9 New Product Development and Product Life-Cycle Strategies

Chapter Preview

In the previous chapter, you learned how marketers manage and develop products and brands. In this chapter, we examine two additional product topics: developing new products and managing products through their life cycles. New products are the lifeblood of an organization. However, new-product development is risky, and many new products fail. So, the first part of this chapter lays out a process for finding and growing successful new products. Once introduced, marketers want their products to enjoy long and happy lives. In the second part of this chapter, you'll see that every product passes through several life-cycle stages, and each stage poses new challenges requiring different marketing strategies and tactics. Finally, we wrap up our product discussion by looking at two additional considerations: social responsibility in product decisions and international product and services marketing.

For openers, consider Google, one of the world's most innovative companies. Google seems to come up with an almost unending flow of knock-your-eye-out new technologies and services. If it has to do with finding, refining, or using information, there's probably an innovative Google solution for it. At Google, innovation isn't just a process; it's in the very spirit of the place.

Google: New-Product Innovation at the Speed of Light

Google is wildly innovative. It recently topped *Fast Company* magazine's list of the world's most innovative companies, and it regularly ranks among everyone else's top two or three innovators. Google is also spectacularly successful. Despite formidable competition from giants like Microsoft and Yahoo!, Google's share in its core business—online search—stands at a decisive 66 percent, 2.5 times the combined market shares of its two closest competitors. The company also captures 86 percent of the mobile-search market and 60 percent of all search-related advertising revenues.

But Google has grown to become much more than just an Internet search and advertising company. Google's mission is "to organize the world's information and make it universally accessible and useful." In Google's view, information is a kind of natural resource—one to be mined and refined and universally distributed. That idea unifies what would otherwise appear to be a widely diverse set of Google projects, such as mapping the world, searching the Web on a cell phone screen, or even providing for the early detection of flu epidemics. If it has to do with harnessing and using information, Google's got it covered in some innovative way.

Google knows how to innovate. At many companies, new-product development is a cautious, step-by-step affair that might take a year or two to unfold. In contrast, Google's freewheeling new-product development process moves at the speed of light. The nimble innovator implements major new services in less time than it takes competitors to refine and approve an initial idea. For example, a Google senior project manager describes the lightning-quick development of iGoogle, Google's customizable home page:

> It was clear to Google that there were two groups [of Google users]: people who loved the site's clean, classic look and people who wanted tons of information there—e-mail, news, local weather. [For those who wanted a fuller home page,] iGoogle started out with me and three engineers. I was 22, and I thought, "This is awesome." Six weeks later, we launched the first version in May. The happiness metrics were good, there was healthy growth, and by September, we had [iGoogle fully operational with] a link on Google.com.

Such fast-paced innovation would boggle the minds of product developers at most other companies, but at Google it is standard operating procedure. "That's what we do," says Google's vice president for search products and user experience. "The hardest part about indoctrinating people into our culture is when engineers show me a prototype

Google's famously chaotic innovation process has unleashed a seemingly unending flurry of diverse new products. But at Google, innovation is more than a process. It's part of the company's DNA. "Where does innovation happen at Google? It happens everywhere."

and I'm like, 'Great, let's go!' They'll say, 'Oh, no, it's not ready.' I tell them, 'The Googly thing is to launch it early on Google Labs [a site where users can try out experimental Google applications] and then to iterate, learning what the market wants—and making it great.'" Adds a Google engineering manager, "We set an operational tempo: When in doubt, do something. If you have two paths and you're not sure which is right, take the fastest path."

Google is spectacularly successful and wildly innovative. Ask the people who work there, and they'll tell you that innovation is more than just a process; it's in the air, in the spirit of the place.

According to Google CEO Eric Schmidt, when it comes to new-product development at Google, there are no two-year plans. The company's new-product planning looks ahead only four to five months. Schmidt says that he would rather see projects fail quickly than see a carefully planned, long drawn-out project fail.

Google's famously chaotic innovation process has unleashed a seemingly unending flurry of diverse products, ranging from an e-mail service (Gmail), a blog search engine (Google Blog Search), an online payment service (Google Checkout), and a photo sharing service (Google Picasa) to a universal platform for mobile-phone applications (Google Android), a cloud-friendly Web browser (Chrome), projects for mapping and exploring the world (Google Maps and Google Earth), and even an early-warning system for flu outbreaks in your area (FluTrends). Google claims that FluTrends has identified outbreaks two weeks sooner than has the U.S. Centers for Disease Control and Prevention.

Google is open to new-product ideas from about any source. What ties it all together is the company's passion for helping people find and use information. Innovation is the responsibility of every Google employee. Google engineers are encouraged to spend 20 percent of their time developing their own new-product ideas. And all new Google ideas are quickly tested in beta form by the ultimate judges—those who will use them. According to one observer:

> Any time you cram some 20,000 of the world's smartest people into one company, you can expect to grow a garden of unrelated ideas. Especially when you give some of those geniuses one workday a week—Google's famous "20 percent time"—to work on whatever projects fan their passions. And especially when you create Google Labs (www.googlelabs.com), a Web site where the public can kick the tires on half-baked Google creations. Some Labs projects go on to become real Google services, and others are quietly snuffed out.

In the end, at Google, innovation is more than a process—it's part of the company's DNA. "Where does innovation happen at Google? It happens everywhere," says a Google research scientist.

Talk to Googlers at various levels and departments, and one powerful theme emerges: Whether they're designing search engines for the blind or preparing meals for their colleagues, these people feel that their work can change the world. The marvel of Google is its ability to continue to instill a sense of creative fearlessness and ambition in its employees. Prospective hires are often asked, "If you could change the world using Google's resources, what would you build?" But here, this isn't a goofy or even theoretical question: Google wants to know because thinking—and building—on that scale is what Google does. This, after all, is the company that wants to make available online every page of every book ever published. Smaller-gauge ideas die of disinterest. When it comes to innovation, Google *is* different. But the difference isn't tangible. It's in the air—in the spirit of the place.[1]

As the Google story suggests, companies that excel at developing and managing new products reap big rewards. Every product seems to go through a life cycle: it is born, goes through several phases, and eventually dies as newer products come along that create new or greater value for customers.

This product life cycle presents two major challenges: First, because all products eventually decline, a firm must be good at developing new products to replace aging ones (the challenge of *new-product development*). Second, a firm must be good at adapting its marketing

Objective OUTLINE

Objective 1 **Explain how companies find and develop new-product ideas.**

Objective 2 **List and define the steps in the new-product development process and the major considerations in managing this process.**

Objective 3 **Describe the stages of the product life cycle and how marketing strategies change during a product's life cycle.**

Objective 4 **Discuss two additional product issues: socially responsible product decisions and international product and services marketing.**

strategies in the face of changing tastes, technologies, and competition as products pass through stages (the challenge of *product life-cycle strategies*). We first look at the problem of finding and developing new products and then at the problem of managing them successfully over their life cycles.

Author Comment New products are the lifeblood of a company. As old products mature and fade away, companies must develop new ones to take their place. For example, only eight years after it unveiled its first iPod, 51 percent of Apple's revenues come from iPods, iPhones, and iTunes.

New-Product Development Strategy (pp 260–261)

A firm can obtain new products in two ways. One is through *acquisition*—by buying a whole company, a patent, or a license to produce someone else's product. The other is through the firm's own **new-product development** efforts. By *new products* we mean original products, product improvements, product modifications, and new brands that the firm develops through its own R&D efforts. In this chapter, we concentrate on new-product development.

New-product development
The development of original products, product improvements, product modifications, and new brands through the firm's own product development efforts.

New products are important—to both customers and the marketers who serve them. For customers, they bring new solutions and variety to their lives. For companies, new products are a key source of growth. Even in a down economy, companies must continue to innovate. New products provide new ways to connect with customers as they adapt their buying to changing economic times. Bad times are "when winners and losers get created," says former Xerox CEO Anne Mulcahy. "The ability to reinforce great marketing and great brand is extraordinarily important." John Hayes, CEO of American Express, agrees: "The world will pass you by if you are not constantly innovating."[2]

Yet innovation can be very expensive and very risky. New products face tough odds. According to one estimate, 80 percent of all new products fail or dramatically underperform. Each year, companies lose an estimated $20 billion to $30 billion on failed food products alone.[3]

Why do so many new products fail? There are several reasons. Although an idea may be good, the company may overestimate market size. The actual product may be poorly designed. Or it might be incorrectly positioned, launched at the wrong time, priced too high, or poorly advertised. A high-level executive might push a favorite idea despite poor marketing research findings. Sometimes the costs of product development are higher than expected, and sometimes competitors fight back harder than expected. However, the reasons behind some new-product failures seem pretty obvious. Try the following on for size:[4]

> Strolling the aisles of GfK's NewProductWorks collection is like finding yourself in a new-product history museum. ● Many of the more than 110,000 products on display

Visiting GfK's NewProductWorks Showcase and Learning Center is like finding yourself in some nightmare version of a supermarket. Each product failure represents squandered dollars and hopes.

were quite successful. Others, however, were abject flops. Behind each flop are squandered dollars and hopes and the classic question, "What were they thinking?" Some products failed because they simply didn't bring value to customers—for example, Look of Buttermilk Shampoo, Cucumber antiperspirant spray, or Premier smokeless cigarettes. *Smokeless* cigarettes? What were they thinking? Other companies failed because they attached trusted brand names to something totally out of character. Can you imagine swallowing Ben-Gay aspirin? Or how about Gerber Singles food for adults (perhaps the tasty pureed sweet-and-sour pork or chicken Madeira)? Other misbegotten attempts to stretch a good name include Cracker Jack cereal, Exxon fruit punch, Smucker's premium ketchup, Fruit of the Loom laundry detergent, and Harley-Davidson cake-decorating kits. Really, what were they thinking?

