



PART





SATISFYING MARKETING OPPORTUNITIES

■ **CHAPTER 10**
Developing New Products
and Services

■ **CHAPTER 11**
Managing Products and
Brands

■ **CHAPTER 12**
Managing Services

■ **CHAPTER 13**
Pricing Products and
Service

■ **CHAPTER 14**
Managing Marketing
Channels and Supply
Chains

■ **CHAPTER 15**
Retailing

■ **CHAPTER 16**
Integrated Marketing
Communications and
Direct Marketing

■ **CHAPTER 17**
Advertising, Sales
Promotion, and Public
Relations

■ **CHAPTER 18**
Personal Selling and Sales
Management

HOW PART 4 FITS INTO THE BOOK

The chapters in Part 4 cover the marketing mix—the four P’s—that are the key product, price, place, and promotion actions marketing managers use to implement their marketing program.



GREPTILE™ GRIP

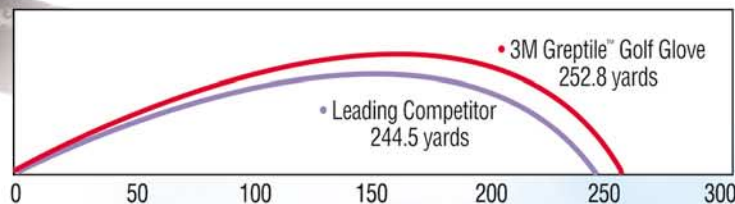


Get a Better Grip on Glove Sales

Increase Club Head Speed and Distance



3M's proprietary Greptile™ micro-replication technology gives golfers a tighter grip with less effort. Using thousands of micro-replication fingers, the glove creates optimal gripping friction to reduce slip and increase swing control.



3M GREPTILE™ GOLF GLOVES GRIP TIGHTLY – EVEN IF YOU DON'T!

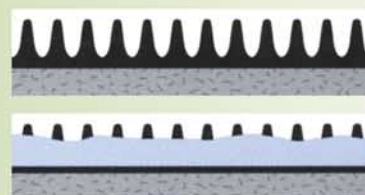
- Maximum gripping power with minimal gripping pressure
- Exceptional grip and dexterity – in wet or dry conditions
- 100% Cabretta leather for the balance of the glove gives a natural, comfortable fit
- One of the greatest innovations in golf glove design in the last 25 years!

*Leading competitor glove compared to a 3M Greptile™ glove in dry conditions.
Tested by 3M Performance Laboratories. Individual results may vary.



THERE'S NEVER BEEN A GRIP LIKE GREPTILE™

Greptile™ micro-replication technology forms a sea of gripping fingers that maintain their grip even immersed in water.



Revolutionary Gripping Technology, another 3M Innovation!



CHAPTER

10

DEVELOPING NEW PRODUCTS AND SERVICES



LEARNING OBJECTIVES

After reading this chapter, you should be able to:

- 1 Recognize the various terms that pertain to products and services.
- 2 Identify the ways in which consumer and business goods and services can be classified.
- 3 Explain the implications of alternative ways of viewing “newness” in new products and services.
- 4 Describe the factors contributing to a product’s or service’s failure.
- 5 Explain the purposes of each step of the new-product process.

3M’S NEW GREPTILE GRIP GOLF GLOVE: HOW TO GET TO THE TOP OF THE LEADER BOARD

“We look around the company for under-utilized technologies that can result in exciting new products for niche markets,” says Dr. George Dierberger, marketing and international manager for Sports and Leisure Products at 3M™. Turning 3M’s micro-replication technology into a golf glove is a prime example.

To ensure that retailers will carry the innovative 3M Greptile™ Grip golf glove and that prospective golfers will buy and use it, Dierberger helps them discover its benefits and learn about the technology behind it. The benefits: to help golfers wearing the glove to hit longer drives and more accurate shots, thus getting lower scores through improved control of the golf club swing under both wet and dry conditions. Here is a quick take on the marketing issues Dierberger faced when introducing this new product:¹

- *The product?* A golf glove that integrates 3M’s revolutionary Greptile urethane gripping material, a technology that consists of thousands of “microscopic fingers,” into a golf glove. The material is sewn in the “gripping channel” of the lower fingers and upper palm on the underside of the glove to reduce the slip of a golfer’s grip when swinging the club.
- *The target market?* Golfers who want to improve their scores—only, say, 100 percent of the market. But then the market segments get more specific: golfers playing in hot or humid conditions, or those needing a stronger grip due to their skill level, age, or arthritis.
- *The special marketing task?* Leverage 3M’s strong brand reputation for using its world-class technologies to introduce innovative, high-quality products in the adhesives, office supply, health care, and other markets as a means of entering the intensely competitive golf equipment market.



Dierberger and his marketing and engineering staff created the ad for distributors and retailers (shown on page 254). 3M has developed a two-stage marketing program for the golf glove: initially, a moderately priced 3M Greptile Grip golf glove will be sold in mass merchandise retailers, such as Wal-Mart. Then, 3M will introduce a premium version of the golf glove in golf course pro shops, golf superstores, sporting goods superstores, and sporting goods retailers. The team's continuing challenge is to communicate the product's benefits in its packaging and promotions to its targeted retailers and customers to overcome the lack of 3M brand recognition in a market dominated by FootJoy, Titleist, Nike, and other golf glove marketers.

A brief look at some 3M products shows how its new-product research has enabled the company to become a global leader in adhesive technology. This has led to dozens of 3M adhesive products. Some examples, varying by the degree of adhesive stickiness, include:

- *Permanent adhesive bonding.* VHB™ (for “very high bond”) tape made with high-strength acrylic, pressure-sensitive adhesives that can make a continuous bond stronger than spot welds or rivets for such applications as for cargo trailers and highway signs.
- *One-time adhesion.* Nexcare™ Tattoo™ Waterproof Bandages for kids that combine superior, waterproof wound protection, with fun designs.
- *Multiple-time adhesion.* Post-it® Notes that enable you to stick and unstick that note to your friend over and over again.
- *No adhesion, but better gripping.* The Greptile Grip golf glove with its urethane gripping material that was discussed above.

The essence of marketing is in developing such products as a new, technologically advanced adhesive to meet buyer needs. A **product** is a good, service, or idea consisting of a bundle of tangible and intangible attributes that satisfies consumers and is received in exchange for money or some other unit of value. Tangible attributes include physical characteristics, such as colour or sweetness, and intangible attributes include better health or more wealth. Hence, a product includes the breakfast cereal you eat, the accountant who fills out your tax return, or your local art museum.

The life of a company often depends on how it conceives, produces, and markets new products. This is the exact reason that 3M spends \$1.1 billion on research annually and has over 5000 engineers and scientists around the globe looking for what *BusinessWeek* calls the Next Big Thing for 3M.² Later, we describe how 3M strives to “delight its customers” using cross-functional teams and “Six Sigma” initiatives.

This chapter covers decisions involved in developing and marketing new products and services. Chapters 11 and 12 discuss the process of managing existing products and services, respectively.

product

A good, service, or idea consisting of a bundle of tangible and intangible attributes that satisfies consumers and is received in exchange for money or some other unit of value.



THE VARIATIONS OF PRODUCTS

A product varies in terms of whether it is a consumer or business good. For most organizations, the product decision is not made in isolation because companies often offer a range of products. To better appreciate the product decision, let us first define some terms pertaining to products.

product line

A group of products that are closely related because they satisfy a class of needs, are used together, are sold to the same customer group, are distributed through the same outlets, or fall within a given price range.

Product Line and Product Mix

A **product line** is a group of products that are closely related because they satisfy a class of needs, are used together, are sold to the same customer group, are distributed through the same type of outlets, or fall within a given price range. Polaroid Canada has two major product lines consisting of cameras and film; Nike's product lines are shoes and clothing; the Toronto Hospital for Sick Children's product lines consist of

inpatient hospital care, outpatient physician services, and medical research. Each product line has its own marketing strategy.

Within each product line is the *product item*, a specific product as noted by a unique brand, size, or price. For example, Downy softener for clothes comes in 360-mL and 700-mL sizes; each size is considered a separate item and assigned a distinct ordering code, or *stock-keeping unit (SKU)*.

