) apt positioning, v) consistency of quality and presence, vi) sensible brand hierarchy, vii) planned marketing activities, viii) sustainable support to the brand, ix) regular check of brand equity.
- There are two types of brands: a) manufacturer's brand, and b) own label or distributor or store brand. The first type is created by companies and the product bears the company's chosen brand name. Manufacturer builds brand equity. The second category is created and owned by channel intermediaries, such as, retailers or distributors.
- A brand is created by enhancing a core product with distinctive values so that customers can distinguish it from the competitor's product. A brand works when certain factors work together, such as quality, positioning, repositioning, well-balanced communication, being a pioneer, long-term prospective and internal marketing.
- Sometimes companies create a single umbrella image that covers all its products. In such a scenario, the products assume the name of the corporate. Such branding is termed as corporate branding.
- Brand image is the overall impression of a brand in the consumers' mind. It is usually a set of things that the target customer associates the brand with. Brand image is automatically formed, depending on the product's appeal, ease of use, functionality, fame and overall value.
- Brand equity is the fame and the financial value of a brand. While measuring the monetary worth of a brand, the following things are considered: a) awareness, b) brand association, c) perceived quality, d) brand loyalty and e) proprietary brand assets.
- Brand extension is the use of an established brand name in new products. The category to which the brand is extended is not necessarily related to the existing categories. The process is less costly and reduces risks of market failure of a product. Before a company decides on brand extension, it is important to add some benefits to the product. Otherwise, the new product is likely to fail.

NOTES

- A brand is valued, depending on its overall features. There are three important approaches to evaluate a brand: 1. The cost approach, 2. The market approach, and 3. The income approach.
- Manufacturers use innovative packaging for their products so that they can establish a distinctive edge in the market. Apart from providing value addition, packaging also plays an important role in enhancing the brand value of a product. Packaging is also used as a medium of communication to explain the product.
- The four types of packaging are: i) Transit packaging that keeps the product safe from the production to the distributors; ii) Consumer packaging is used for delivering goods to the consumers; iii) reusable packaging uses those packages that can be used after the packed goods have been consumed; iv) multiple packaging places several units of the same product in a single container.
- The various types of material used in packaging are: plastic, boxes, bubble wrap, shrink wrap, tissue paper, tin containers and earthenware. While using any of these materials for packing, there are several factors that decide a packaging trend: a) physical protection, b) product promotion, c) storage convenience, d) package size and e) packaging cost.
- While packing products, various strategies are followed to give the product an edge and visibility. a) money-off pack, b) pack in premium, c) coupon pack, d) reusable packaging, e) self-liquidator, f) multiple packaging and g) odd-size packaging.

4.8 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The three major elements of product positioning are: (i) target market, (ii) differential advantage and (iii) highlighting the differential advantage to create a unique identity.
2. The three sources of strategic positioning are: variety-based, need based and customer group based.
3. The important aspects of successful product positioning are: (i) (clarity), (ii) consistency, (iii) credibility, (iv) competitiveness, (v) differentiated offering.
4. Companies position the same products for various customer groups. This is made possible by diluting the positioning, and making the product available to different customer sets. This process is called dilution of positioning.
5. Branding means developing products into brands by endowing them unique design, benefits and characteristics. Brand is the character of a product.
6. The two types of brands are: manufacturer brand and distributor or retailer brand.
7. Brands are built by a combination of seven factors: i) quality, ii) positioning, iii) repositioning, iv) well-balanced communication, v) being a pioneer, vi long-term prospective and vii) internal marketing.
8. The system, under which the products of a company assume the name of the corporate, is called corporate branding.
9. Brand image is the overall impression of a brand in the consumers' mind.
10. The various elements that affect brand equity are: a) awareness, b) brand association, c) perceived quality, d) brand loyalty and e) proprietary brand assets.

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11. Companies resort to brand extensions by releasing new products under the same name because it reduces risk and is less costly than alternative launch strategies.
12. Brand equity takes a stock of the financial worth of a brand, while brands valuation evaluates the entire set of characteristics of a brand.
13. The three important ways to evaluate a brand: 1. The cost approach, 2. The market approach, and 3. The income approach.
14. A company can use packaging to establish a distinctive edge over the market. Apart from enhancing the brand value of a product, packaging is also used to communicate the nature of the product.
15. The various types of packaging are: i) transit packaging, ii) consumer packaging, iii) reusable packaging, iv) multiple packaging.]
16. In money-off packs, a 'flash' of distinctive colour is superimposed, highlighting the special discounted price. In coupon packs, a coupon of specific value is put inside the product package and it can be redeemed by the customer through the retailer.

4.9 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What is the objective of product positioning?
2. List the attributes that lead to the success of a brand.
3. In brand positioning strategy, how is positioning different from repositioning?
4. Mention four conditions that help in determining a brand's equity.
5. What is brand stretching?
6. Differentiate between cost approach and market approach?
7. List four advantages of product packaging.

Long-Answer Questions

1. With the help of a diagram, explain the criteria required for successful product positioning.
2. 'A brand is both abstract and real.' Discuss the statement.
3. Discuss the differences between a manufacturer brand and a retailer brand.
4. Explain the concept of brand equity. How is it measured?
5. Discuss the pros and cons of brand extension.
6. Explain the role of packaging product management. How does packaging give an edge to a product?
7. Describe the various types of packaging strategies.

UNIT 5 PRODUCT LIFE CYCLE (PLC)

NOTES

Structure

5.0 Introduction
5.1 Unit Objectives
5.2 Phases of PLC and their Features
5.2.1 Significance of Product Life Cycle
5.2.2 Stages of Product Life Cycle
5.2.3 Factors Affecting Life Cycle of Product
5.2.4 Reasons for Change in Product Life Cycle
5.3 Uses and Limitations of PLC
5.3.1 Uses of PLC
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5.4 Functional Management Strategies for Different Phases of PLC
5.4.1 Financial, Marketing and Personnel Initiatives in Different Phases of Product Life Cycle
5.5 Strategic Intervention for PLC Mangement
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5.5.2 Focus and Investment in Various Stages of the PLC
5.5.3 Industry Life Cycle
5.6 Summary
5.7 Answers to 'Check Your Progress'
5.8 Questions and Exercises

5.0 INTRODUCTION

Like every object in this world, each product has a life cycle. From the time the idea of a product is conceived by a company, to the time it stops selling, it undergoes the various phases of a product life cycle (PLC).

In this unit, we shall discuss the four phases of a PLC that influence a company. Based on PLC, a company's product either survives or disappears from the market.

At the first stage, called the introductory stage, a product is introduced in the market among the customers. This stage is usually planed, where a company tries to attract target customer segments by highlighting its differences as its benefits. Once the product is stabilized in the market, the company concentrates in the next phase: the growth stage. At this stage, the company tries to promote the product as a brand and reaps great profits.

The next phase is the maturity stage, where the product has a defined clientele. At this phase, the company tries to promote brand loyalty, so that customers don't switch over to some new entrant in the market. The company also doesn't incur more costs on the product. Then the product begins to age, and its demand begins to decline. At the last stage, called the decline stage, companies either try to revive the dying product by renewing the design or adding some new qualities, or just withdraw the product from the market.

Usually, bigger firms with large resources have a backup plan for the decline stage. They either introduce a new product or repackage the product as an advanced item with added qualities. Smaller firms who lack resources, accept the death of the product.

As we make progress in this unit, we shall learn the various advantages and limitations of a PLC, and also discuss how organizations make use of the PLC concept to swim ahead in the market.

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5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Distinguish the various phases of product life cycle
- Analyse the various advantages and disadvantages of product life cycle.
- Discuss the functional management strategies used in the various phases of product life cycle.
- Describe the uses of product life cycle as a strategic marketing tool

  Explain the aspects of industry life cycle.

5.2 PHASES OF PLC AND THEIR FEATURES

Every product goes through a life cycle right from its inception till decline. The concept of PLC is based on the biological life cycle. In the case of a tree, first a seed is planted, then, it begins to sprout. After that, comes a stage when leaves shoot out, followed by the emergence of roots. After another period of time, like an adult, the plant begins to shrink and die. The stage of planting of trees can be categorized as the introduction stage. The sprouting can be compared with the growth stage and similarly shooting out of leaves and emergence of roots can be considered as the stage of maturity and the stage of shrinking and dying of plants can be compared to the decline. A similar theory applies to the life of a product. Once the product is developed, it is launched in the market. As it grows, it attracts more and more customers. With the gradual stabilization of the market, the product reaches the stage of maturity while gaining the confidence of more and more customers. But this stage does not continue for long as the product faces competition from superior products from competitors and eventually faces decline and has to be withdrawn.

5.2.1 Significance of Product Life Cycle

For a marketing manager, the concept of product life cycle is central to the product marketing strategy. It is based on the following notions:

(i) As soon as the product is launched in the market, it starts a life cycle.

(ii) Every product has, birth and death, i.e. introduction and decline. The intervening period is characterized by growth and development.

Taking into consideration the stages through which a product travels during its life period, it may be prudent for a marketer to devise a marketing strategy which is appropriate to the relevant stage in the product's life. The product is introduced in the market at the pioneering stage, and initially, the response is limited. It will take some time before the sales pick up. It is only after the product receives the customer's faith and confidence that the sales go up during the growth stage of the life cycle. Now as more and more competitors enter the market, the rate of growth is likely

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to come down but the total sales will go up. Then comes the stage when, in spite of the best efforts of the marketers, the sales of the product almost come to a standstill. This stage in the life of the product is called the saturation stage. Henceforth, the sales are likely to decline and the product dies at the end. Though every product passes through these stages, the time span from invention to decline differs from one product to another.