Author Comment | Companies can't just hope that they'll stumble across good new products. Instead, they must develop a systematic new-product development process.

The New-Product Development Process (pp 261–269)

Companies face a problem: They must develop new products, but the odds weigh heavily against success. To create successful new products, a company must understand its consumers, markets, and competitors and develop products that deliver superior value to customers. It must carry out strong new-product planning and set up a systematic, customer-driven *new-product development process* for finding and growing new products. **Figure 9.1** shows the eight major steps in this process.

Idea Generation

Idea generation
The systematic search for new-product ideas.

New-product development starts with **idea generation**—the systematic search for new-product ideas. A company typically generates hundreds of ideas, even thousands, to find a few good ones. Major sources of new-product ideas include internal sources and external sources such as customers, competitors, distributors and suppliers, and others.

Internal Idea Sources

Using *internal sources*, the company can find new ideas through formal R&D. However, in one survey, 750 global CEOs reported that only 14 percent of their innovation ideas came from traditional R&D. Instead, 41 percent came from employees, and 36 percent came from customers.[5]

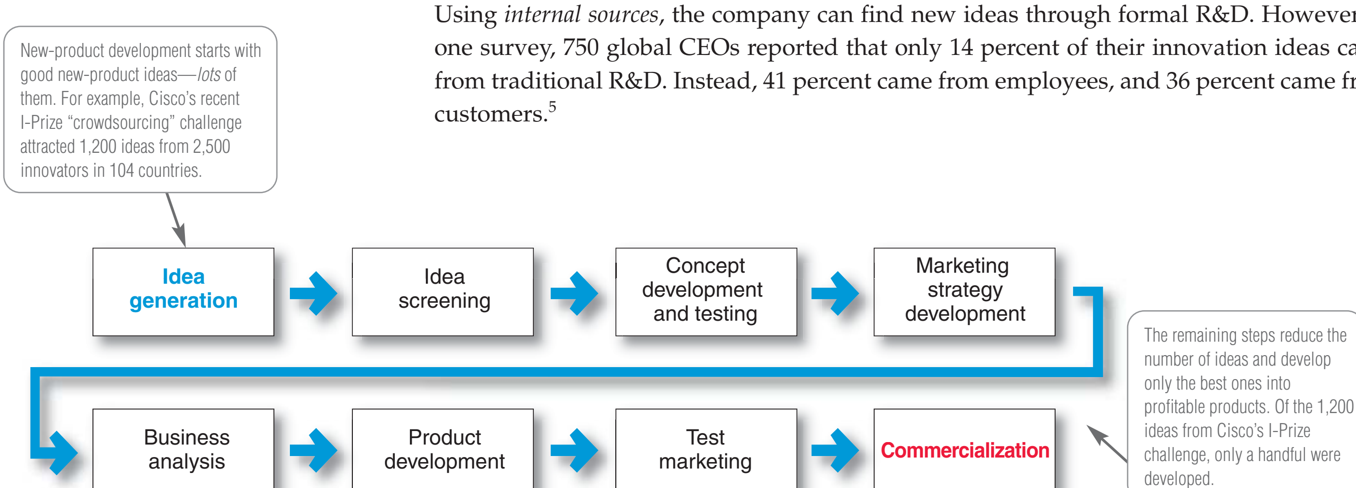


FIGURE | 9.1
Major Stages in New-Product Development

Thus, beyond its internal R&D process, companies can pick the brains of its employees—from executives to scientists, engineers, and manufacturing staff to salespeople. Many companies have developed successful "intrapreneurial" programs that encourage employees to envision and develop new-product ideas. For example, the Internet networking company Cisco makes it everybody's business to come up with great ideas. It set up an internal wiki called Idea Zone or I-Zone, through which any Cisco employee can propose an idea for a new product or comment on or modify someone else's proposed idea. Since its inception, I-Zone has generated hundreds of ideas, leading to the formation of four new Cisco business units.[6]

External Idea Sources

Companies can also obtain good new-product ideas from any of a number of external sources. For example, *distributors and suppliers* can contribute ideas. Distributors are close to the market and can pass along information about consumer problems and new-product possibilities. Suppliers can tell the company about new concepts, techniques, and materials that can be used to develop new products. *Competitors* are another important source. Companies watch competitors' ads to get clues about their new products. They buy competing new products, take them apart to see how they work, analyze their sales, and decide whether they should bring out a new product of their own. Other idea sources include trade magazines, shows, and seminars; government agencies; advertising agencies; marketing research firms; university and commercial laboratories; and inventors.

Perhaps the most important source of new-product ideas are *customers* themselves. The company can analyze customer questions and complaints to find new products that better solve consumer problems. Or it can invite customers to share suggestions and ideas. For example, Starbucks sponsors My Starbucks Idea, a Web site that invites customers to share, discuss, and vote on new product and service ideas. "You know better than anyone else what you want from Starbucks," says the site. "So tell us. What's your Starbucks idea? Revolutionary or simple—we want to hear it."[7]

To harness customer new-product input, 3M has opened nearly two dozen customer innovation centers throughout the world, including sites in the United States, Brazil, Germany, India, China, and Russia. ● The innovation centers not only generate plenty of customer-driven new-product ideas but also help 3M establish productive, long-term customer relationships.[8]

Typically located near company research facilities, the innovation centers engage 3M's corporate customers directly in the innovation process. The idea behind the centers is to gain a richer understanding of customer needs and link these needs to 3M technologies. In a typical customer visit, a customer team meets with 3M marketing and technology experts who pepper them with open-ended questions. Next, together, the customer and 3M teams visit the "World of Innovation" showroom, where they are exposed to more than 40 3M technology platforms—core technologies in areas like optical films, reflective materials, abrasives, and adhesives. This interaction often sparks novel connections and solutions to the customer's needs.

For instance, 3M and customer Visteon Corporation, an automotive supplier, have worked together in the development of a next-generation concept vehicle that incorporates 3M technologies not originally developed for automated applications. Visteon's visit to an innovation center led to the idea of using 3M's 3D technology for navi-

● Customer-driven new-product ideas: At 3M innovation centers, customer teams meet with 3M marketing and technology experts to spark novel solutions to customer problems.

gation displays, Thinsulate materials to reduce noise, and optical films to hide functional elements of the dashboard unless the driver wants them displayed.

Crowdsourcing

Crowdsourcing
Inviting broad communities of people—customers, employees, independent scientists and researchers, and even the public at large—into the new-product innovation process.

More broadly, many companies are now developing *crowdsourcing* or *open-innovation* new-product idea programs. **Crowdsourcing** throws the innovation doors wide open, inviting broad communities of people—customers, employees, independent scientists and researchers, and even the public at large—into the new-product innovation process. The idea, says one analyst, is that when it comes to helping to improve "your products, services, Web site, or marketing efforts . . . two heads—or 2,000 or 20,000—are better than one."[9]

For example, when Netflix wanted to improve the accuracy of its Cinematch online recommendation system, which makes movie recommendations to customers based on their ratings of other movies they've rented, it launched a crowdsourcing effort called Netflix Prize.[10]

Crowdsourcing: When Netflix wanted ideas for improving the accuracy of its Cinematch online recommendation system, it decided to "open it up to the world," promising a $1 million prize for the best solution.

It was a quest that Netflix scientists and mathematicians have been working on for about a decade. Rather than hiring even more computer scientists to work on the project, Netflix decided to open it up to the world. "We'd like to think that we have smart people bumping around the building, but we don't have anything compared to the worldwide intelligentsia," says Netflix vice president Steve Swasey. The company created a Web site, NetflixPrize.com, which issued an open challenge and promised a $1 million prize to whomever submitted the best solution for improving the accuracy of the Cinematch by at least 10 percent. Nearly three years and more than 51,000 participants later, Netflix awarded the prize to BellKors Pragmatic Chaos, a seven-member superteam consisting of engineers, statisticians, and researchers from the United States, Austria, Canada, and Israel. "It was a very innovative way to generate more ideas," says Swasey. "If you think about it, 51,000 scientists" devoted their intelligence, creativity, and man-hours to the project, all for only $1 million.

Similarly, Dell's IdeaStorm Web site asks consumers or anyone else for insights on how to improve the company's product offering. Users post suggestions, the community votes, and the most popular ideas rise to the top. Since its launch in 2007, the site has received more than 13,000 ideas and 713,000 votes.[11]

Crowdsourcing network InnoCentive puts its corporate clients ("seekers") in touch with its global network of more than 200,000 scientists ("solvers"). The seeker companies post "challenges," and solvers can earn up to $1 million for providing solutions. For example, P&G wanted to create a dishwashing detergent smart enough to reveal when just the right amount of soap has been added to a sink full of dirty dishes. After seeing the problem posted on InnoCentive, an Italian chemist working from her home laboratory solved the problem by creating a new kind of dye that turns dishwater blue when a certain amount of soap is added. Her reward: $30,000. P&G estimates that more than 50 percent of its new-product innovations today have elements that originated outside the company, up from 15 percent in 2000.[12]

Crowdsourcing can produce a flood of innovative ideas. In fact, opening the floodgates to anyone and everyone can overwhelm the company with ideas—some good and some bad. "Even a small crowdsourcing event can generate a few hundred ideas. If I told you next year you're going to get 20,000 ideas from your customers, how would you process that?" For example, when Cisco Systems sponsored an open-innovation effort called I-Prize, soliciting ideas from external sources, it received more than 1,200 distinct ideas from more than 2,500 innovators from 104 countries. "The evaluation process was far more labor-intensive than we'd anticipated," says Cisco's chief technology officer. It required "significant investments of time, energy, patience, and imagination . . . to discern the gems hidden within rough stones." In the end, a team of six Cisco people worked full-time for three months to carve 40 semifinalists from more than 1,200 ideas.[13]

Truly innovative companies don't rely only on one source or another for new-product ideas. Instead, according to one expert, they create "extensive networks for capturing inspiration from every possible source, from employees at every walk of the company to customers to other innovators and myriad points beyond."[14]

Idea Screening

Idea screening
Screening new-product ideas to spot good ideas and drop poor ones as soon as possible.