The third way to look at products is by the **product mix**, or the number of product lines offered by a company. Cray Research has a single product line consisting of supercomputers, which are sold mostly to governments and large businesses. Pillsbury Canada, however, has many product lines, including Green Giant canned and frozen vegetables, Pillsbury refrigerated baked goods, Prima Pasta, Old El Paso Mexican foods, and Underwood meat spreads.

product mix

The number of product lines offered by a company.

consumer goods

Products purchased by the ultimate consumer.

business goods

Products that assist directly or indirectly in providing products for resale (also known as *B2B goods*, *industrial goods*, or *organizational goods*).

Specialty goods, such as Raymond Weil watches, require distinct marketing programs to reach narrow target markets.

Classifying Products

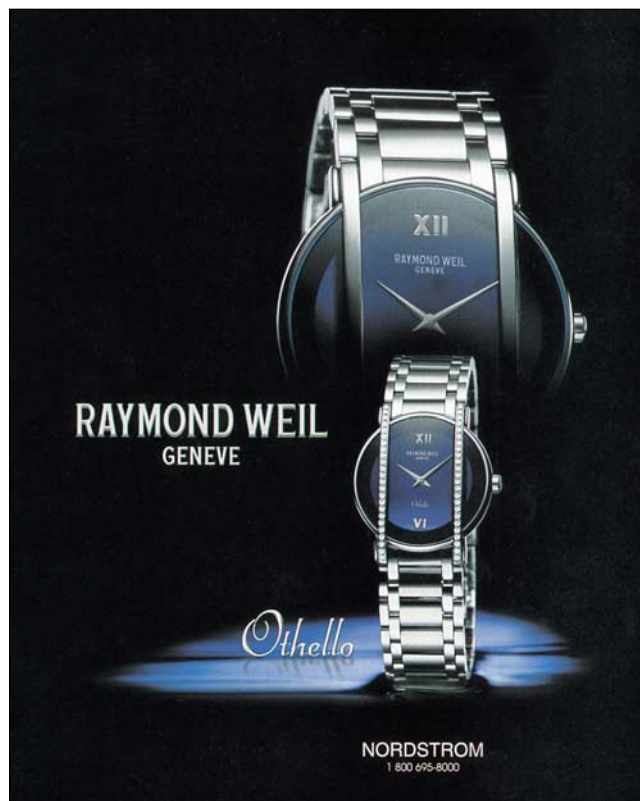
Both the federal government and companies classify products, but for different purposes. The government's classification method helps it collect information on industrial activity. Companies classify products to help develop similar marketing strategies for the wide range of products offered. Two major ways to classify products are by type of user and degree of product tangibility.

Type of User A major type of product classification is based on the type of user. **Consumer goods** are products purchased by the ultimate consumer, whereas **business goods** (also called B2B goods, industrial goods, or organizational goods) are products that assist directly or indirectly in providing products for resale. In many instances, the differences are distinct: Oil of Olay face moisturizer and Bass shoes are clearly consumer products, whereas Cray computers and high-tension steel springs are business goods used in producing other products or services.

There are difficulties, however, with this classification because some products can be considered both consumer and business items. An HP computer can be sold to consumers as a final product or to business firms for office use. Each classification results in different marketing actions. Viewed as a consumer product, the HP would be sold through computer stores or direct from its Web site. As a business product, the HP might be sold by a salesperson offering discounts for multiple purchases. Classifying by the type of user focuses on the market and the user's purchase behaviour, which determine the marketing mix strategy.

Degree of Tangibility Classification by degree of tangibility divides products into one of three categories. First is a *nondurable good*, an item consumed in one or a few uses, such as food products and fuel. A *durable good* is one that usually lasts over an extended number of uses, such as appliances, automobiles, and stereo equipment. *Services* are defined as activities, deeds, or other basic tangibles offered for sale to consumers in exchange for money or something else of value. According to this classification, government data indicate that Canada has a service economy, the reason for a separate chapter (Chapter 12) on the topic.

This classification method also provides direction for marketing actions. Nondurable products, such as



Wrigley's gum, are purchased frequently and at relatively low cost. Advertising is important to remind consumers of the item's existence, and wide distribution in retail outlets is essential. A consumer wanting Wrigley's Spearmint Gum would most likely purchase another brand of spearmint gum if Wrigley's were not available. Durable products, however, generally cost more than nondurable goods and last longer, and so consumers usually deliberate longer before purchasing them. Therefore, personal selling is an important component in durable-product marketing because it assists in answering consumer questions and concerns.

Services and New-Product Development Developing new services, like a new airline service or a new television show, is often difficult to observe step by step. Nevertheless, service innovations do occur and can have a major impact on our lives. For example, online banking and online brokerage firms have revolutionized the financial services industry, while online travel agencies have changed the way we make travel reservations.

CLASSIFYING CONSUMER AND BUSINESS GOODS

Because the buyer is the key to marketing, consumer and business product classifications are discussed in greater detail.

Classification of Consumer Goods

Convenience, shopping, specialty, and unsought products are the four types of consumer goods. They differ in terms of (1) effort the consumer expends on the decision, (2) attributes used in purchase, and (3) frequency of purchase.

Convenience goods are items that the consumer purchases frequently, conveniently, and with a minimum of shopping effort. **Shopping goods** are items for which the consumer compares several alternatives on criteria, such as price, quality, or style. **Specialty goods** are items, such as Tiffany sterling silver, that a consumer makes a special effort to search out and buy. **Unsought goods** are items that the consumer either does not know about or knows about but does not initially want. Figure 10–1 shows how the classification of a consumer product into one of these four types results in different aspects of the marketing mix being stressed. Different degrees of brand loyalty and amounts of shopping effort are displayed by the consumer for a product in each of the four classes.

The manner in which a consumer good is classified depends on the individual. One person may view a camera as a shopping good and visit several stores before deciding on a brand, whereas a friend may view cameras as a specialty good and will only buy a Nikon.

Classification of Business Goods

A major characteristic of business goods is that their sales are often the result of *derived demand*; that is, sales of business goods frequently result (or are derived) from the sale of consumer goods. For example, if consumer demand for Ford cars (a consumer product) increases, the company may increase its demand for paint-spraying equipment (a business good). Business goods may be classified as production or support goods.

Production Goods Items used in the manufacturing process that become part of the final product are **production goods**. These include raw materials, such as grain or lumber, as well as component parts. For example, a company that

convenience goods

Items that the consumer purchases frequently and with a minimum of shopping effort.

shopping goods

Items for which the consumer compares several alternatives on such criteria as price, quality, or style.

specialty goods

Items that a consumer makes a special effort to search out and buy.

unsought goods

Items that the consumer either does not know about or knows about but does not initially want.

production goods

Items used in the manufacturing process that become part of the final product.

BASIS OF COMPARISON	TYPE OF CONSUMER GOOD			
	CONVENIENCE	SHOPPING	SPECIALTY	UNSOUGHT
Product	Toothpaste, cake mix, hand soap, laundry detergent	Cameras, TVs, briefcases, clothing	Rolls Royce cars, Rolex watches	Burial insurance, thesaurus
Price	Relatively inexpensive	Fairly expensive	Usually very expensive	Varies
Place (distribution)	Widespread; many outlets	Large number of selective outlets	Very limited	Often limited
Promotion	Price, availability, and awareness stressed	Differentiation from competitors stressed	Uniqueness of brand and status stressed	Awareness is essential
Brand loyalty of consumers	Aware of brand, but will accept substitutes	Prefer specific brands, but will accept substitutes	Very brand loyal; will not accept substitutes	Will accept substitutes
Purchase behaviour of consumers	Frequent purchases; little time and effort spent shopping	Infrequent purchases; needs much comparison shopping time	Infrequent purchases; needs extensive search and decision time	Very infrequent purchases; some comparison shopping

■ FIGURE 10-1 ■

Classification of consumer goods

manufactures door hinges used by GM in its car doors is producing a component part. As noted in Chapter 6, the marketing of production goods is based on such factors as price, quality, delivery, and service. Marketers of these products tend to sell directly to business users.

support goods

Items used to assist in producing other goods and services.

Support Goods The second class of business goods is **support goods**, which are items used to assist in producing other goods and services. Support goods include installations, accessory equipment, supplies, and services.

- *Installations* consist of buildings and fixed equipment. Because a significant amount of capital is required to purchase installations, the business buyer deals directly with construction companies and manufacturers through sales representatives. The pricing of installations is often by competitive bidding.
- *Accessory equipment* includes tools and office equipment and is usually purchased in small-order sizes by buyers. As a result, instead of dealing directly with buyers, sellers of business accessories use distributors to contact a large number of buyers.
- *Supplies* are similar to consumer convenience goods and consist of such products as stationery, paper clips, and brooms. These are purchased with little effort, using the straight rebuy decision sequence discussed in Chapter 6. Price and delivery are key factors considered by the buyers of supplies.
- *Services* are intangible activities to assist the business buyer. This category can include maintenance and repair services and advisory services, such as tax or legal counsel, where the seller's reputation is critical.