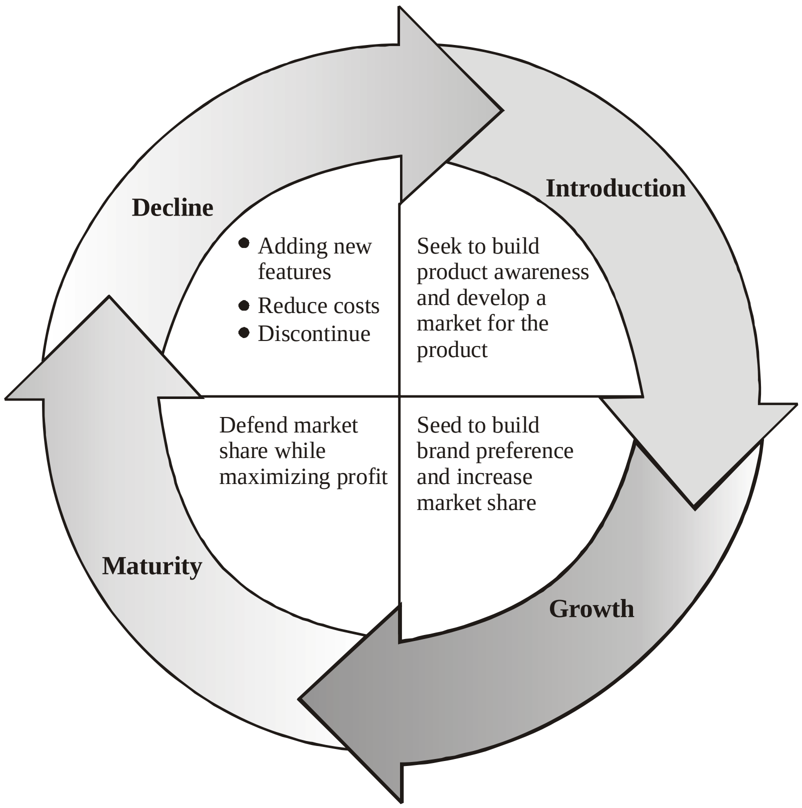

Fig 5.1 *Product Life Cycle*

Some products fail at the introduction stage only. There are products that continue to remain in the market because of consumers' demand. The length of the life cycle from one stage to another is governed by various factors. At the introduction stage, the product requires a large scale advertisement and promotional campaign in order to sustain itself in the market. In case the marketer fails to provide such support, the life cycle of the product is likely to be very short. At the growth stage, the product is faced with the situation of growing competition from rival marketers, who offer improved products at a cheaper price. In other words, right from its birth till its decline or death, the product has to face different competitive environments and its capacity to adjust to these environmental factors determines to a great extent the degree of success of the product.

5.2.2 Stages of Product Life Cycle

1. Introduction stage

As explained above, this is the stage of launching a new product in the market. The length and duration of this phase depends on the pace at which the product penetrates into the selected market segment. This stage continues till the awareness of the product is high enough to attract a large consumer base. The important features of the introductory stage of the product life cycle are:

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(i) A high failure rate at the product, launching stage itself

(ii) Not enough competition from rival companies

(iii) Limited product distribution base

(iv) Frequent product modification, depending on the response from users and their feedback

The product launching stage causes heavy financial loss to the company due to the high promotional cost and low sales volume. At this stage, the prime objective of the company is to create product awareness which requires huge marketing expenditure. Such expenditure at the introductory stage is considered as an investment in the product's future. Since the product is introduced in the market at a very competitive price, the quantum of profit is either very low or negligible, but at the same time, the risk factor is very high. The price of the product will depend on the uniqueness and exclusiveness of the product.

At the introduction stage, the company offers only a limited edition of the product. For example, when Maruti Udyog launched its car in the early 80s, it offered only the 'Maruti-800' version and this was priced very high and thus was not within the common man's budget. The company offered benefits like safety and fuel economy when compared with existing products like the Ambassador and Premier Padmini.

Skimming pricing strategy: The product is offered at a high price to a very selective segment of consumers–primarily the innovators and early adopters, who can afford to pay a premium price

Penetration pricing strategy: Price of the product is kept very low in order to attract the largest possible number of new buyers at the early stage of the product life cycle

Pricing strategy

A company has two basic strategic options for pricing:

(a) ***Skimming pricing strategy:*** Under this strategy, the product is offered at a high price to a very selective segment of consumers–primarily the innovators and early adopters, who can afford to pay a premium price. The offered product has to be distinctive. The growth in sales can be achieved with planned price reduction.

(b) ***Penetration pricing strategy:*** Under this strategy, the price of the product is kept very low in order to attract the largest possible number of new buyers at the early stage of the product life cycle.

In both the strategic pricing options, pricing is done in such a way that the scope for further change in the strategy remains open during the subsequent stages of the life cycle. As per the skimming pricing strategy, an attempt should be made to retain the product's exclusiveness as long as possible. It may not always be possible to earn profits during the introductory stage, but at the same time, it is the responsibility of the marketer to ensure that the introductory pricing strategy prepares the stage for future profitability.

The distribution strategy during the introductory stage of the product life cycle should ensure that the product is made readily available in the targetted market segment. The failure of the company to implement an effective distribution strategy will negate all the positive work done by the marketer during the early stages of the product life cycle.

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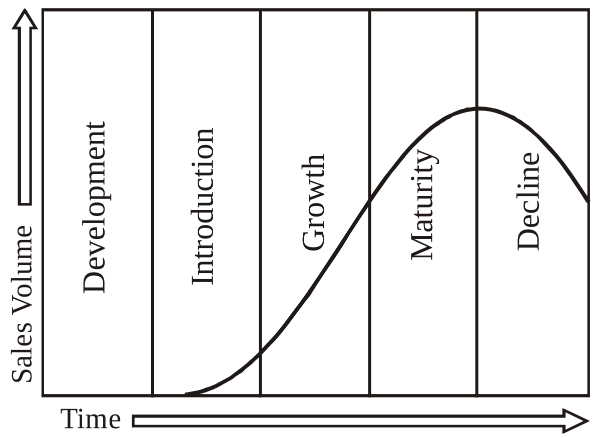

Fig. 5.2 *Product Life Cycle Graph*

2. Growth stage

After crossing the introduction stage, the product enters the growth stage of the life cycle. As more than 95 per cent of the products fail during the introduction phase, only the remaining 5 per cent enter the growth phase, which is marked by intense competition from the rival product companies. As a consequence of this competition, the product is now offered in a more attractive form and packaging and at a competitive price. The main characteristics of the growth stage are as follows:

(i) Intense competition from fellow marketers

(ii) Profitable return

(iii) Rapid demand and sales growth

(iv) Wide product popularity and recognition from customers

(v) High advertising and distribution cost

(vi) Reduction in per unit cost due to higher production demand

The growth stage of the life cycle is the most suitable to acquire maximum market share. However, utmost care should be taken to ensure that this does not lead to draining of the company's profitability.

During the growth stage, marketers concentrate on cultivating the selective demand. The marketing strategy involves either the 'niche marketing strategy' or the 'focused marketing strategy'. The growth phase also puts an end to the mass marketing approach.

The product distribution strategy remains very crucial during the growth phase of the life cycle. The success of the marketing strategy during this phase will depend on getting enough shelf space in retail outlets, which these days, are controlled by a small number of powerful multiple operators. This stage also witnesses the establishment of the hierarchy of brand leaders. The consumers make their brand preferences accordingly.

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During this phase, all possible attempts should be made by the company to optimize the product's price. This will ensure that there is enough opportunity to maximize the profit towards the end of this period. As the growth period tends to lead towards profits, there is the likelihood that market shares of the product will get stabilized. This phase will also witness the emergence of brand leaders.

3. Maturity stage

There the two basic reasons for the survival of the product during the growth stage and their successful entry in the maturity stage.

(a) Competitive strength of the product, and (b) Customer's passion to acquire these products

The major characteristics of this phase are:

(i) Slowing down of sales growth and profits
(ii) Cutthroat competition which leads to a price and promotional war
(iii) Differentiation and re-differentiation of the product
(iv) Withdrawal of marginal manufacturers from the market who cannot sustain the pressure of competition and reduced profit margin

This phase also witnesses the decline of market growth. The growth, if any, can be achieved only at the expense of competitors. That is why this stage calls for a sustained promotional campaign in order to retain the existing customer base. Taking a decision regarding the promotional budget will also be very difficult due to reduced profit margin. Every possible attempt should be made to avoid any price war because the consequence of price cuts will be very serious, like reduced revenue for all marketing participants. The aim of the price reduction should be to increase the purchase level which can then offset any revenue loss.

4. Decline phase

During this phase, market demand of the product faces gradual decline. This is due to a change in the consumers' preferences, who are now looking for more convenient and better products. Due to a decline in the demand for the product, the industry offers only a limited version of the product. The number of competing firms also get a reduced customer's value perception and the product also undergoes a change during the decline phase, of a product's life cycle. Hence, the marketers are left with no other option but to abandon the product.

But at the same time, it will be worthwhile for marketers to explore the possibility of giving a new lease of life to the product, particularly keeping in view the falling number of competitors. While making an attempt to extend the life of the product, the management should give more emphasis on strict cost control. Because, during the decline phase, cost control is the only method of ensuring profitability.

5.2.3 Factors Affecting Life Cycle of Product

The length of the product life cycle is governed by several factors: the pace of technological change, level of market acceptance and entry of other competitive products in the market. The crucial factors affecting the life cycle of the product are as follows.

1. Changing technology

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The life cycle of product is immensely influenced by the changing technological environment in the country. In case the technology is changing very fast, it will lead to a new breakthrough in product improvement and product innovation. As a consequence of the same, the life of the old technology-based product is cut short and the consumers now switch over to the new product which is more advanced in terms of technology and innovation. This fact can further be illustrated by comparing the life cycle of a product in the USA and India. As the technological change is faster and more rapid in the USA compared to India, the life cycle of the product there is much shorter.

2. Rate of acceptance of the product by the customer

The rate of customer's acceptance of the product also affects the product's life cycle. In case the rate of acceptance by the customer is very fast, the life of the product is likely to be very short. It is because customers who accept one product easily today, can accept another product tomorrow and the existing products will soon find no demand in the market.

In a similar fashion, if the customer's acceptance of the product is slow, the product life cycle is likely to be very long. In the case of a developing economy like India, since the market acceptance of the product is very slow, the life cycle of the product is usually quite long.

3. Level of competition in the product market

The level of competition in the market also affects the length of the product life cycle. If the markets are very competitive and new products find an easy entry into the market, life cycle of the product will be very short, as due to easy entry of new products, the customers will be easily getting an opportunity to look for alternative products. In the same way, if it is very difficult for new products to enter the market, the life cycle of the existing products will be longer.

4. Risk-taking capacity of the producer

The extent to which an enterprise can take risks, also determines the length of the product life cycle. If the risk-bearing capacity of the firm is very high, they can keep the product alive in the market for a longer period of time as they are able to face the market challenges effectively. For example, in case the product is not doing very well in the market, the firm can still take a risk by undertaking a huge advertising and sales promotion campaign to maintain the competitive level in the market. However, in the case of those enterprises who cannot take high level of risk, they will be left with no option but to withdraw their product from the market. In such a case, the life cycle of the product will be very short.