The purpose of idea generation is to create a large number of ideas. The purpose of the succeeding stages is to *reduce* that number. The first idea-reducing stage is **idea screening**, which helps spot good ideas and drop poor ones as soon as possible. Product development costs rise greatly in later stages, so the company wants to go ahead only with those product ideas that will turn into profitable products.

Many companies require their executives to write up new-product ideas in a standard format that can be reviewed by a new-product committee. The write-up describes the product or the service, the proposed customer value proposition, the target market, and the competition. It makes some rough estimates of market size, product price, development time and costs, manufacturing costs, and rate of return. The committee then evaluates the idea against a set of general criteria.

One marketing expert proposes an R-W-W ("real, win, worth doing") new-product screening framework that asks three questions. First, *Is it real?* Is there a real need and desire for the product and will customers buy it? Is there a clear product concept and will such a product satisfy the market? Second, *Can we win?* Does the product offer a sustainable competitive advantage? Does the company have the resources to make such a product a success? Finally, *Is it worth doing?* Does the product fit the company's overall growth strategy? Does it offer sufficient profit potential? The company should be able to answer yes to all three R-W-W questions before developing the new-product idea further.[15]

Concept Development and Testing

Product concept
A detailed version of the new-product idea stated in meaningful consumer terms.

An attractive idea must be developed into a **product concept**. It is important to distinguish between a product idea, a product concept, and a product image. A *product idea* is an idea for a possible product that the company can see itself offering to the market. A *product concept* is a detailed version of the idea stated in meaningful consumer terms. A *product image* is the way consumers perceive an actual or potential product.

This is Tesla's initial all-electric roadster. Later, more-affordable mass-market models will travel more than 300 miles on a single charge, recharge in 45 minutes from a normal 120-volt electrical outlet, and cost about one penny per mile to power.

Concept Development

Suppose a car manufacturer has developed a practical battery-powered, all-electric car. Its initial prototype is a sleek, sporty roadster convertible that sells for more than $100,000.[16] However, in the near future, it plans to introduce more-affordable, mass-market versions that will compete with today's hybrid cars. This 100 percent electric car will accelerate from zero to sixty miles per hour in 5.6 seconds, travel more than 300 miles on a single charge, recharge in 45 minutes from a normal 120-volt electrical outlet, and cost about one penny per mile to power.

Looking ahead, the marketer's task is to develop this new product into alternative product concepts, find out how attractive each concept is to customers, and choose the best one. It might create the following product concepts for this electric car:

- *Concept 1:* An affordably priced midsize car designed as a second family car to be used around town for running errands and visiting friends.
- *Concept 2:* A mid-priced sporty compact appealing to young singles and couples.
- *Concept 3:* A "green" car appealing to environmentally conscious people who want practical, low-polluting transportation.
- *Concept 4:* A high-end midsize utility vehicle appealing to those who love the space SUVs provide but lament the poor gas mileage.

Concept Testing

Concept testing
Testing new-product concepts with a group of target consumers to find out if the concepts have strong consumer appeal.

Concept testing calls for testing new-product concepts with groups of target consumers. The concepts may be presented to consumers symbolically or physically. Here, in more detail, is concept 3:

> An efficient, fun-to-drive, battery-powered compact car that seats four. This 100 percent electric wonder provides practical and reliable transportation with no pollution. It goes more than 300 miles on a single charge and costs pennies per mile to operate. It's a sensible, responsible alternative to today's pollution-producing gas-guzzlers. Its fully equipped price is $25,000.

Many firms routinely test new-product concepts with consumers before attempting to turn them into actual new products. For some concept tests, a word or picture description might be sufficient. However, a more concrete and physical presentation of the concept will increase the reliability of the concept test. After being exposed to the concept, consumers then may be asked to react to it by answering questions similar to those in **Table 9.1**.

The answers to such questions will help the company decide which concept has the strongest appeal. For example, the last question asks about the consumer's intention to buy. Suppose 2 percent of consumers say they "definitely" would buy, and another 5 percent say "probably." The company could project these figures to the full population in this target group to estimate sales volume. Even then, the estimate is uncertain because people do not always carry out their stated intentions.

Marketing Strategy Development

Marketing strategy development
Designing an initial marketing strategy for a new product based on the product concept.

Suppose the carmaker finds that concept 3 for the electric car tests best. The next step is **marketing strategy development**, designing an initial marketing strategy for introducing this car to the market.

The *marketing strategy statement* consists of three parts. The first part describes the target market; the planned value proposition; and the sales, market share, and profit goals for the first few years. Thus:

> The target market is younger, well-educated, moderate- to high-income individuals, couples, or small families seeking practical, environmentally responsible transportation.

TABLE | 9.1 Questions for Battery-Powered Electric Car Concept Test

1. Do you understand the concept of a battery-powered electric car?
2. Do you believe the claims about the car's performance?
3. What are the major benefits of the battery-powered electric car compared with a conventional car?
4. What are its advantages compared with a gas-electric hybrid car?
5. What improvements in the car's features would you suggest?
6. For what uses would you prefer a battery-powered electric car to a conventional car?
7. What would be a reasonable price to charge for the car?
8. Who would be involved in your decision to buy such a car? Who would drive it?
9. Would you buy such a car (definitely, probably, probably not, definitely not)?

> The car will be positioned as more fun to drive and less polluting than today's internal combustion engine or hybrid cars. The company will aim to sell 50,000 cars in the first year, at a loss of not more than $15 million. In the second year, the company will aim for sales of 90,000 cars and a profit of $25 million.

The second part of the marketing strategy statement outlines the product's planned price, distribution, and marketing budget for the first year:

> The battery-powered electric car will be offered in three colors—red, white, and blue—and will have a full set of accessories as standard features. It will sell at a retail price of $25,000, with 15 percent off the list price to dealers. Dealers who sell more than 10 cars per month will get an additional discount of 5 percent on each car sold that month. A marketing budget of $50 million will be split 50–50 between a national media campaign and local event marketing. Advertising and the Web site will emphasize the car's fun spirit and low emissions. During the first year, $100,000 will be spent on marketing research to find out who is buying the car and what their satisfaction levels are.

The third part of the marketing strategy statement describes the planned long-run sales, profit goals, and marketing mix strategy:

> We intend to capture a 3 percent long-run share of the total auto market and realize an after-tax return on investment of 15 percent. To achieve this, product quality will start high and be improved over time. Price will be raised in the second and third years if competition and the economy permit. The total marketing budget will be raised each year by about 10 percent. Marketing research will be reduced to $60,000 per year after the first year.

Business Analysis

Business analysis
A review of the sales, costs, and profit projections for a new product to find out whether these factors satisfy the company's objectives.

Product development
Developing the product concept into a physical product to ensure that the product idea can be turned into a workable market offering.

Once management has decided on its product concept and marketing strategy, it can evaluate the business attractiveness of the proposal. **Business analysis** involves a review of the sales, costs, and profit projections for a new product to find out whether they satisfy the company's objectives. If they do, the product can move to the product development stage.

To estimate sales, the company might look at the sales history of similar products and conduct market surveys. It can then estimate minimum and maximum sales to assess the range of risk. After preparing the sales forecast, management can estimate the expected costs and profits for the product, including marketing, R&D, operations, accounting, and finance costs. The company then uses the sales and costs figures to analyze the new product's financial attractiveness.

Product Development

For many new-product concepts, a product may exist only as a word description, a drawing, or perhaps a crude mock-up. If the product concept passes the business test, it moves into **product development**. Here, R&D or engineering develops the product concept into a physical product. The product development step, however, now calls for a huge jump in investment. It will show whether the product idea can be turned into a workable product.

The R&D department will develop and test one or more physical versions of the product concept. R&D hopes to design a prototype that will satisfy and excite consumers and that can be produced quickly and at budgeted costs. Developing a successful prototype can take days, weeks, months, or even years depending on the product and prototype methods.

Often, products undergo rigorous tests to make sure that they perform safely and effectively, or that consumers will find value in them. Companies can do their own product testing or outsource testing to other firms that specialize in testing.

Product testing: HP signs up consumers to evaluate prototype imaging and printing products in their homes and offices to gain insights about their entire "out-of-box experience."

Marketers often involve actual customers in product testing. For example, HP signs up consumers to evaluate prototype imaging and printing products in their homes and offices. Participants work with prerelease products for periods ranging from a few days to eight weeks and share their experiences about how the products perform in an actual use environment. The product-testing program gives HP a chance to interact with customers and gain insights about their entire "out-of-box experience," from product setup and operation to system compatibility. HP personnel might even visit participants' homes to directly observe installation and first usage of the product.[17]

A new product must have the required functional features and also convey the intended psychological characteristics. The battery-powered electric car, for example, should strike consumers as being well built, comfortable, and safe. Management must learn what makes consumers decide that a car is well built. To some consumers, this means that the car has "solid-sounding" doors. To others, it means that the car is able to withstand heavy impact in crash tests. Consumer tests are conducted in which consumers test-drive the car and rate its attributes.