CONCEPT CHECK

1. Explain the difference between product mix and product line.
2. What are the four main types of consumer goods?
3. To which type of good (business or consumer) does the term *derived demand* generally apply?

NEW PRODUCTS AND WHY THEY SUCCEED OR FAIL

New products are the lifeblood of a company and keep it growing, but the associated financial risks are large. Before discussing how new products reach the stage of commercialization when they are in the market, we will begin by looking at *what* a new product is.

What Is a New Product?

The term *new* is difficult to define. Is Sony's PlayStation Portable (PSP) *new* when there was a PlayStation 2? Is Microsoft's Xbox *new* when Microsoft has not been a big player in video games before? What does *new* mean for new-product marketing? Newness from several points of view and some marketing implications of this newness are discussed below.

As you read the discussion about what "new" means in new-product development, think how it affects the marketing strategies of Sony and Microsoft in their new videogame launches.

Sony Corporation

www.sony.com

Microsoft Corporation

www.microsoft.com

Newness Compared with Existing Products If a product is functionally different from existing products, it can be defined as new. Sometimes, this newness is revolutionary and creates a whole new industry, as in the case of the Apple II computer. At other times, additional features are added to an existing product to try to make it appeal to more customers. An example appearing in the accompanying Marketing NewsNet box describes the convergence of cell phones, PDAs, digital cameras, and portable music players in a single device.³ So, digital device manufacturers are suddenly facing competitors from completely different industries than they faced a decade ago. But another result is that today's consumers face difficult decisions about which of almost countless features they want in buying their new digital devices.



MARKETING NEWSNET

Blindsided in the Twenty-First Century—
The Convergence of Digital Devices

Mobile phones that provide wireless voice communications virtually anywhere. Personal digital assistants, or PDAs, that give handheld computerized organization of appointments, addresses, telephone numbers, and so on. Digital cameras that can electronically capture and distribute digitized images. Portable music players such as the Apple iPod store and play back hundreds of tunes. In the late 1990s, companies selling these digital products had it relatively easy: just deliver the *single* core benefit that defined their respective product classes.

But that was the twentieth century—when electronic devices “stayed at home” in their own industry. But in today’s twenty-first century, whole industries—industries that used to be completely separate—are colliding and their products often overlap.

What has happened is that improvements in key technologies have transformed the landscape of the digital consumer electronics marketplace. Consumers, who in the past had purchased these devices separately, now want features from each to be incorporated into a unified product. This collision of these industries has birthed what some call the “convergent digital device.”

Blindsided by the revolutionary changes in technology and consumer tastes, digital device marketers now face competition from unexpected places. Motorola, Nokia, and Samsung now market mobile phones that integrate a digital camera, voice recorder, phonebook organizer, and Internet and e-mail access. PalmOne now offers a PDA with a mobile phone and Internet and e-mail access.

Apple iPods have the capability to store and play video in addition to voice and music, and Nokia and other wireless phone companies offer phones that play CD-quality music including downloadable tunes.

Some experts believe that television, handheld gaming, integrated hands-free mobile phone, and satellite radio will be the next set of convergent digital devices to appear on the horizon and integrate voice, data, and video communication technologies to meet the future needs of consumers.



Newness in Legal Terms Industry Canada, the federal government’s department that regulates business practices, has determined that a product can be called “new” for only up to 12 months.

Newness from the Company’s Perspective Successful companies are starting to view newness and innovation in their products at three levels. At the lowest level, which usually involves the least risk, is a product line extension. This is an incremental improvement of an existing product for the company, such as Frosted Cheerios or Diet Cherry Coke or Gillette Venus for Women—extensions of the basic Cheerios or Diet Coke or men’s Gillette Mach3 product lines, respectively. At the next level is a significant jump in innovation or technology, such as Sony’s leap from the micro tape recorder to the Walkman. The third level is true innovation, a truly revolutionary new product, like the first Apple computer in 1976. Effective new product programs in large firms deal at all three levels.

Newness from the Consumer’s Perspective A fourth way to define new products is in terms of their effects on consumption. This approach classifies new products according to the degree of learning required by the consumer, as shown in Figure 10–2.

	Degree of New Consumer Learning Needed		
	LOW		HIGH
BASIS OF COMPARISON	CONTINUOUS INNOVATION	DYNAMICALLY CONTINUOUS INNOVATION	DISCONTINUOUS INNOVATION
Definition	Requires no new learning by consumers	Disrupts consumer's normal routine but does not require totally new learning	Establishes new consumption patterns among consumers
Examples	Sensor and New Improved Tide	Electric toothbrush, compact disc player, and automatic flash unit for cameras	VCR, home computer, speech recognition software
Marketing emphasis	Generate awareness among consumers and obtain widespread distribution	Advertise benefits to consumers, stressing point of differentiation and consumer advantage	Educate consumers through product trial and personal selling

■ **FIGURE 10-2** ■
Consumption effects define newness

With *continuous innovation*, no new behaviours must be learned. Gateway's introduction of the first plasma flat-panel TV started a revolution among TV buyers.⁴ Gateway's new TV does not require buyers to learn new TV-watching behaviours and therefore is a continuous innovation. Under these conditions, the beauty of this innovation is that effective marketing simply depends on generating awareness and having strong distribution in appropriate outlets, not completely re-educating customers.

With *dynamically continuous innovation*, only minor changes in behaviour are required for use. An example is built-in, fold-down child seats, such as those available in DaimlerChrysler minivans. Built-in car seats for children require only minor bits of education and changes in behaviour, and so the marketing strategy is to *educate* prospective buyers on their benefits, advantages, and proper use.

A *discontinuous innovation* involves making the consumer learn entirely new consumption patterns in order to use the product. After decades of research, IBM introduced its ViaVoice speech recognition software. If you are using ViaVoice you are able to speak to your computer and watch your own words appear on your computer screen, and you can also open Windows programs with your voice. The risk

that IBM faced in introducing this discontinuous innovation was that people had to learn new behaviours in producing word-processed memos and reports. Hence, marketing efforts for discontinuous innovations involve educating consumers on both the benefits and proper use of the innovative product—activities that can cost millions of dollars.

Why Products Succeed or Fail

We all know of giant product or service success stories, such as Microsoft Windows and CNN. Yet, thousands of product failures that occur every year cost Canadian businesses millions of dollars. Recent research suggests that it takes about 3000 raw unwritten ideas to produce a single commercially successful



new product.⁵ To learn marketing lessons and convert potential failures to successes, we can analyze why new products fail and then study several failures in detail. As we go through the new-product process later in the chapter, we can identify ways such failures might have been avoided—admitting, of course, that hindsight is clearer than foresight.

Marketing Reasons for New-Product Failures Both marketing and nonmarketing factors contribute to new-product failures, as shown in the accompanying Marketing NewsNet box. Using the research results from several studies⁶ on new-product success and failure and also those described in the Marketing NewsNet, we can identify critical marketing factors—sometimes overlapping—that often separate new-product winners and losers:

1. *Insignificant “point of difference.”* Shown as the most important factor in the Marketing NewsNet, a distinctive “point of difference” is essential for a new product to defeat competitive ones—through having superior characteristics that deliver unique benefits to the user. In the mid-1990s, General Mills introduced “Fingos,” a sweetened cereal flake about the size of a corn chip. Consumers were supposed to snack on them dry, but they did not.⁷ The point of difference was not important enough to get consumers to give up eating competing snacks, such as popcorn, potato chips, or Cheerios, from the box late at night.
2. *Incomplete market and product definition before product development starts.* Ideally, a new product needs a precise **protocol**, a statement that, before product development begins, identifies (1) a well-defined target market; (2) specific customers’ needs, wants, and preferences; and (3) what the product will be and do. Without this precision, loads of money disappear as research and development (R&D) tries to design a vague product for a phantom market. Apple Computer’s hand-sized Newton computer, which intended to help keep the user organized, fizzled badly because no clear protocol existed.
3. *Too little market attractiveness.* Market attractiveness refers to the ideal situation every new-product manager looks for: a large target market with high growth and real buyer need. But often, when looking for ideal market niches, the target market is too small and competitive to warrant the R&D, production, and marketing expenses necessary to reach it. In the early 1990s, Kodak discontinued its Ultralife lithium battery. With its 10-year shelf life, the battery was

protocol

A statement that, before product development begins, identifies (1) a well-defined target market; (2) specific customers’ needs, wants, and preferences; and (3) what the product will be and do.