5. Brand image/good will of the product

In case the company has been able to build a brand image and good will for its product in the market, it can ensure a long lease of life for the product as compared to the products of other companies that do not enjoy such image and goodwill.

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5.2.4 Reasons for Change in Product Life Cycle

The two major factors that play a significant role in product life cycle are:

1. Changing needs of the customer

Among the various environmental factors that determine the length of product life cycle, the most crucial is the customer's need for a capable product which can satisfy human needs. With the gradual increase in customer awareness and also due to the increase in his disposable income, the customer's need and aspirations also undergoes a change. Such a change can very easily be noticed today if we take into consideration the large scale revolution in electronic media, which has led to a revolution in markets and products. Due to the active role played by the electronic media in product marketing, the demand for the product that had faced a decline or stagnation in the past, suddenly went up and the company witnessed a spurt in sales from an unexplored market. While customers from metros and cities now look for more sophisticated products, customers from rural areas get more satisfaction from basic versions of the product. The companies that are more sensitive to such changes taking place in the customer's needs are competent to incorporate such changes in their product strategies. This fact can be illustrated with the example of invention of the Walkman. Before the invention of the Walkman, people in the United States and also some other countries used to carry a large portable music system on their backs with a very high level of sound which used to disturb others. This very fact led Sony to develop a small portable music system known as the Walkman.

2. Invention of improved and efficient products

Due to new technological breakthrough and rapid technological changes, companies are now more competent to develop a user-friendly, attractive and low-priced product. Rapid development in packaging technology has also helped companies in capturing the market. For example, tetra packs and PET bottles helped soft drink manufacturing companies to capture the selected target market. Development in the field of packaging helped in making the product convenient to use, carry and preserve. Similarly, the concept of any time money or Automated Teller Money (ATM) and Internet banking helped the banking sector in expanding their market base and it also provided the customers with more value added features and benefits.

Check Your Progress

1. When does the life cycle of a product start?
2. What are the two types of pricing strategy?
3. Mention the two reasons which help a product survive during the growth stage and while entering the maturity stage.

5.3 USES AND LIMITATIONS OF PLC

5.3.1 Uses of PLC

- Product life cycle analysis forces a company to manage its product portfolio proactively instead of letting market forces shape it. It has to ensure that there are not too many products in any one stage of PLC. It may feel the need to replace old products with new ones. It needs to have a balanced product portfolio. A company with all its products in the maturity stage may be generating profit today but as the products enter the decline stage, profits may fall. A balanced product portfolio would contain some products in the growth stage, and some in the maturity stage. It would also be working on new product concepts, and overseeing its exit from a few markets. A smart company considers its product portfolio as an interrelated set of profit-generating assets that need to be managed as a group.

- A company that introduces a new-to-the-world product is in a very powerful position because it does not have any competitors. It may be prompted to charge a high price because customers do not have any alternate supplier to go to. But unless the product is patented, competition will enter during the growth phase and make it difficult for the pioneer to charge high prices. Customers get angry when they find the pioneer reducing its high price due to competitive pressures. They feel that the company has charged them a high price when they could afford not to. A company which understands the concept of PLC, will realize and estimate the eventual entry of competitors, and will take that into account when they shape their early strategies of market entry. In fact, smart pioneers will price the products at a low price so that the potential competitors do not consider the market attractive enough to enter it. If pioneers decide to be content with low margins, they can keep off competitors, at least those which pursue markets purely for profits and do not have strategy and preference for entering new markets. Genuinely interested competitors will still enter the market, but they will be there for the long haul and their strategies and moves will be more predictable and manageable.
- Product life cycle analysis reminds a company that a time may come when customers will no longer need its products, and that they still may be as good as when they were wholeheartedly buying its product. It has to learn to move on—try to serve the customer need in the new way that has come up, or simply exit and start a new business. It has to keep working on new product concepts, so that as and when it finds a product in a decline stage, it has a few products that it can launch soon.
- Product life cycle analysis reminds a company that its market will stagnate, and that it cannot grow at the frantic pace that it has been doing in the past. Therefore, it should plan its expansion prudently, and not the let the rate of growth of the growth stage determine its capacity. Companies that base their capacity decisions on the rate of progress of growth stage, end up having more capacity than it requires, and hence its cost of production per unit is higher than competitors who scaled down growth projections when they took their capacity decisions.
- A company needs to follow different strategies in the different stages of the PLC, and therefore it needs to estimate when a stage is likely to end. It needs to believe that the strategy that has worked in one stage will be totally inappropriate in the next stage, and hence it needs to be ready with a new strategy before its product enters the next stage.

5.3.2 Limitations of PLC

- All products do not follow the classic S-shaped PLC curve. The sale of a product may rise sharply, and then fall all of a sudden, signalling the demise of the product. This phenomenon is true for fads, as it happened with pagers.

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There was nothing wrong with pagers—it is just that mobile phones came too soon after pagers came into the market. And there are products like soap and toothpaste, which are in the maturity stage for a long time, and show no inclination to enter the decline stage any time soon. Even some brands have shown great tenacity, and brand managers have been able to reinvent brands and put them back in the growth stage repeatedly.

- PLC is the result of marketing activities, and is not the cause of variability in sales. It is simply a pattern of sales that reflects marketing activity. Sales of a product may stagnate because it has not been promoted aggressively enough, or because it has not kept up with competitors in terms of benefits and features. Therefore, a product may have entered the decline stage because it did not receive enough support, and hence an appropriate strategy cannot be to prune it—the appropriate strategy will to support it, and see if it sells.
- The duration of PLC stages is unpredictable because it is governed by factors which are outside the purview and control of any single company. Howsoever much a company may try, it cannot remain in the growth stage if all the customers have already bought the product. Similarly, it cannot escape the decline stage if its customers have found an alternative to serve their needs.
- A company can falter badly if it adheres too strictly to the prescribed strategies of various PLC stages. There can be circumstances where appropriate marketing strategy in the growth phase is harvest, because the company faces stiff competition from players who are technologically advanced. Similarly, a company may decide to grow in maturity stage because it has developed a differential advantage. A company may also decide to grow in decline stage, because it may seek to dominate whatever market may be left. Marketers must monitor the real changes that are happening in the marketplace before setting objectives and strategies.

5.4 FUNCTIONAL MANAGEMENT STRATEGIES FOR DIFFERENT PHASES OF PLC

At different stages of the product's life cycle, there are changes in a company's strategies due to change in the number of competitors, intensity of competition and level of consumer sophistication. A company should also keep track of the development of substitute products.

1. Introduction

Customers may not even be aware of the needs that the product professes to serve, or they may believe that such needs cannot be served due to the unavailability of technologies. Therefore, the pioneer needs to make potential customers aware of their latent needs, and its solution to those needs. The company builds sales by recruiting as many customers as it can, and it focusses on building the market share rapidly. It communicates profusely to create awareness about the product, and makes them aware of its generic benefits. Customers are suspicious of the product's benefits and are not sure if it will serve their needs, and therefore heavy expenditure on advertising and personal selling is essential. At this stage, the product is fairly basic with emphasis

Check Your Progress

4. What is a balanced product portfolio?
5. Mention two products that stay in the maturity stage for a longer time period.

on reliability and functionality, rather than having special features to appeal to different customer segments. Promotion should stimulate trial. Both advertisement and sales promotion schemes can be used.

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Price can be high as the company would be keen to recover the heavy development cost that the company incurs. The company can afford to charge high prices as there is no or very less competition. But low prices are helpful at this stage as customers consider buying a low-priced product less risky when they are not sure of its benefits.

Distribution can be patchy as some dealers will be wary of stocking the new product as they may not be sure of its acceptability by customers, but it is very important to ensure adequate distribution of the product. Company's promotional programmes build up awareness, curiosity and desire for the product but when customers do not find the product on the shelves, they tune out the product from their minds for a very long time. In fact, before the company starts its promotional blitz, it should ensure that the products are available on the shelves. They may have to provide extra benefits to wholesalers and retailers to stock the new product. Most new products fail due to lack of their availability rather than due to customers not wanting to buy it.

2. Growth

Customers are aware of the product at this stage and are convinced that it serves their needs. They understand the generic benefits of the product and the company now builds sales and market share by building brand preference. The product is redesigned to create differentiation, and the promotion lays stress on the benefits of the differentiated product. The focus is on ensuring repeat purchases. The company tries to achieve this purpose by focussing its efforts on building a strong brand. A strong brand built at this stage helps the company to fight competition as they emerge in hordes at this stage. There is pressure on prices due to entry of large number of competitors.

At this stage, different segments start emerging, and the company has to make a decision as to which of the segments it will attempt to serve. Some pioneers try to serve the whole market with one or a few standard products even when segments have clearly emerged. This is a mistake. Focussed competitors will emerge, which will target specific segments and take away the market share from each of the segments. Most pioneers lose their first-mover advantage by their attempt to indiscriminately serve all the segments as they did in the introduction stage. The pioneer should select a few lucrative segments and target those segments with separate offerings for each of them.

Distribution will be widened to serve the new segments but channel intermediaries will now be interested in carrying the product. The product may have to be made available in different retail formats because customers of different segments buy differently. Therefore a product may have to be made available in a company-owned retail store, departmental store and a discount store simultaneously.

3. Maturity

The market does not grow at this stage. The company should hold on to profit and market share rather than embark on costly competitive challenges. Since a company can gain sales only at the expense of competition, strong challenges are resisted by competitors and can lead to costly promotional price war. Brand objective now focusses on maintaining brand loyalty and stimulating repeat purchases. For all but the brand leader, competition may erode prices and profit margins.

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In this stage, companies are tempted to engage in costly promotional price wars to wean away market share from competitors. But such victories are ephemeral. Most companies are not able to affect permanent shifts in market shares with promotional pricing. Therefore, instead of trying to match promotional pricing schemes of competitors, the company should focus on strengthening its brand by differentiating its offering. In the maturity stage, companies should realize that they cannot grow at the rate at which they did in the growth stage. They target unrealistically high growth rates, which is largely a hangover from their growth stage times. Such targets set the companies on the pernicious path of promotional pricing.

Companies in the growth stage should realize that the maturity stage will last for a long time and should put in place a low cost manufacturing and marketing infrastructure so that they are able to earn a decent return in the long maturity period. The company should target small, incremental growth rates which they should achieve by shifting customer preferences to their brands permanently, by differentiating and strengthening their brands.

4. Decline

A company should anticipate the impending decline in sales. The biggest hurdle in adoption of suitable strategies for the decline stage is marketers' false belief that it is not coming or at least will not come so soon.