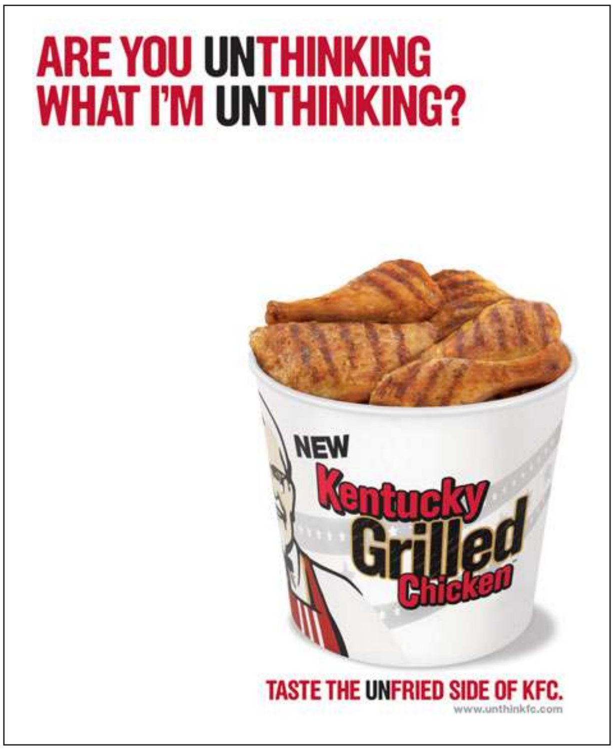
Test Marketing

Test marketing
The stage of new-product development in which the product and its proposed marketing program are tested in realistic market settings.

If the product passes both the concept test and the product test, the next step is **test marketing**, the stage at which the product and its proposed marketing program are introduced into realistic market settings. Test marketing gives the marketer experience with marketing a product before going to the great expense of full introduction. It lets the company test the product and its entire marketing program—targeting and positioning strategy, advertising, distribution, pricing, branding and packaging, and budget levels.

The amount of test marketing needed varies with each new product. Test marketing costs can be high, and it takes time that may allow competitors to gain advantages. When the costs of developing and introducing the product are low, or when management is already confident about the new product, the company may do little or no test marketing. In fact, test marketing by consumer-goods firms has been declining in recent years. Companies often do not test-market simple line extensions or copies of successful competitor products.

However, when introducing a new product requires a big investment, when the risks are high, or when management is not sure of the product or its marketing program, a company may do a lot of test marketing. For instance, KFC conducted more than three years of product and market testing before rolling out its major new Kentucky Grilled Chicken product. The fast-food chain built its legacy on serving crispy, seasoned fried chicken but hopes that the new product will lure back health-conscious consumers who dropped fried chicken from their diets. "This is transformational for our brand," says KFC's chief food innovation officer. Given the importance of the decision, "You might say, 'what took you so long,'" says the chain's president. "I've asked that question a couple of times myself. The answer is we had to get it right."[18]



Test marketing: KFC test marketed its new Kentucky Grilled Chicken product for three years before rolling it out nationally. Says the chain's president, "We had to get it right."

As an alternative to extensive and costly standard test markets, companies can use controlled test markets or simulated test markets. In *controlled test markets*, such as SymphonyIRI's BehaviorScan, new products and tactics are tested among controlled groups of customers and stores. In each BehaviorScan market, SymphonyIRI maintains a panel of shoppers who report all of their purchases by showing an identification card at checkout in participating stores. Within test stores, SymphonyIRI controls such factors as shelf placement, price, and in-store promotions for the products being tested. SymphonyIRI also measures TV viewing in each panel household and sends special commercials to panel member television sets to test their affect on shopping decisions.[19]

By combining information on each consumer's purchases with consumer demographic and TV viewing information, BehaviorScan can provide store-by-store, week-by-week reports on the sales of tested products and the impact of in-store and in-home marketing efforts. Such controlled test markets usually cost much less than standard test markets and can provide accurate forecasts in as little as 12 to 24 weeks.

Companies can also test new products using *simulated test markets*, in which researchers measure consumer responses to new products and marketing tactics in laboratory stores or simulated shopping environments. Many marketers are now using new online simulated marketing technologies to reduce the costs of test marketing and speed up the process. For example, Frito-Lay worked with the research firm Decision Insight to create an online virtual convenience store in which to test new products and marketing ideas.[20]

> Decision Insight's SimuShop online shopping environment lets Frito-Lay's marketers test shopper reactions to different extensions, shelf placements, pricing, and packaging of its Lay's, Doritos, Cheetos, and Fritos brands in a variety of store setups without investing huge amounts of time and money on actual in-store research in different locations. Recruited shoppers visit the online store, browse realistic virtual shelves featuring Frito-Lay's and competing products, click on individual products to view them in more detail, and select products to put in their carts. When the shopping is done, selected customers are questioned in one-on-one, on-screen interviews about why they chose the products they did. Watching the entire decision process unfold gives Frito-Lay marketers reams of information about what would happen in the real world. With 200-some bags of Frito-Lay products sitting on a typical store shelf, the company doesn't have the luxury of test marketing in actual market settings. "For us, that can only really be done virtually," says a Frito-Lay marketer. The SimuShop tests produce a 90 percent or better correlation to real shopper behavior when compared with later real-world data.

Rather than just simulating the shopping environment, P&G recently launched an actual online store that will serve as a "learning lab" by which the company can test new products and marketing concepts. The online store lets P&G quickly do real-time testing of marketing tactics—such as e-coupons, cross-selling efforts, and advertising—and learn how they affect consumer buying. The online store probably won't boost the company's revenues or profits much. Says an analyst, P&G is "more interested in the data [it will produce] about shoppers and what works for them: [new products,] product pairings, environmentally friendly pitches, and packaging options." Says an executive associated with P&G's eStore, "We're creating this giant sandbox for the brands to play in."[21]

Commercialization

Commercialization
Introducing a new product into the market.

Test marketing gives management the information needed to make a final decision about whether to launch the new product. If the company goes ahead with **commercialization**—introducing the new product into the market—it will face high costs. The company may need to build or rent a manufacturing facility. And, in the case of a major new consumer product, it may spend hundreds of millions of dollars for advertising, sales promotion, and other marketing efforts in the first year. For example, to introduce its McCafé coffee in the United States, McDonald's spent $100 million on an advertising blitz that spanned TV, print, radio, outdoor, the Internet, events, public relations, and sampling. Similarly, Verizon spent $100 million to introduce the Droid smart phone, and Microsoft spent $100 million or more on marketing to introduce its Bing search engine.[22]

The company launching a new product must first decide on introduction *timing*. If the carmaker's new battery-powered electric car will eat into the sales of its other cars, the introduction may be delayed. If the car can be improved further, or if the economy is down, the company may wait until the following year to launch it. However, if competitors are ready to introduce their own battery-powered models, the company may push to introduce its car sooner.

Next, the company must decide *where* to launch the new product—in a single location, a region, the national market, or the international market. Few companies have the confidence, capital, and capacity to launch new products into full national or international distribution from the get-go. Instead, they develop a planned *market rollout* over time. For example, when Miller introduced Miller Chill, a lighter Mexican-style lager flavored with lime and salt, it started in selected southwestern states, such as Arizona, New Mexico, and Texas, supported by local TV commercials. Based on strong sales in these initial markets, the company then rolled out Miller Chill nationally, supported by $35 million worth of TV commercials and print ads. Finally, based on the brand's U.S. success, Miller rolled out Miller Chill internationally, starting in Australia.[23]

Some companies, however, may quickly introduce new models into the full national market. Companies with international distribution systems may introduce new products through swift global rollouts. Microsoft did this with its Windows 7 operating system, using a mammoth advertising blitz to launch the operating system simultaneously in more than 30 markets worldwide.

Author Comment Above all else, new-product development must focus on creating customer value. Says P&G's CEO about the company's new-product development: "We've figured out how to keep the consumer at the center of all our decisions. As a result, we don't go far wrong."

Managing New-Product Development (pp 269–273)

The new-product development process shown in Figure 9.1 highlights the important activities needed to find, develop, and introduce new products. However, new-product development involves more than just going through a set of steps. Companies must take a holistic approach to managing this process. Successful new-product development requires a customer-centered, team-based, and systematic effort.

Customer-Centered New-Product Development

Customer-centered new-product development
New-product development that focuses on finding new ways to solve customer problems and create more customer-satisfying experiences.

Above all else, new-product development must be customer centered. When looking for and developing new products, companies often rely too heavily on technical research in their R&D laboratories. But like everything else in marketing, successful new-product development begins with a thorough understanding of what consumers need and value. **Customer-centered new-product development** focuses on finding new ways to solve customer problems and create more customer-satisfying experiences.