New-product success or failure?
For the special problems these
products face, see the text.



MARKETING NEWSNET



What Separates New-Product Winners and Losers

What makes some products winners and others losers? Knowing this answer is a key to a new-product strategy. R. G. Cooper and E. J. Kleinschmidt studied 203 new products to find the answers shown below.

The researchers defined the “product success rate” of new products as the percentage of products that reached the company’s own profitability criteria. Product “winners” are the best 20 percent of performers, and “losers” are the

worst 20 percent. For example, for the first factor in the table below, 98 percent of the winners had a major point of difference compared with only 18 percent of the losers.

Note that the table below includes both marketing and nonmarketing factors. Most of the marketing factors tie directly to the reasons cited in the text for new-product failures that are taken from a number of research studies.

FACTOR AFFECTING PRODUCT SUCCESS RATE	PRODUCT “WINNERS” (BEST 20%)	PRODUCT “LOSERS” (WORST 20%)	% DIFFERENCE (WINNERS–LOSERS)
1. Point of difference, or uniquely superior product	98%	18%	80%
2. Well-defined product before actual development starts	85	26	59
3. Synergy, or fit, with firm’s R&D and manufacturing capabilities	80	29	51
4. Quality of execution of technological activities	76	30	46
5. Quality of execution of activities before actual development starts	75	31	44
6. Synergy, or fit, with marketing mix activities	71	31	40
7. Quality of execution of marketing mix activities	71	32	39
8. Market attractiveness, ones with large markets and high growth	74	43	31

touted as lasting twice as long as an alkaline battery. Yet, the product was available only in the 9-volt size, which accounts for less than 10 percent of the batteries sold in North America.

4. *Poor execution of the marketing mix:* name, package, price, promotion, distribution. Coca-Cola thought its Minute Maid Squeeze-Fresh frozen orange juice concentrate in a squeeze bottle was a hit. The idea was that consumers could make one glass of juice at a time, and the concentrate stayed fresh in the refrigerator for more than a month. After two test markets, the product was finished. Consumers loved the idea, but the product was messy to use, and the advertising and packaging did not educate them effectively on how much concentrate to mix.
5. *Poor product quality on critical factors.* Overlapping somewhat with point 1, this factor stresses that problems on one or two critical factors can kill the product, even though the general quality is high. For example, the Japanese, like the British, drive on the left side of the road. Until 1996, North American car makers sent Japan few right-drive cars—unlike German car makers, who exported right-drive models in a number of their brands.⁸

■ FIGURE 10-3 ■

Why did these new products fail?



As explained in detail in the text, new products often fail because of one or a combination of seven reasons. Look at the two products described below, and try to identify which reason explains why they failed in the marketplace.

- Kimberly-Clark's "Avert Virucidal" tissues that contained vitamin C derivatives scientifically designed to kill cold and flu germs when users sneezed, coughed, or blew their nose into them.
- OUT! International's Hey! There's A Monster In My Room spray that was designed to rid scary creatures from kids' rooms and had a bubble-gum fragrance.

Compare your insights with those in the text.

6. *Bad timing.* The product is introduced too soon, too late, or at a time when consumer tastes are shifting dramatically. Bad timing gives new-product managers nightmares. IBM, for example, killed several laptop computer prototypes because competitors introduced better, more advanced machines to the marketplace before IBM could get there.
7. *No economical access to buyers.* Grocery products provide an example. Today's mega-supermarkets carry 30 000 different SKUs. With new food products introduced each day, the fight for shelf space is tremendous in terms of costs for advertising, distribution, and shelf space.⁹ Because shelf space is determined in terms of sales per square foot, Thirsty Dog! (a zesty beef-flavoured, vitamin-enriched, mineral-loaded, lightly carbonated bottled water for your dog) must displace an existing product on the supermarket shelves, a difficult task with the precise measures of revenues per square foot these stores use.

A Look at Some Failures Before reading further, study the product failures described in Figure 10-3, and try to identify which of the reasons is the most likely explanation for their failure. The two examples are discussed in greater detail below.

Kimberly-Clark's Avert Virucidal tissues lasted 10 months in a test market before being pulled from the shelves. People did not believe the claims and were frightened by the name. So, the tissue probably failed because of not having a clear point of difference, a bad name, and, hence, bad marketing mix execution—probably reasons #1 and #4 on the list in the text.

Out! International's "Hey! There's A Monster In My Room" spray was creative and cute when introduced in 1993. But the name probably kept the kids awake at night more than their fear of the monsters because it suggested the monster was still hiding in the room. Question: Wouldn't calling it the "Monster-Buster Spray" have licked the name problem? It looks like the spray was never really defined well in a protocol (reason #2) and definitely had poor name execution (reason #4).

Simple marketing research on consumers should have revealed the problems. Developing successful new products may sometimes involve luck, but more often it involves having a product that really meets a need and has significant points of difference over competitive products. The likelihood of success is improved by paying attention to the early steps of the new-product process described in the next section of the text.

CONCEPT CHECK

1. From a consumer's viewpoint, what kind of innovation would an improved electric toothbrush be?
2. What does "insignificant point of difference" mean as a reason for new-product failure?

THE NEW-PRODUCT PROCESS

new-product process

The stages a firm uses to identify business opportunities and convert them to a saleable good or service.

new-product strategy development

The stage of the new-product process that defines the role for a new product in terms of the firm's overall corporate objectives.

Six Sigma

A means to "delight the customer" by achieving quality through a highly disciplined process to focus on developing and delivering near-perfect products and services.

Such companies as General Electric, Sony, and Procter & Gamble take a sequence of steps before their products are ready for market. Figure 10-4 shows the seven stages of the **new-product process**, the stages a firm uses to identify business opportunities and convert them to a saleable good or service. This sequence begins with new-product strategy development and ends with commercialization.

New-Product Strategy Development

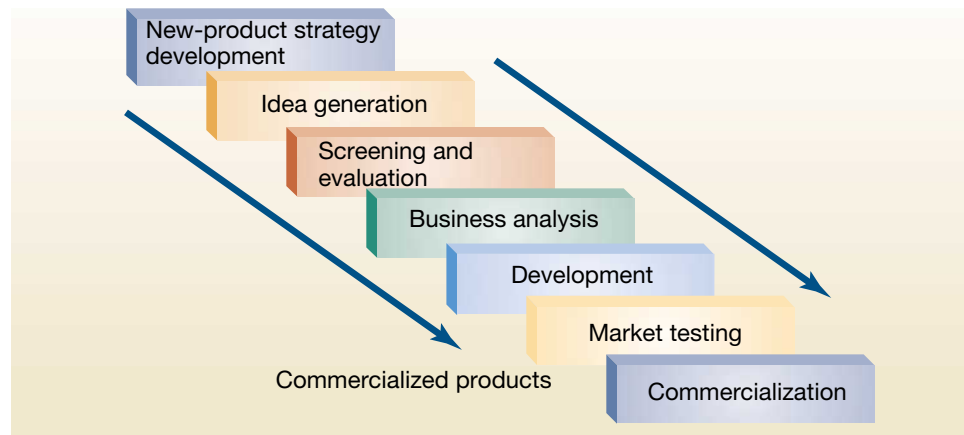
For companies, **new-product strategy development** is the stage of the new product process that defines the role for a new product in terms of the firm's overall corporate objectives. This step in the new-product process has been added by many companies recently to provide a needed focus for ideas and concepts developed in later stages.

Objectives of the Stage: Identify Markets and Strategic Roles During this new-product strategy development stage, the company uses the environmental scanning process described in Chapter 3 to identify trends that pose either opportunities or threats. Relevant company strengths and weaknesses are also identified. The outcome of new-product strategy development is not only new-product ideas but also identifying markets for which new products will be developed and strategic roles new products might serve—the vital protocol activity explained earlier in the discussion of the Marketing NewsNet box on new-product winners and losers.