The company should analyse changing customer requirements or/and effectiveness and acceptability of emerging substitute solutions to gauge the speed at which its product will become redundant. Sometimes, the customers' requirements may have changed dramatically or the emerging solution may be very effective, so the company will have to make plans to exit the market immediately. Companies that make this assessment early will get a better value for the business when it tries to sell it, as the market may not yet be aware of the impending decline.

At other times, the customers' requirement may be changing gradually and the emerging solution may have bugs or may be slow in getting accepted, therefore the company can plan a more gradual withdrawal.

In general, failing sales may induce companies to raise prices and slash marketing expenditure. Brand loyalty will be exploited to create profits. Product development will be halted, product line depth will be reduced and promotional expenditure will be reduced. Only the most profitable distribution outlets will be retained.

5.4.1 Financial, Marketing and Personnel Initiatives in Different Phases of Product Life Cycle

Products require different marketing, financial, manufacturing, purchasing, and human resource strategies in each life-cycle stage. Resource allocation should be in accordance with the stages in the product lifecycle. The logic behind it is that resource requirements vary at different stages in the life cycle of a product and changes in the stage of its life cycle also determine the strategic choice. For example, with retrenchment strategy assigned to a product division, you may suggest a zero-based budgeting, which implies that resource allocation needs to rely on budget requests justified in detail from its inception rather than in the light of allocations of the previous period. Similarly, marketing and personnel initiatives are also influenced by the stage of development of the product.

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1. Introduction phase

In the introduction phase, sales may be sluggish since the company creates awareness of its product among potential customers. Advertising is vital at this stage, so the marketing budget is often generous. The kind of advertising depends on the product. For example, if the product is intended to reach a mass audience, then an advertising campaign created around one theme may be in order. On the other hand, if a product is specialized, or if a company's resources are limited, smaller advertising campaigns would be more appropriate.

You have already learned that the introduction phase is the period of slow sales growth. Profits in this phase are marginal because of heavy expense of product introduction. The overall marketing strategy in this phase is to attract the opinion leaders, who are essential in communicating the product's benefit to consumers. The marketers require market data that help them define the product's most favourable targeting, positioning and profiling.

To increase consumer awareness and willingness to buy the product, the following activities are suggested:

- Developing opinion leaders
- Developing media spokesperson
- Reducing risks
- Adapting promotional mix
- Sampling or couponing
- Broadening product offering
- Modifying marketing channels

2. Growth phase

In the Growth phase, promotional activities tend to focus on expanding the market for the product into new segments – usually either geographic or demographic – and supporting this by expanding the product family. In this phase, product's sales revenue is modest but fast growing and its profitability is growing. Early adopters like the product, and additional consumers start buying the product. Marketers' main objective in this phase is to enlarge the distribution and product line by offering new product benefit and forms. Increasing competition reduces the product price. Sales force expands. It shifts its priority from a few consumers to a large number of consumers.

During the growth stage, the marketers use several strategies to maintain brisk market growth, such as:

- They improve product quality and add new product features and styling
- They add new models and flanker products
- They enter new market segment
- They shift from product awareness advertising to product preference advertising

- They lower the price to attract the next layer of price sensitive buyers
- They increase distribution coverage and enters new distribution channel.

3. Maturity phase

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This phase is characterized by a steady sale performance with low cost and high profits. By the time a product reaches its maturity phase, the company producing it needs to garner significant rewards for the time and money spent in the development of the product so far. At this stage, marketer is occupied with maintaining the products advantage and fighting new competitive new product launches with new features and benefits. The product's characteristics may continue to be refreshed from time to time, and there will still be some promotion to differentiate the product from the competition and increase market share. However, the marketing activity and expenditure levels may be much lower than earlier on in the lifecycle.

The maturity phase is divided into three sub-stages:

(i) Growth stage

The characteristics of this sub-phase are as follows:

- Sales growth rate starts to decline.
- There is no new distribution channel to fill.
- New competitive forces emerge.

(ii) Stable

The characteristics of this sub-phase are as follows:

- Sales flatten on per capita basis because of market saturation.
- Potential consumers have tried the products and the future sales govern by population growth and replacement demand.

(iii) Decaying maturity

The characteristic of this sub-phase is as follows:

- Absolute level of sales starts to decline, customers begin to switching over to other products.

4. Decline phase

Once the product starts to decline, marketing support may be withdrawn completely. Sales are completely dependent on product's residual reputation amongst a small market sector (for example, elderly people may continue buying products that they started using forty or even fifty years earlier.) By this stage, the most vital decision that needs to be made is when to withdraw the product from the market entirely. The sales force ensures that the product is not allowed to start costing its producer money, and this can easily happen if production costs increase as volumes drop.

Sales decline for a number of reasons, such as

- Technological advancement
- Shifting consumer taste
- Increased domestic and foreign competition
- Increased price cutting

Check Your Progress

6. Why are low prices helpful at the introductory stage?
7. What is the brand objective of a company during the product's maturity stage?

5.5 STRATEGIC INTERVENTION FOR PLC MANAGEMENT

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5.5.1 PLC as a Strategic Marketing Tool

A company's attempt to successfully use the strategic concept of the product life cycle depends on its ability to precisely identify the transition from one stage of the product life cycle to another. This can be accomplished only when the company is intensely marketing-oriented. The company should also encourage development of marketing research and marketing intelligence techniques to achieve its marketing objective.

The use of the product life cycle provides valuable benefits to the company:

(i) It provides the company with a tool to forecast future product development and thus helps the company to formulate its strategy. It also helps the company in planning their budget accordingly.

(ii) The PLC as a strategic tool can also help the company in planning beyond the existing line of product. Alternatively, the company can plan some additional or substitute products with more consumer acceptability.

(iii) Another important aspect of the product life cycle is the fact that although every product has to undergo its life cycle, the length of the life cycle differs from item to item. Products like tooth paste, toilet soap, eatables, etc., will have a longer period of the growth and maturity stage when compared to durable goods like radio, which has been substituted with television.

By adopting an aggressive product strategy, the company can prolong the growth and maturity phase of the product's life cycle. Such a strategy will include the following:

(a) Carrying out product modifications

(b) Encouraging the consumers to frequently use the product

(c) Creating a new market for its product, i.e., the segment, which has remained untapped so far

(d) Locating new users in the existing market

Among the various strategies adopted by the company in order to extend the growth and maturity stage of the life cycle product, the modification strategy is the most crucial. Product modification strategies help the company in improving the quality and functional utility of the product.

Functional utility of a product can be achieved by adopting the following measures:

1. Improvement in product efficiency and personnel level of the product.
2. Reducing the cost of the product.
3. Adding more features to the product
4. Finding new applications for the product.
5. Increasing the convenience level of the product, i.e., incorporates easy to handle features. Example: Buying a broadband connection which can be used both as Internet as well as a telephone line. Redesigning a sofa in such manner that it can work as a sofa cum bed.

Any product modification that is carried out by the company should be based on real customer needs. However, the main problem of the functional modification of the

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product is that it may increase the cost of the product and may adversely affect the sales of the product.

Yet another strategy adopted by the company to extend the growth and maturity stage of the product's life cycle is to bring about changes in the quality of the product. Any change in the quality of the product is likely to affect the cost, performance and durability of the product. A change in the quality can either improve or reduce the performance level of the product. As a part of the product modification strategy, the company may decide to bring down the quality of the product in order to reduce its cost so than it can easily enter in the lower market segment. Similarly, the company may decide to further improve the quality of the product so that apart from retaining its existing customer base, it can also attract customers of superior brands.

Another method to increase the life of a product that is followed by companies, is to bring changes in product presentation and style. This kind of product strategy has been used quite successfully in the automobile market where customers eagerly wait for new models every year.

Products such as apparel, shoes, cellular phones, furniture, etc., are forced to undergo large scale changes in style in order to remain alive in the market. Thus it becomes very difficult to predict what the style of these products will be in next few years.

The marketing strategy of the company tries to create an illusion of product change or product modification without making any major change in the product itself. This is usually done by making changes in the packaging and advertising appeal. For example, manufacturers of pain relief products like Crocin claim better effectiveness by bringing out different varieties in different packaging like 'Crocin for fever', 'Crocin for pain relief, 'Crocin for cough and cold', etc., even though there is hardly any major chemical improvement in the product.

5.5.2 Focus and Investment in Various Stages of the PLC

The focus and amount of investment should be adapted to the dynamics of various stages of the product life cycle.

In the early stage of the product life cycle, companies have the greatest potential to invest in developing loyal customers. Early entrants alert customers about the existence of the category, define the category in terms of initial consumer preference, influence consumer choice criteria to some extent by their early offering, allow their product to become the base on which consumers compare offerings of later entrants and build a customer base. In these early stages, cumulative marketing investment is a strong determinant of market share and therefore early entrants should make adequate investments.

But discretion has to be exercised. There would be few competitors and it can be tempting to pursue all the customers of the category, but the early entrants cannot afford to build high levels of loyalty with every customer. This is an opportunity to select the most profitable customers and the segments which are likely to grow faster than the others since there are not many competitors vying for them. Early entrants often make the mistake of trying to cater to the whole market and hence spreading their investments very thin. The result is that no particular segment develops special affiliation to them. When the market is invaded by other players, they do it segment by segment and the entrants have to cede one segment after another to these focussed competitors. It is imperative that early entrants direct their investment and attention to a chosen set of customers and segments and not fritter it away on the whole market, however strong the temptation might be to grab the whole pie.

In the growth stage, business customers who are expected to grow faster than their competitors should be targeted. These customers would still be small in operation and would be flattered to be courted with tailor made offerings but these same customers would grow big in future and demand huge concessions from their suppliers. The locking-in of the prospective mega companies would reap rich dividends.

In the maturity stage, investment and attention should be focussed on customers who are unhappy with their existing suppliers and are likely to switch if more appropriate offerings are made to them. As a market matures, the sophistication of customers increases, and the market is splintered and there is multitude of customer preferences. Under such circumstances, the number of customers who will be unhappy with their existing suppliers will be increasing and it would be wise to invest in them.

In the decline stage, the effort should be to protect the existing loyal customers and to further focus on the most profitable among them. If loyal customers are not protected, they can become potential switchers.

5.5.3 Industry Life Cycle

The strategies of a company must be in sync with the dynamics of various stages of the industry life cycle.

Most new industries are fragmented, and they consolidate as the industry matures. Most industries progress predictably through a clear consolidation life cycle. Once an industry forms or is deregulated, it will move through four stages of consolidation. An understanding of where an industry is in the life cycle should be the cornerstone of a company's long-term strategy.