One study found that the most successful new products are ones that are differentiated, solve major customer problems, and offer a compelling customer value proposition. Another study showed that companies that directly engage their customers in the new-product innovation process had twice the return on assets and triple the growth in operating income of firms that did not. Thus, customer involvement has a positive effect on the new-product development process and product success.[24]

For example, whereas the consumer package goods industry's new-product success rate is only about 15–20 percent, P&G's success rate is over 50 percent. According to former P&G CEO A. G. Lafley, the most important factor in this success is understanding what consumers want. In the past, says Lafley, P&G tried to push new products down to consumers rather than first understanding their needs. But now, P&G employs an immersion process it calls "Living It," in which researchers go so far as to live with shoppers for several days at a time to envision product ideas based directly on consumer needs. P&Gers also hang out in stores for similar insights, a process they call "Working It." And at its Connect + Develop crowdsourcing site, P&G urges customers to submit their own ideas and suggestions for new products and services, current product design, and packaging. "We figured out how to keep the consumer at the center of all our decisions," says Lafley. "As a result, we don't go far wrong."[25]

For products ranging from consumer package goods to financial services, today's innovative companies get out of the research lab and mingle with customers in the search for new customer value. For example, when PNC Bank sought new digital services that would connect with high-tech millennial consumers, it started by observing these consumers in their day-to-day lives:[26]

> For three months, researchers and designers followed about 30 young consumers on their daily living paths and quizzed them on how they use their money, where they kept it, what they thought about it, and which mobile and online banking programs they used. Next, PNC Bank set up discussion groups composed of both consumers and

company employees, who jointly brainstormed hundreds of ideas and then whittled them down to a few core ones. The result was PNC Bank's successful real-time money management widget/smartphone app called Virtual Wallet. The digital tool combines three accounts—spend, grow, and reserve—into one high-definition deal. A Calendar feature provides daily-to-monthly monitoring of every bill and payment. The Money Bar slider lets young customers move money quickly between their spend and save accounts. The savings component offers a feature called "Punch the Pig," a fun, customizable widget that lets users click to transfer cash instantly into a high-yield savings account. And a "Danger Days" feature automatically warns of potential overspending. In all, based on in-depth consumer insights, PNC Bank's Virtual Wallet puts real-time money management at the fingertips of the millennial generation.

Thus, customer-centered new-product development begins and ends with understanding customers and involving them in the process. (See Real Marketing 9.1 for another great example.) Successful innovation boils down to finding fresh ways to meet customer needs.

Team-Based New-Product Development

Good new-product development also requires a total-company, cross-functional effort. Some companies organize their new-product development process into the orderly sequence of steps shown in Figure 9.1, starting with idea generation and ending with commercialization. Under this *sequential product development* approach, one company department works individually to complete its stage of the process before passing the new product along to the next department and stage. This orderly, step-by-step process can help bring control to complex and risky projects. But it can also be dangerously slow. In fast-changing, highly competitive markets, such slow-but-sure product development can result in product failures, lost sales and profits, and crumbling market positions.

Team-based new-product development
An approach to developing new products in which various company departments work closely together, overlapping the steps in the product development process to save time and increase effectiveness.

To get their new products to market more quickly, many companies use a **team-based new-product development** approach. Under this approach, company departments work closely together in cross-functional teams, overlapping the steps in the product development process to save time and increase effectiveness. Instead of passing the new product from department to department, the company assembles a team of people from various departments that stays with the new product from start to finish. Such teams usually include people from the marketing, finance, design, manufacturing, and legal departments and even supplier and customer companies. In the sequential process, a bottleneck at one phase can seriously slow an entire project. In the team-based approach, if one area hits snags, it works to resolve them while the team moves on.

The team-based approach does have some limitations, however. For example, it sometimes creates more organizational tension and confusion than the more orderly sequential approach. However, in rapidly changing industries facing increasingly shorter PLCs, the rewards of fast and flexible product development far exceed the risks. Companies that combine a customer-centered approach with team-based new-product development gain a big competitive edge by getting the right new products to market faster.

Systematic New-Product Development

Finally, the new-product development process should be holistic and systematic rather than compartmentalized and haphazard. Otherwise, few new ideas will surface, and many good ideas will sputter and die. To avoid these problems, a company can install an *innovation management system* to collect, review, evaluate, and manage new-product ideas.

The company can appoint a respected senior person to be the company's innovation manager. It can set up Web-based idea management software and encourage all company stakeholders—employees, suppliers, distributors, dealers—to become involved in finding and developing new products. It can assign a cross-functional innovation management committee to evaluate proposed new-product ideas and help bring good ideas to market. It can create recognition programs to reward those who contribute the best ideas.

The innovation management system approach yields two favorable outcomes. First, it helps create an innovation-oriented company culture. It shows that top management

Real Marketing 9.1

LEGO Group: Building Customer Relationships, Brick by Brick

Classic LEGO plastic bricks have been fixtures in homes around the world for more than 60 years. A mind-blowing 400 billion LEGO bricks now populate the planet, enough to build a tower to the moon ten times over. In fact, the Danish-based LEGO Group (TLG) now sells seven LEGO sets every second in 130 countries, making it the world's fifth-largest toymaker.

But only six years ago, TLG was near bankruptcy. Sales were sagging, and the company was losing money at a rate of $300 million a year. The problem: The classic toy company had fallen out of touch with its customers. As a result, its products had fallen out of touch with the times. In the age of the Internet, videogames, iPods, and high-tech playthings, traditional toys such as LEGO bricks had been pushed to the back of the closet. So in 2004, the company set out to rebuild its aging product line-brick by brick.

The LEGO product makeover, however, didn't start with engineers working in design labs. First, TLG had to reconnect with customers. So it started by listening to customers, understanding them, and including them in the new-product development process. Then it used the insights it gained to develop new generations of more relevant products. Rather than simply pushing the same old construction sets out *to* customers, TLG worked *with* customers to co-create new products and concepts.

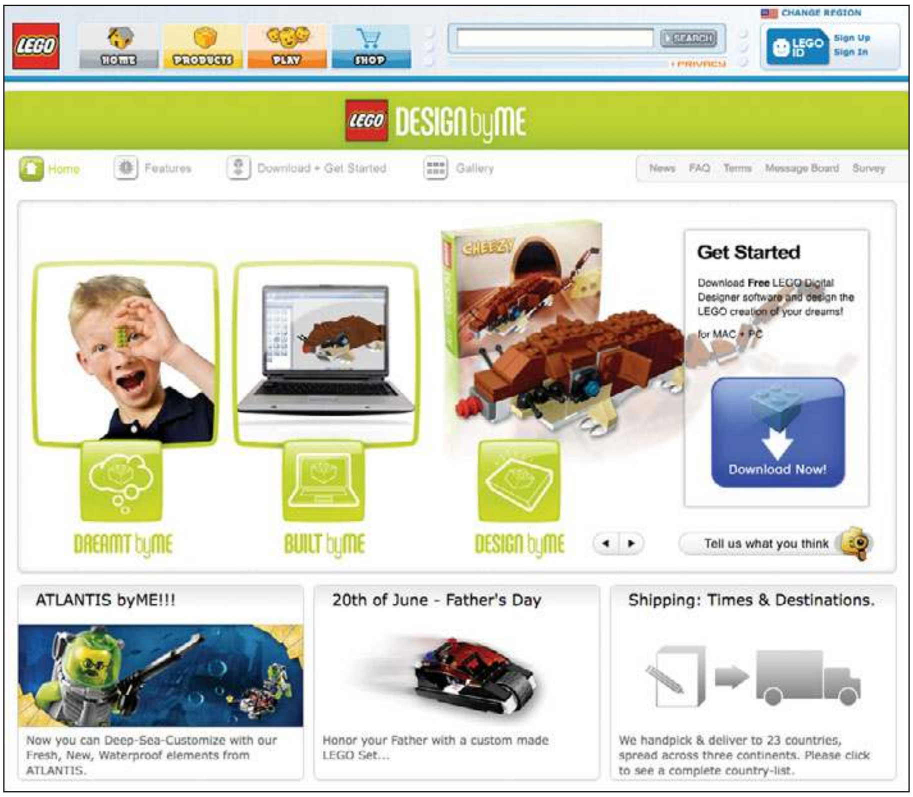
To get to know its customers better, for instance, LEGO conducted up-close-and-personal ethnographic studies—hanging out with and observing children ages seven to nine on their home turf. "We thought we understood our consumers, the children of the world," says a LEGO Group marketer, but it turns out that "we didn't know them as well as we thought." The ethnographic research produced a lot of "Aha! moments" that shattered many of the brand's long-held traditions.

For example, TLG had long held fast to a "keep it simple" mantra. From the beginning, it offered only basic play sets—bricks, building bases, beams, doors, windows, wheels, and slanting roof tiles—with few or no instructions. The philosophy was that giving children unstructured building sets would stimulate their imaginations and foster creativity. But that concept just wasn't cutting it in the modern world. Today's children get bored easily, and in today's fast-moving environment, they are exposed to many more characters and themes.

In response, TLG shifted toward more-specialized, more-structured products. It now churns out some 7,000 unique building pieces each year, which support a seemingly endless assortment of themed product lines and specific building projects. So instead of just buying a set of basic square LEGO bricks and building a house or a car, children can now buy specialized kits to construct anything from a realistic fire engine to a city police helicopter to a working robot. And the LEGO brick lineup is refreshed regularly; 60 percent of the core LEGO product assortment changes every year.

To add desired variety and familiarity, TLG now builds plays sets around popular movie and TV themes and characters. It offers an ever-changing assortment of licensed lines based on everything from *Indiana Jones* and *Star Wars* to *Toy Story*. About 60 percent of U.S. LEGO sales are now linked to licenses, more than double that of five years ago. In fact, it's getting harder and harder to find a set of basic LEGO blocks.

TLG's more thematic and structured play sets have given a big boost to sales, but not everyone is thrilled. One industry observer notes, "What LEGO loses is what makes it so special. When you have a less-structured, less-themed set, kids [can] start from scratch. When you have kids playing out Indiana Jones, they're playing out Hollywood's imagination, not their own." But TLG doesn't see this shift as a compromise of values, and most customers agree. For example, one father of two



At LEGO, new-product development begins with listening to customers and including them in the design process. The LEGO Design by Me site lets customers download 3D design software, create a LEGO toy, and then order the kit to build it.