3M: Cross-Functional Teams, Six Sigma, and Lead Users Key to 3M's success in new-product development is its use of *cross-functional teams*, a small number of people from different departments in an organization who are mutually accountable to a common set of performance goals. Today in 3M, teams are especially important in new-product development so that individuals from R&D, marketing, sales, manufacturing, and finance can simultaneously work together in a collaborative environment on new product and market opportunities. In the past, 3M and other firms often utilized these department people in sequence—possibly resulting in R&D designing new products that the manufacturing department could not produce economically and that the marketing department could not sell.

Important today in 3M's cross-functional teams is **Six Sigma**, a means to "delight the customer" by achieving quality through a highly disciplined process to focus on developing and delivering near-perfect products and services. "Near perfect" here means being 99.9997 percent perfect, or allowing 3.4 defects per million products produced or transactions processed—getting as close as possible to "zero

■ **FIGURE 10-4** ■
Stages in the new-product process



How listening to employees and co-workers matters in new product development: Volvo's innovative YCC and its design team.



defects.” Six Sigma’s success lies in determining what variables impact the results, measuring them, and making decisions based on data, not gut feeling.¹⁰

Idea Generation

idea generation

Developing a pool of concepts as candidates for new products as candidates for new products.

Developing a pool of concepts as candidates for new products, or **idea generation**, must build on the previous stage’s results. New-product ideas are generated by consumers, supplies, employees, basic R&D, and competitors.

Customer and Supplier Suggestions Companies often analyze customer complaints or supplier ideas to discover new-product opportunities. Whirlpool, trying to reduce costs by cutting the number of different product platforms in half, got ideas from customers on ways to standardize components.¹¹ Business researchers now emphasize that firms must actively involve customers and suppliers in the product development process.¹² This often means focusing on what the new product will actually *do* for them rather than simply *what they want*.¹³

Employee and Co-Worker Suggestions Employees may be encouraged to suggest new-product ideas through suggestion boxes or contests. The idea for Nature Valley Granola Bars from General Mills came when one of its marketing managers observed co-workers bringing granola to work in plastic bags.

As described at the start of Chapter 5, auto industry studies show that women buy about two-thirds of all vehicles and also influence about 85 percent of all sales. However, many auto manufacturers get ideas on new-car features by doing marketing research on gear-head guys who love cars. That is *exactly opposite* to what Volvo did recently in trying to bridge the gender gap. Volvo first obtained ideas on new-car features from all-female focus groups drawn from its Swedish workforce. It then named a five-woman team of Volvo managers to design a “concept car”—what the auto industry uses to test new designs, technical innovations, and consumer reactions. Shown in the photos above with its all-women design team are some features of Volvo’s YCC (Your Concept Car) that appeared in auto shows recently:

- **Automatically opening doors.** Press a button on the car key and the gull-wing doors pop open, the chassis rises a few inches, and the steering pulls in to make a wide path in for the driver.
- **Ergovision system for automatic fit to the driver.** At a dealership, the driver’s body is laser-scanned so that the car automatically sets the optimal positions for the seat belt, pedals, headrest, steering wheel, and seat—information saved in memory in the car key.
- **Parallel parking aid.** When the car stops in front of an empty spot, sensors confirm the space is big enough and the system automatically self-steers the car into the space while the driver controls the brake and gas.
- **Care and cleanliness.** The no-stick paint on body panels repels dirt, and customized seat covers can be removed and washed.

WEBLINK

[HTTP://WWW.MCGRAWHILL.CA/
COLLEGE/CRAVE](http://www.mcgrawhill.ca/college/crane)



IDEO—Where Design Is Not a Noun . . . It's a Verb

The Apple mouse. The Palm V PDA. The Crest Neat Squeeze toothpaste dispenser. The Steelecase Leap adjustable office chair. These are just some of the thousands of new products designed by a firm you have probably never heard of but benefit from everyday. For David Kelley, co-founder of IDEO, product design includes both artistic and functional elements. And to foster this creativity, IDEO allows its designers and engineers much freedom—its

offices look like schoolrooms; employees can hang their bicycles from the ceiling; there are rubber-band fights; and on Monday mornings, there are show-and-tell sessions.

Visit IDEO's Web site (www.ideo.com) to view its recent inventions and innovations for such clients as McDonald's self-ordering kiosk, the Zyliss' Mandolin fruit and vegetable slicer, LifePort's kidney transporter, Pepsi's High Visibility vending machine, and Nike's all-terrain sunglasses.

You may never see the YCC in your local Volvo showroom because its likely \$65 000 price tag may be too high for the market. But you *will* see many of these women-designed features on future Volvos, testimony to the importance of listening to consumers in developing new products.¹⁴

Research and Development Breakthroughs Another source of new products is a firm's basic research, but the costs can be huge. Sony is a world leader in new-product development in electronics. Sony's research and development breakthroughs have made it a legend in the electronics industry, popularizing VCRs, the Walkman, and—coming into your future?—flat-panel Organic Electroluminescence (OEL) monitors about the thickness of a credit card providing brighter images on large, 30-inch screens.

Not all R&D labs have Sony's genius for moving electronic breakthroughs into the marketplace. Take Xerox Corporation's Palo Alto Research Center (PARC). In what maybe the greatest electronic fumble of all time, by 1979, PARC had what is in your computer system now: graphical user interfaces, mice, windows and pull-down menus, laser printers, and distributed computing. Concerned with aggressive competition from Japan in its core photocopier business, Xerox did not even bother to patent these breakthroughs. Apple Computer's Steven Jobs visited PARC in 1979, adapted many of the ideas for the Macintosh, and the rest is history.

Professional R&D laboratories also provide new-product ideas. Laboratories at Arthur D. Little helped put the crunch in Cap'n Crunch cereal and the flavour in Carnation Instant Breakfast. As described in the Weblink box, IDEO is a world-class new-product development firm, having designed more than 4000 of them.

Brainstorming sessions run at IDEO can generate 100 new ideas in an hour. Its "shop-a-long" visits with managers of client firms let the managers experience firsthand what one of its customers does.¹⁵

Competitive Products New-product ideas can also be found by analyzing the competition. A six-person intelligence team from the Marriott Corporation spent six months travelling around the United States staying at economy hotels. The team assessed the competition's strengths and weaknesses on everything from the sound-proof qualities of the rooms to the softness of the towels. Marriott then budgeted \$500 million for a new economy hotel chain, Fairfield Inns.

screening and evaluation

The stage of the new-product process that involves internal and external evaluations of the new-product ideas to eliminate those that warrant no further effort.

Screening and Evaluation

Screening and evaluation is the stage of the new-product process that involves internal and external evaluations of the new-product ideas to eliminate those that warrant no further effort.



For the creative way a student project helped lead to 3M's new Post-it® Flag Highlighter, see the text.

Internal Approach Internally, the firm evaluates the technical feasibility of the proposal and whether the idea meets the objectives defined in the new-product strategy development step. In a recent project, 3M researcher David Windorski worked with a team of local university students to find new applications for Post-it® Flags in their studying activities. Student suggestions reinforced some ideas Windorski had been working on in his laboratory. Students said that combining Post-it® Flags with coloured felt-tip highlighters could be used as bookmarks on key pages in their textbooks that they highlighted. Windorski and the team worked on a few different prototypes: Post-it® Flags on top, on the side, and so on. He knew the basic idea was sound, but the designs were not.

Windorski then hit on his breakthrough idea: put small Post-it®® Flags *inside* pens and highlighters that students use! After much engineering, consumer testing, and evaluation, the result was the launch of 3M's Post-it® Flag Highlighter and Post-it® Flag Pen—a credit to global cross-functional collaboration among research, manufacturing, and marketing. In these two 3M products, the pen and highlighter components were sourced worldwide. The new product development team then coordinated the commercialization for a global introduction.

The final, marketable Post-it® Flag Highlighter version is shown in the photo above. But earlier prototypes were first mocked up in cardboard, then modelling clay, then components screwed together—a far cry from the final product you probably see in your student bookstore. By the end of 2004, 3M had sold over a million units of the two new products.¹⁶

External Approach Concept tests are external evaluations that consist of preliminary testing of the new-product idea (rather than the actual, final product) with consumers. Generally, these tests are more useful with minor modifications of existing products than with new, innovative products that are not familiar to consumers.¹⁷ Concept tests usually rely on written descriptions of the product but may be augmented with sketches, mockups, or promotional literature. With food products, consumers may actually be asked to taste-test the products. Several key questions are asked during concept testing: How does the customer perceive the product? Who would buy it? How would it be used?