- The first stage in an industry life cycle begins with a single start-up or a monopoly emerging from a newly deregulated or privatized industry. But competitors quickly enter the industry and the market share of the leader goes down. At this stage, companies should aggressively defend their first-mover advantage by building scale, trying to go global and establishing barriers to entry by protecting a proprietary technology or idea. They should focus more on revenue than on profit, working to amass market share. They should be ready to acquire other companies. Intensive brand image building exercises should be a part of the plan.
- The second stage is all about building scale. Major players emerge and buy competitors. Because of a large number of acquisitions happening at this stage, companies should develop skills in mergers and integration. These skills include protecting their core culture as they absorb new companies, and retaining the best employees of acquired companies. Major players should have captured the major competitors in the most important markets and should have expanded their global reach.
- At the third stage, companies focus on expanding their core business and aggressively outgrow the competition. This is a period of mega deals and large scale consolidation. The goal is to emerge as one of a small number of global industry leaders. Companies at this stage need to emphasize their core capabilities, focus on profitability and either shore up or part

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with weak businesses. The well-entrenched players will attack underperformers. They should be able to identify strong competitors and avoid all-out assaults on them. They should also be able to identify start-up competitors early on so that they can decide whether to crush them, acquire them or emulate them.

- In the last stage, few industry leaders reign. The top three companies can claim as much as 70–90 per cent of the market. Large companies may form alliances as growth is more difficult to come by. They must defend their positions. They must be alert to the danger of being lulled into complacency by their own dominance. They must find new ways to grow their core business and create a new wave of growth by spinning off new businesses into industries in early stages of consolidation.

A company's long-term success depends upon how well it moves from one stage of the industry life cycle to the next. Speed is vital and company's merger competence is important, particularly during the middle stages of consolidation. Companies that evaluate each strategic and operational move according to how it will help in moving successfully through the stages will be more successful. Slower companies will be acquired. Companies cannot survive the stages by trying to stay out of the contest. They will have to be in the fray and fight it out.

5.6 SUMMARY

Some of the important concepts discussed in this unit are:

- The life cycle of a product starts as soon as it is launched in the market. Every product takes birth and eventually dies. In short, each product has an introduction and a decline. The intervening period is characterized by growth and development.
- A product life cycle (PLC) undergoes four stages: i) introduction, ii) growth, iii) maturity and iv) decline. The various factors affecting PLC are: i) changing technology, ii) rate of acceptance of the product by the customer, iii) level of competition in the product market, iv) risk taking capacity of the producer, v) brand image/good will of the product.
- There are two major factors that play a critical role in PLC: i) the changing needs of customers and ii) emerging technology trends that creates improved products. Based on these two factors, a product either rules the market or disappears from it.
- Product life cycle analysis helps a company in managing a product portfolio instead of letting market forces shape it. Based on the analysis, a company can shape up their strategies of market entry.
- PLC drives a company to keep working on new products so that when the launched product enters its decline stage, the company can introduce its line of new products.
- The classic S-shaped PLC curve doesn't apply to all new products. For technology products, the curve may rise and fall too soon. Sometimes lack of

Check Your Progress

8. What is the most crucial strategy adopted by a company to extend growth at the maturity stage?
9. What is the first stage of an industry life cycle?

aggressive marketing also shortens the PLC. No company can control the various stages of PLC, because they are determined by external factors.

- At times, in spite of the right marketing strategies, products fail to survive. This is due to the stiff competition in the market, where the customers prefer the competitor's product.
- There are functional management strategies to tackle different stages of PLC. At the introduction stage, companies must create the latent needs among customers, and project its product as a solution to those needs. It's important for companies to introduce their products to the customers, and raise the necessity bar.
- After customers become aware of the product, and are convinced that it serves their needs, the next plan of the companies is to build sales and brand preference. At the growth stage of a product, companies aim to create differences in its product and highlight this differentiation as the benefits.
- At the third stage, i.e., the maturity stage, companies aim at maintaining brand loyalty and encouraging repeat sales. Since the market doesn't grow at this stage, the company tries to hold on to its profit, rather than getting onto competitions.
- At the decline stage of a product, a company should analyse the changing preferences of customers and gauge the emerging trends in products. Companies try to make the most of brand loyalty to generate profits at this stage. They halt product development, maintaining only the most profitable distribution outlets.
- A company can use the PLC as a strategic concept only when it can precisely identify the transition from one stage of the product life cycle to another. The right analysis of PLC can provide various benefits to a company.
- With the aid of PLC analysis tool, a company can forecast future product development, plan beyond the existing product line or add some alternative product as a backup.
- Among the various strategies adopted by companies to lengthen a product's growth and maturity stage, the modification strategy is the most crucial. Product modification strategies help the companies in improving the quality and functional utility of the product.
- Companies also try to increase their products life cycle by changing the quality of the product. Also, changing the product presentation and style is another strategy to extend the PLC.
- A company's strategies would fail if they are not in sync with the stages of industry life cycle. Most industries evolve through a clear consolidation life cycle. A company's long-term strategy can't be stabilized until the industry life cycle is comprehended well.
- A company's long-term achievement depends on how it transits from one stage of the industry life cycle to the next. Speed of the transition is very important for the company's success.

5.7 ANSWERS TO 'CHECK YOUR PROGRESS'

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1. The life cycle of a product starts when it enters the market.
2. The two types of pricing strategy are: skimming pricing strategy and penetration pricing strategy.
3. The two basic reasons for the survival of the product during the growth stage and their successful entry in the maturity stage are: (a) Competitive strength of the product; (b) Customer's passion to acquire these products.
4. A balanced product portfolio puts its product in various life cycle stages so that it can regulate the revenue earned form the product.
5. Products such as, toothpaste and bathing soap stay in the maturity stage for a long time.
6. Low prices are helpful at the introductory stage because customers consider buying a low-priced product less risky as they are not sure of its benefits.
7. The brand objective of a company during the product's maturity stage focusses on maintaining brand loyalty and stimulating repeat purchases.
8. The most crucial strategy adopted by a company to extend growth at the maturity stage is the modification strategy. Product modification strategies help the company in enhancing the quality and functional utility of the product.
9. The first stage in an industry life cycle begins with a single start-up or a monopoly emerging from a newly deregulated or privatized industry.

5.8 QUESTIONS AND EXERCISES

Short-Answer Questions

1. List the critical features of the introductory stage.
2. Outline the factors that affect the life cycle of a product.
3. What are the reasons for change in product life cycle?
4. List three limitations of the PLC analysis.
5. Identify the biggest hurdle in adoption of suitable strategies for the decline stage.
6. Mention three benefits that a company can derive with the analysis of a PLC.
7. Describe in brief the first stage of industry life cycle.

Long-Answer Questions

1. Explain the significance of product life cycle.
2. How is the pricing strategy formed in the introductory stage of a product life cycle?
3. Explain the S-curve of a product life cycle. Support your answer with a diagram.
4. Discuss the various factors that affect PLC.
5. What are the uses of the product life cycle analysis?
6. 'A company's strategies for a product keep changing according to the various stages of PLC.' Explain.
7. How is PLC used as a strategic marketing tool? Explain.

UNIT 6 PRODUCT STRATEGY AND POLICY

NOTES

Structure

6.0 Introduction
6.1 Unit Objectives
6.2 Product Portfolio strategy
 6.2.1 Boston Consulting Group Growth Share Matrix
 6.2.2 General Electric Market Attractiveness–Competitive Position Matrix
 6.2.3 Contribution of Product Portfolio Planning
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 6.5.2 Frequency of Purchase
6.6 Launch Time Strategy
6.7 Mitigation of Cannibalization
6.8 Product Research: Areas and Components
6.9 Summary
6.10 Answers to 'Check Your Progress'
6.11 Questions and Exercises

6.0 INTRODUCTION

This unit deals with the strategies and policies involved in the management of the product portfolio, investment, divestment, development and research. Here, we explore the concepts of product portfolio strategy and its importance. We look at the significance of strategizing product investment and divestment which aids in optimal utilization of the companies' resources.

Later in the unit, you will study about new product development policy, consistency of the product line and its importance, frequency of purchases and techniques for its increase. You will also learn about launch time strategies, the various types of corporate cannibalization and the methods to mitigate its impact. The unit comes to a close with the study of the components and area of product research.

6.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain product portfolio strategy
- Differentiate between product investment and disinvestment strategies
- Discuss the launch time strategy

- Discuss how corporate cannibalization can be diminished
- Analyse the various areas of product research

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6.2 PRODUCT PORTFOLIO STRATEGY

Most companies have a portfolio of products, with each product serving a different market. Some of these products generate profits, and some of them lose money. Some products require investment to finance their growth, while other products generate more cash than they need. A company has to decide on how to distribute its limited resources among competing needs of products to achieve the best performance for the company. It needs to decide which brands/product lines to build, hold or withdraw support. The process of managing groups of brands and product lines is called portfolio planning. A portfolio of products can be examined using the Boston Group Consulting Matrix.

6.2.1 Boston Consulting Group Growth Share Matrix

The Boston Consulting Group (BCG) matrix enables a company to start thinking about setting a right strategic objective for each aspect of its business, be it building, holding harvesting or divesting. The main aim of the BCG matrix is to identify the cash generators and the cash users. This categorises the products into one of four different areas, based on:

(i) Market share – the sold product has a low or high market share

(ii) Market growth – the growth of potential customers in the market

- A company operates in various businesses or markets. Each of its businesses operates in different conditions. The corporate has to realize that each of its businesses will earn different amounts of profits and will require different amounts of investments. They should learn to expect different amounts of profits from its different businesses and should invest in them depending on their requirements.
- In the BCG matrix, market growth rate is shown on the vertical axis and indicates the annual growth rate of the industry in which each product line operates. It is used as a proxy for market attractiveness, i.e., the higher the growth rate, more attractive is the industry to do business in.
- Relative market share is shown on the horizontal axis and refers to the market share relative to the largest competitor. It acts as a proxy for competitive strength.
- Cash flow is dependent on the box in which a product falls.

Stars are market leaders and earn high revenues but require substantial investments to finance growth and thwart competitive challenges. Therefore, a star's overall cash flow is likely to be in balance.

Problem children/? are products in high growth markets, and therefore they incur huge marketing expenditure in reaching out to growing number of customers.