Continued on next page

recognizes that LEGO toys have changed since he was a boy, but he thinks that they have retained their innocence. "The most exotic thing I could build when I was a kid was an ambulance," he says. "Now [my kids] can build the Death Star." The fact that "the pieces and the sets are a lot cooler than they were 30 years ago," means that they lure kids away from less imaginative pastimes. "Instead of watching TV or playing computer games, the kids are building something, and [we] build stuff together."

Of course, kids aren't the only ones playing with LEGO bricks. The classic brick sets have a huge fan base of adults that never got over the toys of their youth. TLG estimates that it has as many as 250,000 active AFOLs (adult fans of LEGO) around the globe who spend large sums on LEGO products. These adults maintain thousands of LEGO fan sites and blogs, flock to conventions with names such as BrickFest, and compete with each other to construct "the Biggest LEGO Train Layout Ever (3,343 feet; it ran through an entire LEGO cityscape) or beat the Fastest Time to Build the LEGO Imperial Star Destroyer (3,104 pieces; five builders maximum and no presorting allowed; record: 1 hour 42 minutes 43 seconds)."

In developing new products, TLG actively taps into the AFOL community. It has created a roster of customer ambassadors who provide regular input, and it even invites customers to participate directly in the product-development process. For example, it invited 250 LEGO train-set enthusiasts to visit its New York office to assess new designs. The result was the LEGO Santa Fe Super Chief set, which sold out the first 10,000 units in less than two weeks with virtually no additional marketing. Similarly, TLG used customer co-creation to develop its most popular product ever, LEGO MINDSTORMS:

> The LEGO MINDSTORMS build-it-yourself robot was initially an internal effort in partnership with MIT. Within three weeks of its introduction, however, more than 1,000 intrigued customers formed their own Web community to outdo each other in making it better. TLG quickly embraced the co-creation idea. The next generation of LEGO MINDSTORMS featured user-defined parts. Then, LEGO made customer co-creation official by creating the MINDSTORMS Development Program (MDP), through which it selected the most avid MINDSTORMS fans—100 pioneers, inventors, and innovators from across the globe—to play with LEGO MINDSTORMS and create innovative new features and applications. The MDP fans share their ideas with other customers and invite feedback.

Listening to adult customers has also led to the development of the LEGO Design by Me site, which lets customers download 3D design software, create a LEGO toy, and then order the kit to build it. And TLG recently launched LEGO Universe, an MMOG (massively multiplayer online game) in which adults and children alike can act out roles from LEGO sets and build toys from virtual blocks.

Thanks to customer-centered new-product development, TLG is now thriving. In the past five years, even as the overall toy market has declined in a weakened economy and as competitors such as Mattel and Hasbro have struggled, LEGO's sales have soared 66 percent, and its profits have jumped tenfold. "Kids [including the adult variety] are ruthless," says a senior LEGO executive. "If they don't like the product, then at the end of the day . . . all the rest of it won't make any difference. What counts, all that counts, is that you're at the top of kids' wish lists." Thanks to all that listening and customer involvement, that's where the LEGO Group is again."

Sources: "LEGO Grows by Listening to Customers," *Advertising Age*, November 9, 2009, p. 15; Nelson D. Schwartz, "Beyond the Blocks," *New York Times*, September 6, 2009, p. BU1; Jon Henley, "Toy Story," *Guardian*, March 26, 2009, p. F4; Kevin O'Donnell, "Where Do the Best Ideas Come From? The Unlikeliest Sources," *Advertising Age*, July 14, 2008, p. 15; Lewis Borg Cardona, "LEGO Learns a Lesson," *Change Agent*, June 2008, http://www.synovate.com/changeagent/index.php/site/full_story/lego_learns_a_lesson/; and www.lego.com/eng/info/ and http://mindstorms.lego.com/en-us/community/default.aspx, accessed September 2010.

supports, encourages, and rewards innovation. Second, it will yield a larger number of new-product ideas, among which will be found some especially good ones. The good new ideas will be more systematically developed, producing more new-product successes. No longer will good ideas wither for the lack of a sounding board or a senior product advocate.

Thus, new-product success requires more than simply thinking up a few good ideas, turning them into products, and finding customers for them. It requires a holistic approach for finding new ways to create valued customer experiences, from generating and screening new-product ideas to creating and rolling out want-satisfying products to customers.

More than this, successful new-product development requires a whole-company commitment. At companies known for their new-product prowess, such as Google, Apple, IDEO, 3M, P&G, and GE, the entire culture encourages, supports, and rewards innovation.

New-Product Development in Turbulent Times

When tough economic times hit, or when a company faces financial difficulties, management may be tempted to reduce spending on new-product development. However, such thinking is usually shortsighted. By cutting back on new products, the company may make itself less competitive during or after the downturn. In fact, tough times might call for even greater new-product development, as the company struggles to better align its market offerings with changing consumer needs and tastes. In difficult times, innovation more often helps than hurts in making the company more competitive and positioning it better for the future. Summarizes one analyst:[27]

> Innovation is a messy process—hard to measure and hard to manage. When revenues and earnings decline, executives often conclude that their innovation efforts just aren't worth it. Better to focus on the tried and true than to risk money on untested ideas. The contrary view, of course, is that innovation is both a vaccine against market downturns and an elixir that rejuvenates growth. In today's economy, for example, imagine how much better off General Motors might have fared if it had matched the pace of innovation set by Honda or Toyota. Imagine how much worse off Apple would be had it not—in the midst of previously very difficult times for the company—created the iPod, iTunes, and iPhone.

Thus, rain or shine, good times or bad, a company must continue to innovate and develop new products if it wants to grow and prosper. "The good news is . . . downturns are times of turbulence [but] are also times of incredible opportunity," says one marketing consultant. "Your competitors may be hunkering down, giving you more opportunities." Another analyst notes that P&G launched two of its most successful (and highest-priced) new products, Swiffer and White Strips, during recessions.[28]

Author Comment | A company's products are born, grow, mature, and then decline, just as living things do. To remain vital, the firm must continually develop new products and manage them effectively through their life cycles.

Product Life-Cycle Strategies (pp 273–279)

After launching the new product, management wants that product to enjoy a long and happy life. Although it does not expect that product to sell forever, the company wants to earn a decent profit to cover all the effort and risk that went into launching it. Management is aware that each product will have a life cycle, although its exact shape and length is not known in advance.

Figure 9.2 shows a typical **product life cycle (PLC)**, the course that a product's sales and profits take over its lifetime. The PLC has five distinct stages:

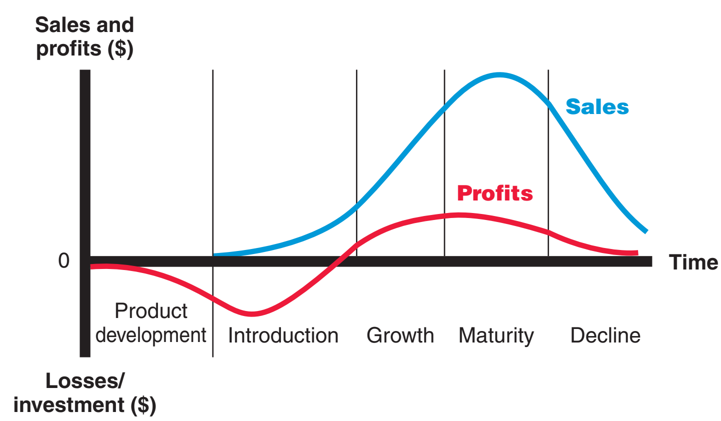
Product life cycle (PLC)
The course of a product's sales and profits over its lifetime. It involves five distinct stages: product development, introduction, growth, maturity, and decline.

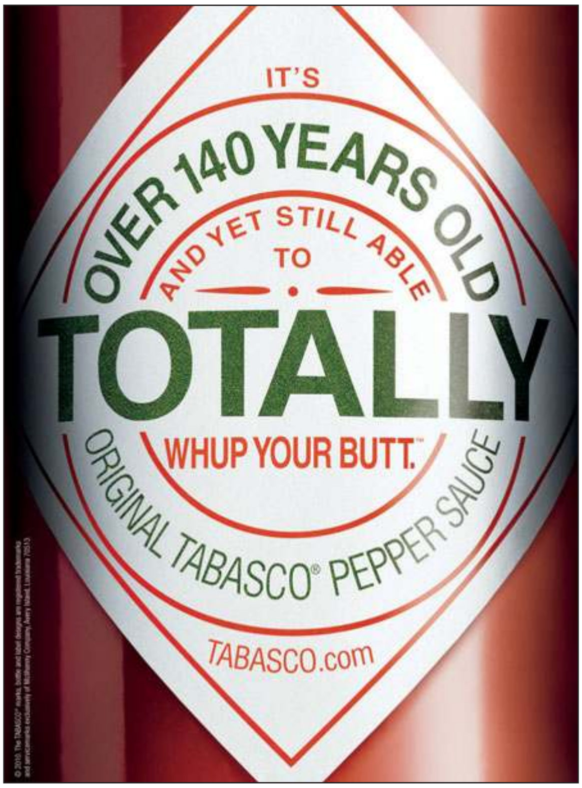
1. *Product development* begins when the company finds and develops a new-product idea. During product development, sales are zero, and the company's investment costs mount.
2. *Introduction* is a period of slow sales growth as the product is introduced in the market. Profits are nonexistent in this stage because of the heavy expenses of product introduction.
3. *Growth* is a period of rapid market acceptance and increasing profits.
4. *Maturity* is a period of slowdown in sales growth because the product has achieved acceptance by most potential buyers. Profits level off or decline because of increased marketing outlays to defend the product against competition.
5. *Decline* is the period when sales fall off and profits drop.