Frito-Lay spent a year interviewing 10 000 consumers about the concept of a multigrain snack chip before introducing its highly successful Sun Chips. Atkins, on the other hand, used product concept testing extensively before launching its low-carb food products in Canada, including its *Morning Start* cereals and breakfast bars and *Endulge* snack line. The goal for Atkins was to work with consumers to develop food products that were healthy but also tasted good.¹⁸

Atkins used product concept testing to develop and refine its brands of low-carb products for the Canadian market.



CONCEPT CHECK

1. What step in the new-product process has been added in recent years?
2. What are the main sources of new-product ideas?
3. What is the difference between internal and external screening and evaluation approaches used by a firm in the new-product process?

business analysis

The stage of the new-product process that involves specifying the product features and marketing strategy and making necessary financial projections needed to commercialize a product.

Business Analysis

Business analysis is the stage of the new-product process that involves specifying the product features and marketing strategy and making necessary financial projections needed to commercialize a product. This is the last checkpoint before significant capital is invested in creating a *prototype*, a full-scale operating model of the product under development. Economic analysis, marketing strategy review, and legal examination of the proposed product are conducted at this stage. The product is also analyzed relative to the firm's marketing and technological synergies, two criteria noted in the Marketing NewsNet box earlier.

The marketing strategy review studies the new-product idea in relation to the marketing program to support it. The proposed product is assessed to determine whether it will help or hurt the sales of existing products. Likewise, the product is examined to assess whether it can be sold through existing channels or if new outlets will be needed. Profit projections involve estimating the number of units expected to be sold but also the costs of R&D, production, and marketing.

As an important aspect of the business analysis, the proposed new product is studied to determine whether it can be protected with a patent or copyright. An attractive new-product proposal is one in which the technology, product, or brand cannot easily be copied. All of these critical business issues emerge in huge research and development gambles on new drug compounds by pharmaceutical companies, such as Eli Lilly & Company, discussed in the next section.

development

The stage of the new-product process that involves turning the idea on paper into a prototype.

Development

Product ideas that survive the business analysis proceed to actual **development**, the stage of the new-product process that involves turning the idea on paper into a prototype. This results in a demonstrable, producible product in hand. Outsiders seldom understand the technical complexities of the development stage, which involves not only manufacturing the product but also performing laboratory and consumer tests to ensure that it meets the standards set. Design of the product becomes an important element.

Some new products can be so important and costly that the company is literally betting its very existence on success. And creative, out-of-the-box thinking can be critical. In the pharmaceutical industry, no more than one out of every 5000 to 10 000 new compounds developed in the laboratories emerges as an approved drug.¹⁹

With the success rate on new drug compounds so low, pharmaceutical giant Eli Lilly has initiated "failure parties" to recognize excellent scientific work that unfortunately resulted in products that failed anyway. But the failed drug compound does not end with the party. Instead, Lilly usually names a team of doctors and scientists to look back objectively at every compound that failed at any point in human clinical trials to learn the specific reasons for the failure.

This "failure analysis" has resulted in Lilly's sometimes finding ways to make the compound succeed in addressing the original disease for which it was designed. For example, in 1999 Lilly halted trials of Alimta, an experimental chemotherapy drug, when three patients died. Extensive failure analysis revealed that patients with the most severe side effects had reduced folic acid in their blood. The solution: simply give all patients suffering from a rare type of cancer caused by exposure to asbestos *both* Alimta *and* folic acid pills.

ETHICS AND SOCIAL RESPONSIBILITY ALERT



Sports Utilities versus Cars: Godzilla Meets a Chimp?

Make car wrecks safer. This sounds sort of stupid. But . . . the problem is death! The high and heavy pickups, vans, and sport utility vehicles (SUVs) are now involved in an increasing number of highway deaths. When one huge vehicle meets a bitty little car, the larger, higher one smashes the smaller one's passenger compartment, instead of going head-to-head at bumper level. The people in the cars, unfortunately, are more likely to be killed in such accidents.

The problem is also money. These mega-vehicles now account for a large percentage of Canadian automakers' sales and profits. Improving the smaller cars—with side air bags and steel supports—is cheaper than lowering the frame or adding a crumple zone for the frame of the bigger

vehicle. Nothing is easy. And consumers love the power of these hefty vehicles that are about 1000 kilograms heavier than a compact car.

But changes are on the way. Mercedes Benz has completely redesigned its M-class SUV. Mercedes engineers addressed the compatibility of their SUV with smaller cars so that the Mercedes SUV frame and bumper is as much as 20 centimetres lower than its competitor's SUV models. This makes the bumpers of Mercedes SUVs and those of small cars more likely to meet in a crash, dramatically increasing the safety for small-car passengers.

Who should address the problem here? The federal government? The insurance companies? The vehicle manufacturers? Consumers?

More surprisingly, a number of successful Eli Lilly drugs trace their origins back to trials that demonstrated the drug was a flop for the initial medical problem it was intended to address. Examples are a failed antidepressant drug now used in treating attention deficit/hyperactivity disorders and a drug that flopped in addressing asthma but works for cardiovascular diseases. Some of these breakthroughs come from researchers using an Eli Lilly “blue sky” fund that enables them to spend 10 to 20 percent of their time on projects with no clear immediate commercial value.²⁰



Eli Lilly's drug prototypes go through exhaustive laboratory and clinical tests to see if they meet design criteria set for them if used the way intended. But safety tests are also critical for when the product is not used as planned. To make sure seven-year-olds cannot bite Barbie's head off and choke, Mattel clamps her foot in steel jaws in a test stand and then pulls on her head with a wire. Similarly, car manufacturers have done extensive safety tests by crashing their cars into concrete walls. As mentioned in the Ethics and Social Responsibility Alert box, consumer groups are increasingly concerned about what happens when a pickup truck or sport utility vehicle hits a small car when their bumpers do not line up.²¹ Auto industry tests are identifying some feasible, but costly, solutions.

Market Testing

market testing

Exposing actual products to prospective consumers under realistic purchase conditions to see if they will buy.

The **market testing** stage of the new-product process involves exposing actual products to prospective consumers under realistic purchase conditions to see if they will buy. Often, a product is developed, tested, refined, and then tested again to get consumer reactions through either test marketing or purchase laboratories.

Test Marketing Test marketing involves offering a product for sale on a limited basis in a defined area. This test is done to determine whether consumers will actually buy the product and to try different ways of marketing it. Only about a third of the products test-marketed do well enough to go on to the next phase. These market tests are usually conducted in cities that are viewed as being representative of



Canadian consumers. Test marketing gives the company an indication of potential sales volume and market share. Market tests are also used to check other elements of the marketing mix besides the product itself, such as price, level of advertising support, and distribution. Market tests are time consuming and expensive because production lines as well as promotion and sales programs must be set up. Costs can run to more than a million dollars. Market tests also reveal information to competitors, sometimes enabling them to get their products into national distribution first. Competitors can also try to sabotage test markets. With such problems, some firms skip test markets completely or use simulated test markets.

Simulated Test Markets Because of the time, cost, and confidentiality problems of test markets, consumer packaged goods companies often turn to *simulated* (or *laboratory*) *test markets* (STM), a technique that simulates a full-scale test market but in a limited fashion. STMs are often run in shopping malls, where consumers are questioned to identify who uses the product class being tested. Willing participants are questioned on usage, reasons for purchase, and important product attributes. Qualified persons are then shown TV commercials or print ads for the test product along with competitors' advertising and are given money to make a decision to buy or not buy a package of the product (or the competitors') from a real or simulated store environment. STMs are used early in the development process to screen new-product ideas and later in the process to make sales projections.

When Test Markets Do Not Work Test marketing is a valuable step in the new-product process, but not all products can use it. Testing a service beyond the concept level is very difficult because the service is intangible and consumers cannot see what they are buying. For example, how could Google easily have test marketed the mid-2004 launch of its Gmail, an e-mail service users get free in exchange for accepting ads with its Gmail?²²

Similarly, test markets for expensive consumer products, such as cars or VCRs, or costly industrial products, such as jet engines or computers, are impractical. For these products, consumer reactions to mockup designs or one-of-a-kind prototypes are all that is feasible. Car makers test new style designs on early adopters (discussed in Chapter 11) who are more willing than the average customer to buy new designs or products.²³

Commercialization

commercialization

The stage of the new-product process that involves positioning and launching a new product in full-scale production and sales.

slotting fee

A payment a manufacturer makes to place a new item on a retailer's shelf.

failure fee

A penalty payment a manufacturer makes to compensate a retailer for failed sales from its valuable shelf space.