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They also incur costs in setting up new manufacturing units to be able to serve the growing markets. But their market share is low and therefore they do not generate much revenue. Problem children need lot of cash, but do not generate much revenue, and therefore a company cannot have too many problem children in its portfolio.

Cash cows are market leaders in mature, low-growth markets, i.e., investment in new production facilities and marketing is minimum. High market share leads to large revenues and hence, positive cash flow.

Dogs also operate in mature, low growth markets but their market share is low. Therefore, they earn low revenues. Most dogs produce low or negative cash flows, except for some products near the dividing line between cash cows and dogs.

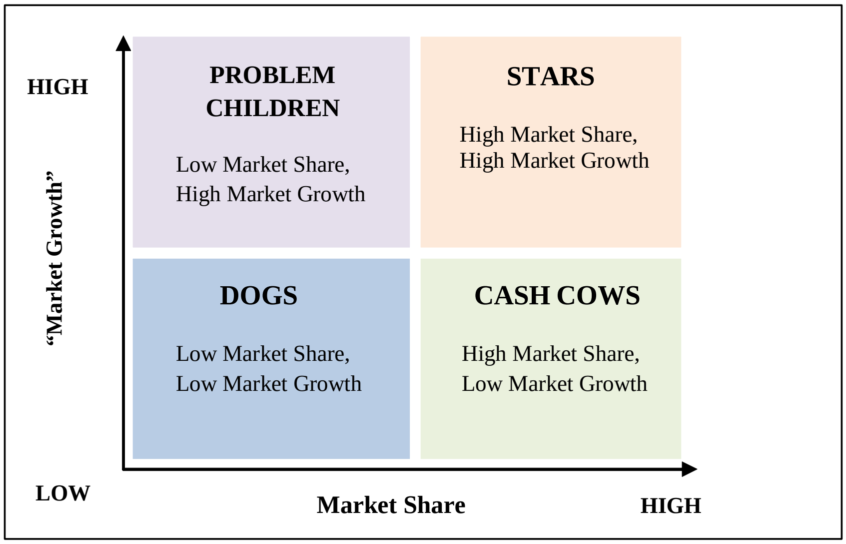

Fig. 6.1 *Growth Share*

Strategic objectives

Stars

The company is in a market which is growing rapidly. A star is a leader in its market, but it has to remain focussed on building market share. It needs to keep investing to maintain and increase its market share. Competitors should not be allowed to build market share, and their competitive moves like new product introduction or price reduction should be promptly thwarted. A company should be keenly aware that if the market share of its star falls, it is changed into a problem child. The growth rate of the market eventually declines and the star is changed to a cash cow. Therefore, a company needs to keep investing in its stars, because they are the cash cows of the future. A company can be lavish with its stars as it will provide profits for a long time.

Problem children

The market is growing at a high rate but the market share is low. The choice is to increase investment and build market share to turn it into a star, or to withdraw support by either harvesting (raising prices while lowering marketing expenditure) or divesting (dropping or selling) or to find a small market segment where dominance can be achieved (niche). Since the market is growing rapidly, such a company will require lot of investment even to stay in the same position. Therefore, a company has to make a swift decision. It has to pump in resources to convert it into star or the business should be dropped. The company cannot afford to keep a problem child in its position for a long time. It will gobble up huge amount of resources and turn no profits.

Cash cows

The market is growing at a slow rate and business is the market leader. Expenditure can be controlled as the business does not need to spend on new manufacturing facility or reaching out to new customer segments. But the revenue is high due to high market share. Therefore, cash cows earn high profits. The company's objective should be to hold on to its sales and market share. If the business fails to hold on to its market share, it will be converted to dog.

Since cash cows earn profits for the company, it will be tempting to make investments in modernization of manufacturing facilities and in sophisticated branding exercises. The company should avoid any investment in excess of what is required to maintain the market share and keep on increasing it incrementally. Excess funds should be used to fund stars and problem children/?.

Dog

The market is growing at a slow rate and the market share of the business is low. The business does not earn profits. The company should look at such a business closely to find out if the business has enough remnant strengths to be converted to a cash cow by making appropriate investments. Normally, one or a few elements of such businesses are weak. A business may have a good brand image, but it may have outdated manufacturing facility, so the business can recover if investments are made in the upgrading of the manufacturing facility. A business classified as dog should not be an automatic candidate for closure. It may also be possible to reposition the product into a defendable niche.

But if the business is weak in many facets, the company should take swift action to retrieve as much cash as possible from the business. For such dogs, the appropriate strategy will be to harvest to generate a positive cash flow or to divest and invest somewhere else.

Maintaining a balanced product portfolio

The portfolio is unbalanced when there are too many problem children and dogs, and not enough stars and cash cows. Enough investments should be made in cows so that they are able to maintain their market share. One or two problem children should be invested in. Most companies will not have enough resources to invest in many problem children. Stars should continue to receive adequate support. The aim should be to build existing stars and build market share of chosen problem children. Dogs should be harvested or divested, if it is believed that they cannot be resurrected.

Criticisms of the BCG matrix

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Though the BCG matrix is a useful technique for evaluating the product portfolio of a company, it has come under a lot of criticism. One of the most important reasons is that companies have found it far too simplistic to use.

- The assumption that cash flow will be determined by a product's position on the matrix is weak. Some stars will show a healthy positive cash flow as will some dogs in markets where competitive activity is low.
- Treating market growth rate as proxy for market attractiveness and market share as indicator of competitive strength is over simplistic. Other factors like market size, brand strength are also important.
- When competitive retaliation is likely, cost of building market share outweighs gains. Therefore, excess stress on market share may be harmful.
- The analysis ignores interdependence among products. A dog may complement a star. Customers may want a full product line. Dropping a product because they fall in a box may not be beneficial.
- Some products have a short product life cycle and profits should be maximized in the star stage instead of building them.
- Competitors' reactions are not assessed. When a company makes investments to build market share of a problem child, the incumbent stars are going to react. The suggested strategies for the businesses in each quadrant are simplistic and do not account for market dynamics and competitor reactions.
- The matrix does not define a market i.e., the whole market or a segment. There is vagueness about the dividing line between high and low growth markets. A chemical plant may use 3 per cent as the dividing line, whereas a leisure goods company may use 10 per cent.
- The matrix does not identify which problem children to build, harvest or drop.

6.2.2 General Electric Market Attractiveness–Competitive Position Matrix

The businesses of the corporate operate in different markets and are at different stages of evolution. The effort is to classify the businesses in a way so that the corporate is able to identify appropriate investment policies and strategies for each of its businesses.

- **Market attractiveness criteria**: Instead of market growth rate alone, a range of criteria are used, such as market size, strength of competition, market growth rate, profit potential and social, political and legal factors.
- **Competitive strength criteria**: Instead of using only market share, a number of factors are used, such as market share, potential to develop a differential advantage, opportunities to develop cost advantages, reputation and distribution capabilities.

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- **Weighing the criteria**: The management decides as to which criteria are applicable for their products. They would agree upon a weighing criterion for each set of criteria. Then, each factor is scored out of 10 to reflect how each product rates on that factor. Each score is multiplied by the factor weight and summed to obtain overall market attractiveness and competitive strength scores for each product.

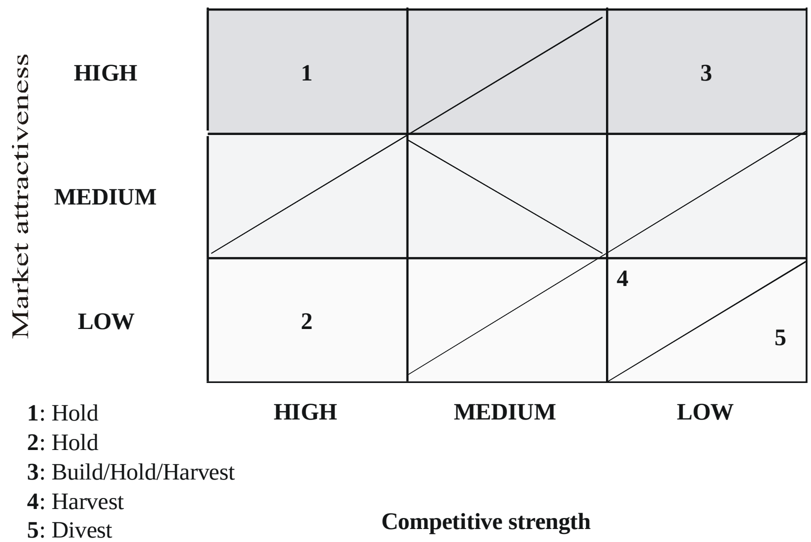

Fig. 6.2 *The General Electric Attractiveness-competitive Position Matrix*

Market attractiveness

	Weight	Score	
	(in comparison to other markets/industry)		
Market size	.5	5	2.5
Market growth rate	.3	6	1.8
Profit potential	.2	2	0.4
			4.7

Competitive strength

	Weight		Score
	(in comparison to other players in the market)		
Market share	.4	4	1.6
Cost of advertising	.3	3	.9
Distribution	.3	6	1.8
			4.3

With market attractiveness plotted on the y-axis and competitive strength plotted on the x-axis, it is possible to identify nine cells with different combination of market attractiveness and competitive strength. A specific strategy can be prescribed for each of the cells as shown in Fig. 6.2.

Criticism

Managers need to agree on which factors to use, their weighings and scoring. Bias enters the analysis whereby product managers argue for factors and weighing to show that their products are doing well. Senior managers should conduct such analysis so that biases do not creep in and the exercise does not become a tool in the hands of product and brand managers to protect their own products and brands.

6.2.3 Contribution of Product Portfolio Planning

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- **Different products and different roles**: Profit expectation and investment requirement depend on a business's position in the matrix.
- **Different reward systems and type of managers**: Managers of products which are being built should be intent on increasing sales and market, and should be of an expansive mindset. In contrast, managers of products that are being harvested should be cost-oriented, and should be rewarded for selling the company's assets at a lucrative price.

6.3 PRODUCT INVESTMENT AND DISINVESTMENT STRATEGIES

Product investment and divestment strategies are essential in optimally utilizing and allocating a company's resources.

6.3.1 Investment Strategy

Product investment strategy seeks to help a company invest its resources effectively by achieving the right portfolio of projects and development investments.

Product investment strategy: Product investment strategy seeks to help a company invest its resources effectively by achieving the right portfolio of projects and development investments

Strategy development is where the product development goals are specified. Some examples of product development goals are profit from new products, the markets and product areas which the new products will target and the breakdown of product development investments across product areas, markets and project types.