Not all products follow all five stages of the PLC. Some products are introduced and die quickly; others stay in the mature stage for a long, long time. Some enter the decline stage

FIGURE | 9.2
Sales and Profits over the Product's Life from Inception to Decline

Some products die quickly; others stay in the mature stage for a long, long time. For example, TABASCO sauce has been around for more than 140 years. Even then, to keep the product young, the company has added a full line of flavors (such as Sweet & Spicy and Chipotle) and a kitchen cabinet full of new TABASCO products (such as spicy beans, a chili mix, and jalapeno nacho slices).





Product life cycle: Some products die quickly; others stay in the mature stage for a long, long time. TABASCO® sauce is "over 140 years old and yet still able to totally whup your butt!"

and are then cycled back into the growth stage through strong promotion or repositioning. It seems that a well-managed brand could live forever. Venerable brands like Coca-Cola, Gillette, Budweiser, Guinness, American Express, Wells Fargo, Kikkoman, and TABASCO sauce, for instance, are still going strong after more than 100 years. Guinness beer recently celebrated its 250th anniversary; and TABASCO sauce brags that it's "over 140 years old and still able to totally whup your butt!"

The PLC concept can describe a *product class* (gasoline-powered automobiles), a *product form* (SUVs), or a *brand* (the Ford Escape). The PLC concept applies differently in each case. Product classes have the longest life cycles; the sales of many product classes stay in the mature stage for a long time. Product forms, in contrast, tend to have the standard PLC shape. Product forms such as "dial telephones" and "VHS tapes" passed through a regular history of introduction, rapid growth, maturity, and decline.

A specific brand's life cycle can change quickly because of changing competitive attacks and responses. For example, although laundry soaps (product class) and powdered detergents (product form) have enjoyed fairly long life cycles, the life cycles of specific brands have tended to be much shorter. Today's leading brands of powdered laundry soap are Tide and Cheer; the leading brands almost 100 years ago were Fels-Naptha, Octagon, and Kirkman.

The PLC concept also can be applied to what are known as styles, fashions, and fads. Their special life cycles are shown in **Figure 9.3**. A **style** is a basic and distinctive mode of expression. For example, styles appear in homes (colonial, ranch, transitional), clothing (formal, casual), and art (realist, surrealist, abstract). Once a style is invented, it may last for generations, passing in and out of vogue. A style has a cycle showing several periods of renewed interest.

A **fashion** is a currently accepted or popular style in a given field. For example, the more formal "business attire" look of corporate dress of the 1980s and 1990s gave way to the "business casual" look of the 2000s. Fashions tend to grow slowly, remain popular for a while, and then decline slowly.

Fads are temporary periods of unusually high sales driven by consumer enthusiasm and immediate product or brand popularity.[29] A fad may be part of an otherwise normal life cycle, as in the case of recent surges in the sales of poker chips and accessories. Or the fad may comprise a brand's or product's entire life cycle. "Pet rocks" are a classic example. Upon hearing his friends complain about how expensive it was to care for their dogs, advertising copywriter Gary Dahl joked about his pet rock. He soon wrote a spoof of a dog-training manual for it, titled "The Care and Training of Your Pet Rock." Soon Dahl was selling some 1.5 million ordinary beach pebbles at $4 a pop. Yet the fad, which broke one October, had sunk like a stone by the next February. Dahl's advice to those who want to succeed with a fad: "Enjoy it while it lasts." Other examples of fads include the Rubik's Cube and low-carb diets.[30]

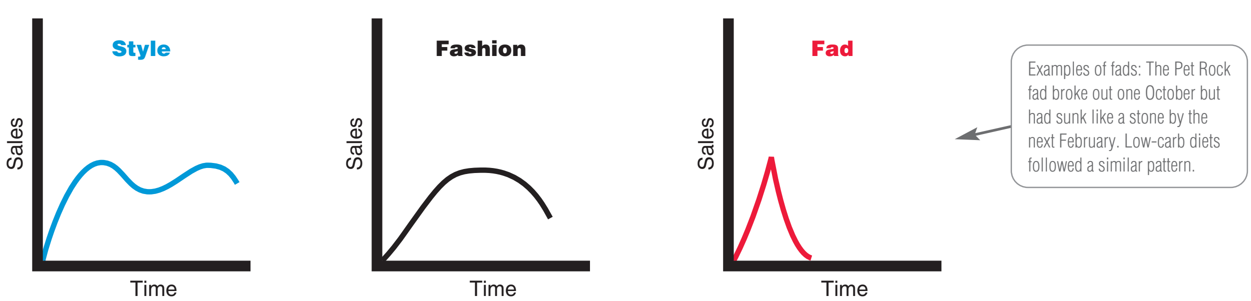
Marketers can apply the PLC concept as a useful framework for describing how products and markets work. And when used carefully, the PLC concept can help in developing good marketing strategies for its different stages. But using the PLC concept for forecasting

Style
A basic and distinctive mode of expression.

Fashion
A currently accepted or popular style in a given field.

Fad
A temporary period of unusually high sales driven by consumer enthusiasm and immediate product or brand popularity.

FIGURE | 9.3
Styles, Fashions, and Fads



product performance or developing marketing strategies presents some practical problems. For example, in practice, it is difficult to forecast the sales level at each PLC stage, the length of each stage, and the shape of the PLC curve. Using the PLC concept to develop marketing strategy also can be difficult because strategy is both a cause and a result of the PLC. The product's current PLC position suggests the best marketing strategies, and the resulting marketing strategies affect product performance in later stages.

Moreover, marketers should not blindly push products through the traditional PLC stages. Instead, marketers often defy the "rules" of the life cycle and position or reposition their products in unexpected ways. By doing this, they can rescue mature or declining products and return them to the growth phase of the life cycle. Or they can leapfrog obstacles to slow consumer acceptance and propel new products forward into the growth phase.

The moral of the product life cycle is that companies must continually innovate or else they risk extinction. No matter how successful its current product lineup, a company must skillfully manage the life cycles of existing products for future success. And to grow, it must develop a steady stream of new products that bring new value to customers (see Real Marketing 9.2).

We looked at the product-development stage of the PLC in the first part of this chapter. We now look at strategies for each of the other life-cycle stages.

Introduction Stage

Introduction stage
The PLC stage in which a new product is first distributed and made available for purchase.

The **introduction stage** starts when a new product is first launched. Introduction takes time, and sales growth is apt to be slow. Well-known products such as frozen foods and HDTVs lingered for many years before they entered a stage of more rapid growth.

In this stage, as compared to other stages, profits are negative or low because of the low sales and high distribution and promotion expenses. Much money is needed to attract distributors and build their inventories. Promotion spending is relatively high to inform consumers of the new product and get them to try it. Because the market is not generally ready for product refinements at this stage, the company and its few competitors produce basic versions of the product. These firms focus their selling on those buyers who are the most ready to buy.

A company, especially the *market pioneer*, must choose a launch strategy that is consistent with the intended product positioning. It should realize that the initial strategy is just the first step in a grander marketing plan for the product's entire life cycle. If the pioneer chooses its launch strategy to make a "killing," it may be sacrificing long-run revenue for the sake of short-run gain. As the pioneer moves through later stages of the life cycle, it must continuously formulate new pricing, promotion, and other marketing strategies. It has the best chance of building and retaining market leadership if it plays its cards correctly from the start.

Growth Stage

Growth stage
The PLC stage in which a product's sales start climbing quickly.

If the new product satisfies the market, it will enter a **growth stage**, in which sales will start climbing quickly. The early adopters will continue to buy, and later buyers will start following their lead, especially if they hear favorable word of mouth. Attracted by the opportunities for profit, new competitors will enter the market. They will introduce new product features, and the market will expand. The increase in competitors leads to an increase in the number of distribution outlets, and sales jump just to build reseller inventories. Prices remain where they are or decrease only slightly. Companies keep their promotion spending at the same or a slightly higher level. Educating the market remains a goal, but now the company must also meet the competition.

Profits increase during the growth stage as promotion costs are spread over a large volume and as unit manufacturing costs decrease. The firm uses several strategies to sustain rapid market growth as long as possible. It improves product quality and adds new product features and models. It enters new market segments and new distribution channels. It shifts some advertising from building product awareness to building product conviction and purchase, and it lowers prices at the right time to attract more buyers.

Real Marketing 9.2

Kraft: Lots of Good Old Products; Too Few Good New Ones?

Kraft makes and markets an incredible portfolio of known and trusted brands, including eleven $1 billion brands and another 70 that top $100 million in sales. Beyond the Kraft label of cheeses, snacks, dips, and dressings, its megabrands include the likes of Oscar Mayer, Post cereals, Maxwell House coffee, JELL-O, Cool Whip, Kool-Aid, A1 sauce, Velveeta, Planters, Miracle Whip, Light 'n Lively, Grey Poupon, Capri Sun, Cadbury, and Nabisco (Oreo, Chips Ahoy!, Triscuit, SnackWells, and a whole lot more). If you search America's pantries, you'll find at least one Kraft product in 199 of every 200 households.

However, despite its long list of familiar brands, five years ago, Kraft wasn't doing very well. Its sales and profits had stagnated, and its stock price had flatlined. The problem? Kraft did a poor job of managing the product life cycle. Although it had a slew of good *old* products, it had far too few good *new* products.