Finally, the product is brought to the point of **commercialization**—the stage of the new-product process that involves positioning and launching a new product in full-scale production and sales. Companies proceed very carefully at the commercialization stage because this is the most expensive stage for most new products, especially consumer products. If competitors introduce a product that leapfrogs the firm's own new product or if cannibalization of its own existing products looks significant, the firm may halt the new-product launch permanently.²⁴ Large companies often use regional rollouts, introducing the product sequentially into certain geographical areas to allow production levels and marketing activities to build up gradually in order to minimize the risk of new-product failure. Grocery product manufacturers and some telecommunications service providers are two examples of firms that use this strategy.

Grocery product manufacturers, in fact, are also exposed to other special commercialization problems. Because shelf space is so limited, many supermarkets require a **slotting fee** for new products, a payment a manufacturer makes to place a new item on a retailer's shelf. This can run to several million dollars for a single product. But there is yet another potential expense. If a new grocery product does not achieve a predetermined sales target, some retailers require a **failure fee**, a penalty payment a manufacturer makes to compensate a retailer for failed sales from its valuable shelf

space. These costly slotting fees and failure fees are further examples of why large grocery product manufacturers use regional rollouts.

In recent years, companies have been trying to move very quickly from the idea generation or product concept stage to the commercialization stage of the new-product process. This is because speed or *time to market* (TtM) has been found to be correlated to new-product success. Recent studies, for example, have shown that high-tech products coming to market on time are far more profitable than those arriving late. So, some companies—such as Sony, Honda, 3M, and Hewlett-Packard—have overlapped the sequence of stages described in this chapter.

With this approach, termed *parallel development*, cross-functional team members, who conduct the simultaneous development of both the product and the product process, stay with the product from concept to production. This has enabled Hewlett-Packard (HP) to reduce the development time for computer printers from 54 months to 22. In software development, *fast prototyping* uses a “do it, try it, fix it” approach—encouraging continuous improvements after the initial design. One result: HP has been able to introduce many more new printer products to the market in substantially less time.²⁵

HP’s new-product success can be traced to its founders’ innovative management style that shunned traditional rigid hierarchical structures. Instead, HP uses a decentralized system where the brainpower of its employees is freed so that they can get whoever is needed to get the job done.²⁶

Figure 10–5 identifies the purpose of each stage of the new-product process and the kinds of marketing information and methods used. The third column of the figure

■ **FIGURE 10-5** ■

Marketing information and methods used in the new-product process

STAGE OF PROCESS	PURPOSE OF STAGE	MARKETING INFORMATION AND METHODS USED
New-product strategy development	Identify new-product niches to reach in light of company objectives	Company objectives; assessment of firm’s current strengths and weaknesses in terms of market and product
Idea generation	Develop concepts for possible products	Ideas from employees and co-workers, consumers, R&D, and competitors; methods of brainstorming and focus groups
Screening and evaluation	Separate good product ideas from bad ones inexpensively	Screening criteria, concept tests, and weighted point systems
Business analysis	Identify the product’s features and its marketing strategy, and make financial projections	Product’s key features, anticipated marketing mix strategy; economic, marketing, production, legal, and profitability analyses
Development	Create the prototype product, and test it in the laboratory and on consumers	Laboratory and consumer tests on product prototypes
Market testing	Test product and marketing strategy in the marketplace on a limited scale	Test markets, simulated test markets (STMs)
Commercialization	Position and offer product in the marketplace	Perceptual maps, product positioning, regional rollouts

also suggests information that might help avoid some new-product failures. Although using the new-product process does not guarantee the success of products, it does increase a firm's success rate.

CONCEPT CHECK

1. How does the development stage of the new-product process involve testing the product inside and outside the firm?
2. What is a test market?
3. What is commercialization of a new product?

CHAPTER IN REVIEW

1 Recognize the various terms that pertain to products and services.

A product is a good, service, or idea consisting of a bundle of tangible and intangible attributes that satisfies consumers and is received in exchange for money or some other unit of value. Firms can offer a range of products, which involve decisions regarding the product item, product line, and product mix.

2 Identify the ways in which consumer and business goods and services can be classified.

Products can be classified by type of user and tangibility. By user, the major distinctions are consumer goods, which are products purchased by the ultimate consumer, and business goods, which are products that assist in providing other products for resale. By degree of tangibility, products may be classified as (a) nondurable goods, which are consumed in one or a few uses; (b) durable goods, which are items that usually last over an extended number of uses; or (c) services, which are activities, deeds, or other basic intangibles offered for sale.

Consumer goods can further be broken down on the basis of the effort involved in the purchase decision process, marketing mix attributes used in the purchase, and the frequency of purchase: (a) convenience goods are items that consumers purchase frequently and with a minimum of shopping effort, (b) shopping goods are items for which consumers compare several alternatives on selected criteria, (c) specialty goods are items that consumers make special efforts to seek out and buy, and (d) unsought goods are items that consumers do not either know about or initially want.

Business goods can further be broken down into (a) production goods, which are items used in the manufacturing process that become part of the final product, such as raw materials or component parts; and (b) support goods, which are items used to assist in producing other goods and services and include installations, accessory equipment, supplies, and services.

3 Explain the implications of alternative ways of viewing "newness" in new products and services.

A product may be defined as "new" if it (a) is functionally

different from the firm's existing products; (b) falls within the Industry Canada definition; (c) is a product line extension, a significant innovation, or a revolutionary new product; or (d) affects the degree of learning that consumer's must engage in to use the product. With a continuous innovation, no new behaviours must be learned. With a dynamically continuous innovation, only minor behavioural changes are needed. With a discontinuous innovation, consumers must learn entirely new consumption patterns.

4 Describe the factors contributing to a product's or service's failure.

A new product often fails for these marketing reasons: (a) insignificant points of difference, (b) incomplete market and product definition before product development begins, (c) too little market attractiveness, (d) poor execution of the marketing mix, (e) poor product quality on critical factors, (f) bad timing, and (g) no economical access to buyers.

5 Explain the purposes of each step of the new-product process.

The new-product process consists of seven stages a firm uses to develop a salable good or service: (i) New-product strategy development involves defining the role for the new product within the firm's overall objectives. (ii) Idea generation involves developing a pool of concepts from consumers, employees, basic R&D, and competitors to serve as candidates for new products. (iii) Screening and evaluation involve evaluating new product ideas to eliminate those that are not feasible from a technical or consumer perspective. (iv) Business analysis involves defining the features of the new product, developing the marketing strategy and marketing program to introduce it, and making a financial forecast. (v) Development involves not only producing a prototype product but also testing it in the laboratory and on consumers to see that it meets the standards set for it. (vi) Market testing involves exposing actual products to prospective consumers under realistic purchasing conditions to see if they will buy the product. (vii) Commercialization involves positioning and launching a product in full-scale production and sales with a specific marketing program.

FOCUSING ON KEY TERMS

business analysis p. 270	product line p. 256
business goods p. 257	product mix p. 257
commercialization p. 272	production goods p. 258
consumer goods p. 257	protocol p. 263
convenience goods p. 258	screening and evaluation p. 268
development p. 270	shopping goods p. 258
failure fee p. 272	Six Sigma p. 266
idea generation p. 267	slotting fee p. 272
market testing p. 271	specialty goods p. 258
new-product process p. 266	support goods p. 259
new-product strategy development p. 266	unsought goods p. 258
product p. 256	

DISCUSSION AND APPLICATION QUESTIONS

- Products can be classified as either consumer or business goods. How would you classify the following products? (a) Johnson's baby shampoo, (b) a Black & Decker two-speed drill, and (c) an arc welder.
- Are such products as Nature Valley Granola bars and Eddie Bauer hiking boots convenience, shopping, specialty, or unsought goods?
- Based on your answer to question 2, how would the marketing actions differ for each product and the classification to which you assigned it?
- In terms of the behavioural effect on consumers, how would a PC, such as an Apple PowerBook be classified? In light of this classification, what actions would you suggest to the manufacturers of these products to increase their sales in the market?
- Several alternative definitions were presented for a new product. How would a company's marketing strategy be affected if it used (a) the legal definition, or (b) a behavioural definition?
- What methods would you suggest to assess the potential commercial success for the following new products? (a) a new, improved ketchup, (b) a three-dimensional television system that took the company 10 years to develop, and (c) a new children's toy on which the company holds a patent.
- Concept testing is an important step in the new-product process. Outline the concept tests for (a) an electrically powered car, and (b) a new loan payment system for automobiles that is based on a variable interest rate. What are the differences in developing concept tests for products as opposed to services?