Decisions on individual products are taken and resources are allocated to development work. Projects are periodically reviewed to address vital questions like: Does the company have the right portfolio of new-product projects? Is this how the company will spend money in order to maximize its performance?

At portfolio review meetings**,** the executive management uses data like net present value (NPV), adjusted by the technical and commercial probabilities of success, to evaluate the feasibility of each project. The projects are then selected and prioritized according to their expected commercial values.

6.3.2 Disinvestment Strategy

A **product disinvestment strategy** is a plan, whereby a product line is liquidated or sold to limit real or anticipated losses. The strategy also aims to redirect the resources behind that product line or division to other company products or divisions. Product discontinuation may involve selling the product to another company or group of investors, or the sale of intellectual property, designs, or technologies as a means of recouping losses.

Product disinvestment strategy: A product disinvestment strategy is a plan, whereby a product line is liquidated or sold to limit real or anticipated losses

The company takes into consideration whether a product fits a unique need that makes it relevant to the customer. In some cases, a product isn't discontinued but rather repositioned and re-launched later.

NOTES

A business may choose to terminate the operations of a facility for a number of reasons. The products may become obsolete or lose their appeal to the buying public. If the equipment cannot be adapted to manufacture other products, the decision may be made to close the facility and sell off the assets related to the operation before any more loss takes place. This allows the company to avoid paying any additional taxes on property and assets that are no longer productive.

Reasons to disinvest

A company may decide to disinvest due to various reasons.

1. Small market share

Companies may decide to divest when their market share is too small for them to continue producing the product or when the product doesn't yield the expected profit returns.

2. Better alternatives

Most organizations have limited resources and they can plan to invest in a new or better product only by divesting from the existing one.

3. Need for increased investment

Sometimes, companies reach a point where continuing to produce or develop a product might prove very expensive. The companies might not be in a position to make large investments in terms of equipment, advertising, research and development. So instead of investing more, firms may choose to divest that part of the business.

4. Lack of strategic fit

Another reason for divesting is that the acquired business doesn't resemble the image or the strategies of the company. This usually happens when a company acquires diversified business. Also, restructuring the existing business can lead to such a condition.

5. Legal pressures

Companies may be forced to divest product development processes due to trade restraints. In such a condition, a company would divest to avoid legal consequences.

6.4 NEW PRODUCT DEVELOPMENT POLICY

In Unit 1, we have discussed about the new product development process, where a company develops new products or modifies existing products, and offers them to the market. Before a product is developed, a company formulates certain policies to carry out the process. Such a policy is called product development policy.

As we have seen, product development is a complex process that consists of various stages.

Check Your Progress

1. What is product investment strategy? Why do we need it?
2. What is product divestment? Why is it done?

Generally, product development policy comprises several aspects:

- A detailed study of competitors and customers' needs
- A keen observation of the ruling and future market trends
- The availability of resources to finance prototypes and production processes
- An innovative marketing and advertising plan

The various types of product development policies are discussed as follows:

1. Product Development Diversification Policy

When an organization sees no scope of growth due to saturated market conditions or falling revenues and profits, it employs product development diversification policy. This strategy steers clear of the existing market and develops an entirely new product for a new market segment. For example, a company that is into selling children's garments decides to develop a new clothes line for teenagers. The new product is one-of-a-kind as there are other firms selling similar products. But the product is new to the company producing it.

2. Product Modification Policy

Some companies formulate policies to modify an existing product, with the aim of reviving it and also capturing new customer segments for the new product. An example of this strategy is children's health drink. Health drinks that provide energy, also promise to supply other health benefits, such as strengthened bones, sharper memories and increased height and so on.

3. Revolutionary Product Development

The policy that plans to develop a new product, for which the customer has felt no prior need, can be termed as **revolutionary product development policy**. Before these products appear on the market, consumers had no idea how it could revolutionize their way of life. For example, the internet changed the way we communicate. It not only made communication faster, but also more personal.

Product development policy also includes:

1. Benchmarking the Process

Whatever policy a company employs, the new product development process sets some benchmarks to formulate a product. Benchmarking examines whether the process should be continued, as it is usually costly and takes a lot of time. For example, if a company is working on a new product, but its competitor goes ahead and launches the same product, the company has to take a decision whether or not to continue developing the product.

2. Consumer Participation

Notwithstanding what the product development strategy of a company is, consumers' feedback should be involved in the process right from the beginning to the end. The policy sets aside enough resources for consumer evaluation and reserves enough scope to incorporate consumer feedback.

NOTES

Revolutionary product development policy: The policy that plans to develop a new product, for which the customer has felt no prior need, can be termed as revolutionary product development policy

Check Your Progress

3. Why is product development policy required?
4. Mention the different types of product development policies.

6.5 PRODUCT LINE CONSISTENCY

NOTES

In Unit 1, we had discussed in detail how consistency is one of the important components of product mix. A product line is a group of items produced by a company which are similar or related. The products may have common physical or technical characteristics.

6.5.1 Product Line Consistency

Product line consistency is the level to which product lines are related. It also indicates how closely related are the various product lines in end use, production requirements, or distribution channels.

Companies may develop one product line, or may expand for a mass appeal. Product line consistency helps an organization determine which product lines to promote and how are they to be marketed.

Purchase frequency: Purchase frequency is defined as the number of times a customer makes a purchase in a given period of time

6.5.2 Frequency of Purchase

Purchase frequency is defined as the number of times a customer makes a purchase in a given period of time. This metric can be calculated for a week, a month, 6 months or a year depending on the category being studied. Purchase frequency measures the value of a customer in terms of the number of purchases made and the length of time between purchases, as well as, the length of time since the last purchase. The higher the degree of recency and frequency, the more valuable the customer is.

Purchase frequency can be increased by promoting additional uses for the product. Products with a high purchase frequency require a sustained, year round advertising effort to avoid losing market share. Products with a low purchase frequency require seasonal advertising efforts.

How to increase purchase frequency?

Sales promotions such as deferred discounts and complimentary items may help you do this.

1. Deferred discounts

The idea of this strategy is to reward the client with a discount that they collect the next time they purchase. As a result, you give your client an incentive to purchase from you again.

2. Complimentary items

Complimentary items involve giving clients something free with a purchase. Complimentary items encourage your clients to return more frequently since everybody loves freebies.

Check Your Progress

5. What is purchase frequency? How can it be increased?
6. What are the factors that affect launch time strategy?

6.6 LAUNCH TIME STRATEGY

NOTES

Before a company introduces a new product, it requires a detailed planning about the time of the launch, as the timing can exert a major influence on the product's success. Companies consider certain factors that can help determining the right launch time like market trends, demand for the product, availability of the product, presence of substitutes of the product etc.

1. Maximize Sales

If a product is launched in the market at a time when there is no demand for it, it can lead to disastrous results. Launching a product too early or too late might not generate maximum sales. For example, launching a new flavour of cookies during the Christmas, can lead to a maximum.

2. Easy Availability

Before planning a product launch, the company should ensure that the new product is readily available and the items are ready for shipment to the retailers. Besides concentrating on a timely promotional campaign, the company should also ensure that customers are not made to wait for a long duration. Or else, the product might be erased from the public memory.

3. Creating Public Anticipation

Some companies launch their products after a huge marketing campaign. They also plan hush-hush yet leaked product information to build anticipation. Such a tactic creates great curiosity among customers and the launch stirs great excitement, leading to bigger sales figures.

Time taken by auto companies to launch a new product

An automobile life cycle consists of the generic following stages:

- Materials production
- Manufacturing and assembly
- Use and service
- End-of-life management

In an industry like automobiles, in which products are differentiated and scale and learning effects are important to production, the timely introduction of a successful new product may yield gains in market share, profit margins, and productivity: the history of the auto industry is replete with such examples. Depending on the product, changing from one design to another entails significant adjustment costs and time. Moreover, the organizational capabilities that determine the time and costs required- the engineering know-how, the procedures and information systems are even longer-lived assets with significant costs of adjustment. In an industry such as automobile manufacturing, the life of a given design is measured in years while the life of a development organization may be measured in decades.

Time taken by software companies to launch a new product

Software Development Life Cycle (SDLC) is the process which is followed to develop a software product. It is a structured way of building software applications. Most software development organizations have a process in place for developing software. This process may, at times, be customized based on the organizations requirement and framework followed by organization. Time taken to complete the development depends on the size of the application and number of programmers involved.

For example, on January 27, 2010, Apple, an American multinational corporation that designs, develops and sells consumer electronics, computer software and personal computers, launched media tablet, the iPad. It offers multi-touch interaction with multimedia formats including newspapers, magazines, ebooks, textbooks, photos, movies, TV shows videos, music, word processing documents, spreadsheets, video games, and most existing iPhone apps. After about a year, in March 2011, Apple launched the iPad 2, which had a faster processor and two cameras on the front and back, respectively. Exactly one year later, it launched the third-generation iPad, marketed as ”the new iPad”. About seven months later, in October 2012, Apple launched the fourth-generation iPad, marketed as the “iPad with Retina display”.

Time taken by cell phone companies to launch a new product

European firms created the digital global system for mobile (GSM) standard in the late 1980s and early 1990s and GSM phones were available in 1992.The much faster growth in the GSM market than the advanced mobile phone system (AMPS) caused the phone market to quickly pass through the medium-volume production that characterized competition in the early part of the analog market. While it took almost five and 11 years for the number of annual AMPS phone sales to pass the 1-million and 10-million marks, respectively, it took less than 1-1/2 and 3-1/2 years, respectively, for the number of GSM phone sales to pass these marks.

6.7 MITIGATION OF CANNIBALIZATION

Cannibalization: Refers to a decline in sales volume, sales revenue, or market share of a product due to the introduction of a new product by the same company

Cannibalization, according to a marketing strategy, refers to a decline in sales volume, sales revenue, or market share of a product due to the introduction of a new product by the same company.

Such a negative impact on the existing product might seem negative in the context of a carefully planned strategy, but it can be positively effective. Such cannibalization can lead to the growth of the market and meet consumer demands in a more appropriate way. Cannibalization is an important concern in product portfolio analysis.

In simple terms, cannibalization is a strategy in which a company launches a new product, notwithstanding the fact that the company’s products are already well-established in the market. For example, when Pepsi introduced Diet Pepsi, it dipped the sales of the original drink. But the move extended the market for diet soft drinks.

NOTES

A company might plan corporate cannibalism for two reasons. First, the company plans to increase its market share and takes the route of corporate cannibalism as a risk. It introduces the new product, thinking that it will harm competitors more than the existing product.