GOING ONLINE



Jalapeño Soda, Anyone?

Jalapeño soda? Aerosol mustard? Fingos? These are just three of the more than 70 000 products (both successes and failures) on the shelves of the NewProductWorks Showcase. Visit its new Web site (www.newproductworks.com). Study the "Hits & Misses" categories, such as "We Expect Them to Be Successes," which are those that probably will be commercial successes; "Jury Is Out," products whose future is in doubt; "Failures," which are recent products that have failed miserably; and "Favorite Failures," which are those that cause people to ask "What *were* they thinking?" Pick



two of the failed products and try to identify the reasons discussed earlier in the chapter that may have led to their failure. Contrast these failed products with those that are deemed successes to learn why the latter became "sure-fire winners."

Do you want to get better grades and stay up to date with current issues in marketing? Visit the Online Learning Centre at www.mcgrawhill.ca/college/crane for practice tests, video cases, resources for building a marketing plan, *Globe and Mail* headlines, access to *Marketing Magazine*, and other learning and study tools.



VIDEO CASE 10

3M™ Greptile Grip™ Golf Glove: Great Gripping!

“Marketing is not brain surgery,” says Dr. George Dierberger, Marketing and International Manager of 3M’s Sports and Leisure Products Project. “We tend to make it a lot more difficult than it is. 3M wins with its technology. We’re not in the ‘me-too’ business, and in marketing we’ve got to remember that.”

3M’S MICRO-REPLICATION TECHNOLOGY AND ITS GREPTILE GOLF GLOVE

3M is a \$20 billion global, diversified technology company. Among its well-known brands are Post-it Notes, Scotch tape, Scotch Brite scouring pads, and Nexcare bandages. The key to 3M’s marketing successes is its commitment to innovation. For more than a century, 3M’s management has given its employees the freedom to try new ideas. This “culture of creativity” has led to the commercialization of more than 50 000 products.

The Sports and Leisure Products Project is a business unit managed by Dierberger and his marketing staff. Recently, Dierberger and his staff changed the conventional thinking about golfing. Using 3M’s proprietary “micro-replication” technology, and applying it to a golf glove, the new Greptile gripping material consists of thousands of tiny “gripping fingers” sewn into the upper palm and lower fingers of a golf glove. According to Dierberger, “It is the only glove on the market that actively improves a golfer’s hold on the club by allowing a more relaxed grip, leading to greater driving distance with less grip pressure, even under wet conditions.” Laboratory tests found that the Greptile material offers 610 percent greater gripping power than leather and 340 percent greater than tackified (sticky) grips. The result: on drives, the golf ball travels an average 10.5 feet farther!²⁷

Introduced in 2004, the new 3M Greptile Grip golf glove is made primarily of high-quality Cabretta sheep leather to give it a soft feel. Initially, 3M sold the Greptile Grip golf glove through Wal-Mart and other mass merchandisers for a suggested retail price of \$11.95 to \$15.95. And now it is also being stocked by golf retailers

across the country, such as Nevada Bob’s, Golfsmith, and Austad’s. The golf glove is available in both men’s and women’s left hand versions and in small, medium, medium/ large, large, and extra-large

hand sizes. A right hand version for both genders appeared in 2005. 3M projected first-year sales of \$1 million in the United States.

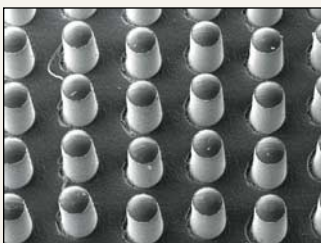
THE GOLF MARKET

Several socioeconomic and demographic trends impact the golf glove market favourably. First, the huge baby boomer population (those born between 1946 and 1964) has matured, reaching its prime earning potential. This allows for greater discretionary spending on leisure activities, such as golf. According to the National Golf Foundation (NGF), most spending on golf equipment (clubs, bags, balls, shoes, gloves, etc.) is by consumers 50 and older—today’s baby boomers.²⁸ Second, according to the U.S. Census, the American population has shifted regionally from the East and North to the South and West, where golfing is popular year around due to the temperate weather. Third, the number of golf courses has been growing, totalling about 15 000 at the end of 2004.²⁹

Finally, golf is becoming an increasingly popular leisure activity for all age groups and ethnic backgrounds. According to the NGF, golf participants in the United States totalled 37.9 million in 2003, an all-time high. Female golfers now account for about 25 percent of all golfers, while minority participation has increased to over 10 percent.³⁰ According to the National Sporting Goods Association, sales of golf equipment was \$3.1 billion in 2004, an increase of 2 percent from 2003.³¹

THE GOLF GLOVE MARKET

The global market for golf gloves is estimated at \$300 million, with the United States at \$180 million or 60 percent of worldwide sales. Historically, about 80 percent of golf gloves are sold through public and private on- and off-course golf pro specialty shops, golf superstores, and sporting good superstores. However, mass merchandisers have recently increased their shares due to the typically lower prices offered by these retailers.³² FootJoy (46 percent) and Titleist (9 percent), both owned by Acushnet, are the top two golf glove market share leaders. Nike, which recently entered the golf equipment market with Tiger Woods as its spokesperson, has vaulted to a 7-percent share of the golf glove market.³³ These golf glove marketers focus on technology and comfort to create points of difference from its competitors, such as the recently introduced FootJoy SciFlex™ glove (\$18), the Titleist Perma-Tech™ glove (\$19), and the Nike DriFit glove (\$18).



3M'S NEW PRODUCT PROCESS

Since about half of 3M's products are less than five years old, the process used by 3M to develop new product innovations is critical to its success and continued growth. Every innovation must meet 3M's new product criteria: (1) be a patentable or trademarked



technology; (2) offer a superior value proposition to consumers; and (3) change the basis of competition by achieving a significant point of difference.

When developing a new product innovation, such as the 3M Greptile Grip golf glove, 3M uses a rigorous seven-step process: (1) ideas, (2) concept, (3) feasibility, (4) development, (5) scale-up, (6) launch, and (7) post-launch. “But innovation is not a linear path—not just A, then B, then C,” says Dierberger. “It’s the adjustments you make after you’ve developed the product that determines your success. And it’s learning lessons from testing

on real customers to make the final ‘tweaks’—changing the price points, improving the benefits statement on the packaging, and sharpening the advertising appeals.”

In the case of the 3M Greptile Grip golf glove, countless other examples of these adjustments appeared. Mike Kuhl, marketing coordinator at 3M, points out, “Consumer testing labs said the information on the back of our package was incomplete, so we had dozens of golfers hit drives using our glove and competitive gloves to compare driving distance.” And 3M packaging engineer Travis Strom says, “Our first glove package ‘pillowed’—bulked up—on the shelf, had hard-to-read text, and wasn’t appealing to golfers, so

we had to redesign it. After all, you only have a few seconds to capture the customer’s attention with the package and make a sale.”

THE FUTURE OF 3M GOLF AND GREPTILE

In 2005, 3M Golf launched a premium golf glove consisting of the highest quality Cabretta leather and selling for a suggested retail price of \$16.95 to \$19.95. On the drawing board: 3M Greptile Grip golf tape that can be applied to golf club grips and possibly a line of Greptile Grip golf grips to double the gripping power when used in conjunction with the Greptile Grip golf glove. In 2006, 3M intends to launch versions of its Greptile Grip golf gloves in Japan and Europe, the second and third largest golf markets behind the United States. Finally, 3M may develop and market baseball and softball batting gloves using the Greptile material in 2006 if the manufacturing and channels for golf gloves can be augmented.

QUESTIONS

- 1 What are the characteristics of the target market for the 3M Greptile Grip golf glove?
- 2 What are the key points of difference of the 3M Greptile Grip golf glove when compared with competitors’ products, such as FootJoy and Nike? Substitute products, such as golf grips?
- 3 How does the Greptile Grip golf glove meet 3M’s three criteria for new products?
- 4 Since 3M has no prior products for the golf market, what special promotion and distribution problems might 3M have?
- 5 How would you rate the 3M Greptile Grip golf glove on the following reasons for success and failure: (a) significant points of difference; (b) size and growth of the golf market; (c) product quality; (d) market timing; (e) execution of the marketing mix; (f) synergy or fit with 3M’s R&D, manufacturing, and/or marketing capabilities; and (g) access to consumers?