Secondly, the company may believe that the new product will be able to incur more sales volume than the old product. The company may also consider attracting a whole new customer segment with the new item. For example, a company may manufacture computers, and later begin producing mobile handsets. While both products appeal to the same target market, one may fit an individual's needs better than the other. The corporate cannibalism strategy may boomerang if customers prefer buying only mobile sets, ignoring the initial product. This will lead to a dip in the sales of computers and may altogether bring a stop to the sales.

Cannibalization also occurs when a retailer sells a product at a discounted price. Customers have an inclination to buy a discounted item rather than buying a competitor's product at a higher price. But the effect disappears once the prices return to normal. This temporary change in consumer behavior can be termed as cannibalization.

Some companies deliberately cannibalize their products by offering them at a discounted price for online shopping. Customers, who have known the product's original retail price, tend to buy it from the online store. In such a way, the company manages to increase volume sales, although their retail sales may decline.

Another example of cannibalization is when companies open retail outlets in the same vicinity, vying for the same set of customers for the same product at the same price. The many outlets of Cafe Coffee Day, located almost next to each other, are good examples of this sort of cannibalization.

Cannibalization is a crucial concept in marketing strategy, when a company plans brand extension. As we have seen, when a brand extends from a sub-category, the original product may suffer at the cost of the new extension. For example, when Kurkure Masala introduced Kurkure Desi Beats, the sales volume of the original got divided. Sometimes, this sort of cannibalization is planned by a company to capture a larger market of a different market section. The company is not concerned about the potential loss of the existing product. Such a plan of the company can be called cannibalization strategy.

Cannibalization can be mitigated in the following ways:

- The existing or older products can be made special again by changing certain attributes or reintroducing it with added qualities.
- Old products can be offered at highly discounted price to tap a new market. As we had mentioned earlier in this section, customers tend to get attracted to discounted price.
- A company can take a fresh approach of an existing product to mitigate cannibalization. This can be done by giving an entire new look to the product. The packaging of a product could be changed, or the qualities could be enhanced.

Check Your Progress

7. Why does a company plan corporate cannibalism? Explain.
8. How can corporate cannibalization be mitigated?

6.8 PRODUCT RESEARCH: AREAS AND COMPONENTS

NOTES

Product research: Product research is a component of market research, which identifies the characteristics of a product or a service that will satisfy a particular need or want of the consume

Product research is a component of market research, which identifies the characteristics of a product or a service that will satisfy a particular need or want of the consumer.

A company cannot make progress until it produces new items. There is a constant need to strategize and replace older products that are in the maturity or decline stage. In the earlier units, we had discussed how successful companies learn to turn opportunities into successful products. Product research examines two aspects of a product: technical and market.

Product development process is usually very complex, and to simplify this, it is very important for a company to invest in product research. Product research involves processes, tools and methods that help a company understand the latent needs of customers and plan for the right product specifications to suit the right portfolio of products. The process changes the planned features into engineering specifications. It also keeps an eye on customer feedback so that the company doesn't lag behind in terms of product modification. Any sort of product research is incomplete if companies don't pay heed to customers' feedback.

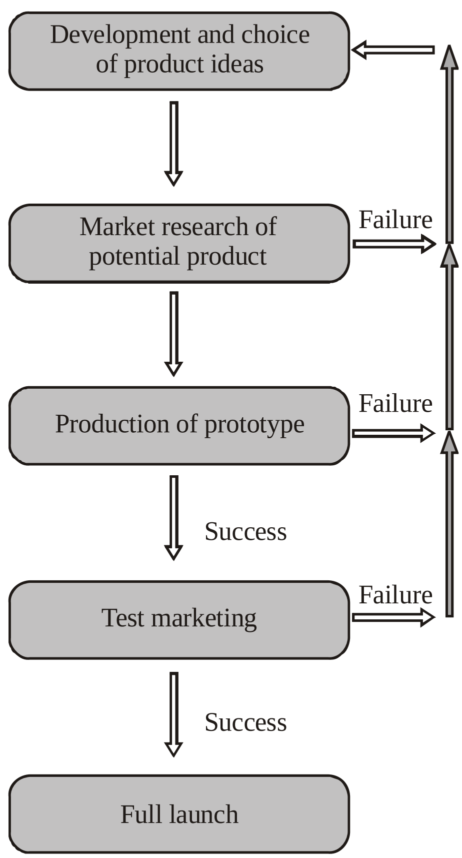

Fig. 6.3 *Product Research considers all the Factors of a Product Development Process*

NOTES

Marketers see product research as the first stage in PLC management tool. Product research refers to the entire process of launching a new product in the market. There are two features of product research concept: product engineering and marketing analysis.

Most leading companies consider product research as an active tool to find out market changes. Based on the findings, they work on new product opportunities before they occur. A product research is usually considered an ongoing process, which is carried by a product research team. The main objective of such a team is to look for new market opportunities.

Since a product research process requires engineering as well as marketing expertise, companies bring together several teams under a single product development project. The team is associated with all the stages of the project, right from the product inception to final release in the market.

The various areas of product research are as mentioned below:

(i) Assess product performance of the company in terms of revenue, profits, market segments and competition.

(ii) Determine modifications in the various areas of a product, such as, quality, design, packaging, colour, variety, etc.

(iii) Describe product diversification, depending on the demand of consumers.

(iv) Initiate product development and market testing.

(v) Evaluate new product lines on the basis of market competition and its success or failure.

6.9 SUMMARY

Some of the important concepts discussed in this unit are:

- The process of managing groups of brands and product lines is called portfolio planning.
- Product investment and divestment strategies are essential in optimally utilizing and allocating a company's resources.
- In product investment strategy, the product development goals are specified based on which decisions are taken and resources are allocated for development work.
- Product divestment is a process where a product line is liquidated /sold off or the product is discontinued to limit losses to the company.
- Product development policy refers to certain policies formulated by the company, before a product is developed, to carry out the process of product development.
- Product line consistency is the level to which product lines are related in end use, production requirements or distribution channels.
- Purchase frequency is a measure of the frequency/number of times a customer makes a purchase in a given period of time. It also measures the time between consecutive purchases as well as the time elapsed since the last purchase.

Check Your Progress

9. What is the importance of product research?
10. Mention the two features of product research.

NOTES

- Cannibalization refers to a decline in sales volume, sales revenue, or market share of a product due to the introduction of a new product by the same company. Such cannibalization can lead to the growth of the market and meet consumer demands in a more appropriate way. Cannibalization is an important concern in product portfolio analysis.
- Product research identifies the characteristics of a product or a service that satisfies a particular need or want of the consumer. Product research helps a company understand the latent needs of customers and plan for the right product specifications to suit the right portfolio of products.

6.10 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Product investment strategy is a strategy which helps companies to invest their resources effectively. Here, the product development goals are specified. Based on the strategy, con individual products are taken and resources are allocated to development work.
2. Product divestment is a process where a product line is liquidated /sold off or the product is discontinued to limit losses to the company. Product divestment is done if the market share is too small, the profit earned is too less, the company plans to invest in a new or better product by divesting from the existing one, there is a need for increased investment, lack of strategic fit, legal pressures, etc.
3. Product development policy refers to certain policies formulated by the company, before a product is developed, to carry out the process of product development.
4. The different types of product development policies are:
   - Product Development Diversification Policy
   - Product Modification Policy
   - Revolutionary Product Development
5. Purchase frequency is a measure of the frequency/number of times a customer makes a purchase in a given period of time. It also measures the time between consecutive purchases as well as the time elapsed since the last purchase. Purchase frequency can be increased by promoting additional uses for the product and sales promotions such as provision of deferred discounts and complimentary items.
6. Launch time strategy of a product is affected by factors such as:
   - Availability of the product
   - Demand in the market for the product
   - Favourable competitive environment
   - Consumer trends
7. A company might plan corporate cannibalism for two reasons:

   (i) The company plans to increase its market share

(ii) The company may believe that the new product will be able to incur more sales volume than the old product. The company may also consider attracting a whole new customer segment with the new item.

8. Cannibalization can be mitigated by:
   - Changing certain attributes in the existing or older products or reintroducing them with added qualities.
   - Offering old products at highly discounted prices to tap new markets and attract customers.
   - Giving an entirely new look to the product by changing the packaging of the product or enhancing its qualities.
9. Product research identifies the characteristics of a product or a service that satisfies a particular need or want of the consumer. There is a constant need to strategize and replace older products that are in the maturity or decline stage. Product research helps a company understand the latent needs of customers and plan for the right product specifications to suit the right portfolio of products.
10. There are two features of product research concept: product engineering and marketing analysis.

NOTES

6.11 QUESTIONS AND EXERCISES

Short-Answer Questions

1. What are the four aspects of BCG Matrix?
2. List the drawbacks of General-Electric Attractiveness–Competitive Position Matrix.
3. Define (i) Product development diversification strategy and (ii) Revolutionary product development policy
4. What is product line consistency?
5. Mention three benefits of launch time strategy
6. Define corporate cannibalization. Give an example.
7. What are the factors of product research?

Long-Answer Questions

1. Describe the BCG matrix with the help of diagram.
2. What is the General Electric Market Attractiveness-competitive position Matrix?
3. What is product disinvestment strategy? Explain the reasons why a company resorts to this strategy.
4. List the various policies meant for new product development policy. Explain every policy with the support of an example.
5. Analyze corporate cannibalization. Why do some companies deliberately resort to this strategy?
6. Discuss the various areas of product research.

Model Question Paper MBA Degree Examination

Product Management

Time: 3 Hours **Maximum: 100 Marks**

PART A (5 × 8 = 40 marks)

Answer any FIVE of the following:

1. Compare and contrast financial and derivative products.
2. Examine the need of product management.
3. List the characteristics of various concepts of design.
4. Determine how product standardization impacts the market.
5. Discuss how innovative ideas are nurtured in an organization.
6. List the differences between brand equity and brand evaluation.
7. Identify the advantages and disadvantages of product life cycle (PLC).
8. Differentiate between product investment and disinvestment strategies.

PART B (4 × 15 = 60 marks)

Answer any FOUR of the following:

9. Discuss how product line decisions play a crucial part in influencing the consumer.
10. Explain how a commodity is different from a product. How are products different from services?
11. Analyse the role of marketers in the new product development process.
12. Describe how McKinsey's 7-S framework can be applied in the new product development process.
13. Describe the various aspects associated with product positioning.
14. What is the focus of various stages of the PLC? Describe the uses of PLC as a strategic marketing tool.
15. Evaluate the various types of product development policies.