Many of Kraft's venerable old brands—such as Maxwell House, Velveeta, and JELL-O—were showing their age. Other brands were extended about as far as they could go—for instance, Kraft markets more than 20 varieties of Oreos, from the original sandwich cookies, Oreo Double Stuf, Oreo Double Double Stuf, Chocolate-Covered Oreos, and Double Delight Chocolate Mint'n Crème Oreos to Oreo Mini Bites, Oreo Snack Cakes, and even Oreo ice cream cones. How much pop could yet one more variety provide?

Over the years, competitors such as P&G had invested dollars and energy in their mature or declining brands, such as Mr. Clean and Old Spice, moving them back into the growth stage of the PLC. In contrast, Kraft focused on costcutting, leaving its mature brands to wither. Whereas rival P&G developed a constant stream of really new products, even inventing all new product categories with products such as Swiffer and Febreze, Kraft was slow to innovate. And while P&G was intensely customer focused, bringing innovative new solutions to its customers, Kraft slowly lost touch with its customers.

In 2006, however, under the leadership of new CEO Irene Rosenfeld, Kraft laid out an ambitious turnaround plan to restore sales and profit growth. For starters, it announced that it would make heavy investments to reconnect with customers and improve product quality. "We're going to connect with the consumer wherever she is," said Rosenfeld. "On the quality side, [we need to] shift from 'good enough' to 'truly delicious,' turning brands that [our] consumers have lived with for years into brands they can't live without." Most importantly, Kraft pronounced that it would invest heavily in innovation and new-product development.

Kraft began its new-product development efforts not in test kitchens but by visiting consumers' homes to see the world through customers' eyes rather than through a company's lens. We want to take our products "in a new direction that's more consistent with the reality of consumers' lives today," declared Rosenfeld. We need "customer-focused innovation!" Kraft discovered the simple truth about the way customers live their lives today: They want high-quality but convenient and healthy foods. "Wouldn't it be a whole lot easier if you could have restaurant-quality food at home for a fraction of the cost?" asked Rosenfeld.

The team also realized that Kraft already had all the fixings it needed to complete this mission. It needed only to reframe its offerings in ways that fit customers' changing lifestyles. For example, Kraft developed the highly successful "Deli Creations" brand—a build-your-own premium sandwich kit that includes bread, Oscar Mayer meats, Kraft cheeses, and condiments such as A1 steak sauce and Grey Poupon mustard. Customers can quickly assemble the sandwiches, pop them into the microwave for one minute, and wrap their mouths around a hot, restaurant-style sandwich. In a similar fashion, Kraft rolled out "Fresh Creations" salads, complete with Oscar Mayer meat, Kraft cheese, Good Season's salad dressing, and Planter's nuts, a move that took its product portfolio into a whole new section of the grocery store, the produce section.

Dozens of other new products ranged from higher-quality Oscar Mayer Deli Fresh cold cuts and an entirely rejuvenated line of Kraft salad dressings with no artificial preservatives to Kraft Bagel-Fuls handheld breakfast sandwiches, Cakesters snack cakes, healthy LiveActive products with probiotic cultures and prebiotic fiber, and Oscar Mayer Fast Franks prepackaged microwavable stadium-style hotdogs.

Kraft even invested to reinvigorate some of its old brands. For example, it added four bold new flavors to the Grey Poupon brand, a name that had retained 70 percent consumer awareness even without much investment. The new flavors were supported by a fresh version of the old and much-liked Grey Poupon "Pardon me" ad campaign. Kraft also infused new life into existing brands such as Knudsen and Breakstone by co-marketing them with the LiveActive health brand.

To support its new-product lineup, Kraft also boosted marketing expenditures and refreshed the look and feel of its packaging and advertising. The once old-school marketer now sports a revamped Web site, a splashy Food & Family e-magazine, and e-mail newsletters. Kraft even offers a much-lauded iPhone app—iFood Assistant—that serves up simple recipes anytime anywhere, complete with shopping lists and a food store locator.

Thus, it appears, Kraft is back—or at least heading in the right direction. Although profits

Managing the PLC: Despite its long list of familiar old brands, until recently, Kraft had far too few good new products. It's now emphasizing new-product innovation. "Welcome to the new Kraft."

still languished, sales grew 27 percent in the first two years under the turnaround plan. Kraft also sweetened its top line with the recent acquisition of confectionary giant Cadbury, making it the world's second-largest food company. Although the weak economy has dented recent sales growth, Rosenfeld is optimistic. "Our brands are getting stronger every day," she says. "Our insights about consumers are deeper and richer than ever before. And our new product pipeline is flowing with exciting ideas. I'm pleased to tell you, the new Kraft is taking shape."

Kraft has learned that a company can't just sit back, basking in the glory of today's successful brands. Continued success requires skillful management of the PLC. But Kraft still has a long way to go. For example, in the shadow of the recent recession, Kraft appears to have taken "a less risky approach to new products," observes one analyst, "introducing modified versions of existing products rather than wholly new ones." Rosenfeld admits as much: "You will see lots of new products—they are the lifeblood of our business—but you will see them in the context of platforms and ideas that have already been proven in the marketplace."

Only time will tell whether playing it safe in a sour economy is a smart strategy, especially when some competitors are moving ahead more aggressively. "There is a tendency to crawl into a foxhole and wait for the barrage of competition to end," says the analyst. "But it's unfortunate that they are missing a chance to grab more market share." Rosenfeld counsels patience. "This is not *Extreme Makeover: Home Edition* that'll get fixed in 60 minutes," she says. "We've [still] got some fundamental work to do."

Sources: Quotes and other information from David Sterrett, "Kraft Holds Off on New Products," *Crain's Chicago Business*, March 2, 2009, p. 3; John Schmeltzer, "Foodmaker Whips Up Plan for a Comeback," *Chicago Tribune*, February 21, 2007, p. 1; Michael Arndt, "It Just Got Hotter in Kraft's Kitchen," *BusinessWeek*, February 12, 2007, p. 36; Emily Bryson York, "Behind Kraft's Marketing Makeover: From New Ad Agencies to New Attitude," *Advertising Age*, February 8, 2010, p. 10; and annual reports and other information from www.kraft.com, accessed September 2010.

In the growth stage, the firm faces a trade-off between high market share and high current profit. By spending a lot of money on product improvement, promotion, and distribution, the company can capture a dominant position. In doing so, however, it gives up maximum current profit, which it hopes to make up in the next stage.

Maturity Stage

Maturity stage
The PLC stage in which a product's sales growth slows or levels off.

At some point, a product's sales growth will slow down, and it will enter the **maturity stage**. This maturity stage normally lasts longer than the previous stages, and it poses strong challenges to marketing management. Most products are in the maturity stage of the life cycle, and therefore most of marketing management deals with the mature product.

The slowdown in sales growth results in many producers with many products to sell. In turn, this overcapacity leads to greater competition. Competitors begin marking down prices, increasing their advertising and sales promotions, and upping their product development budgets to find better versions of the product. These steps lead to a drop in profit. Some of the weaker competitors start dropping out, and the industry eventually contains only well-established competitors.

Although many products in the mature stage appear to remain unchanged for long periods, most successful ones are actually evolving to meet changing consumer needs. Product managers should do more than simply ride along with or defend their mature products—a good offense is the best defense. They should consider modifying the market, product, and marketing mix.

In *modifying the market*, the company tries to increase consumption by finding new users and new market segments for its brands. For example, mature 101-year old card maker American Greetings is now reaching younger consumers through social-networking widgets and instant-messaging channels.[31]

> Women buy 80 percent of the greeting cards in the United States, and their median age is 47—not exactly the Facebook crowd. To younger buyers in this digital age, a snail-mail card is as antiquated as getting a $5 birthday check from grandma. ● So to make its brand more youthful, American Greetings' fast-growing digital division, AG Interactive (AGI), created Kiwee.com, a repository for emoticons, video winks, postcards, graphics, widgets, and glitter text for all the major social-networking sites and instant-messaging services. A 47-year-old housewife may not be interested in the winking-turd emoticon that her 15-year-old son adores, but "we sell emotions," says AGI's chief technology

Modifying the market: 101-year old cardmaker American Greetings is reaching out to younger consumers through social-networking widgets and instant-messaging channels.

officer. "Even younger people need help saying better what they want to say." Kiwee.com content is now being downloaded millions of times per day, signaling American Greetings' adjustment to a segment where paper cards are passé. Young people may not send paper anymore, but being remembered is universal.

The manager may also look for ways to increase usage among present customers. For example, Glad Products Company helps customers find new uses for its Press'n Seal wrap, the plastic wrap that creates a Tupperware-like seal. As more and more customers contacted the company about alternative uses for the product, Glad set up a special "1000s of Uses. What's Yours?" Web site (www.1000uses.com) at which customers can swap usage tips. Suggested uses for Press'n Seal range from protecting a computer keyboard from dirt and spills and keeping garden seeds fresh to use by soccer moms sitting on damp benches while watching their tykes play. "We just roll out the Glad Press'n Seal over the long benches," says the mom who shared the tip, "and everyone's bottom stays nice and dry."[32]

The company might also try *modifying the product*—changing characteristics such as quality, features, style, or packaging to attract new users and inspire more usage. It can improve the product's styling and attractiveness. It might improve the product's quality and performance—its durability, reliability, speed, and taste. Thus, makers of consumer food and household products introduce new flavors, colors, scents, ingredients, or packages to enhance performance and revitalize consumer buying. For example, TABASCO pepper sauce may have been around for more than 140 years, but to keep the brand young, the company has added a full line of flavors (such as Garlic, Sweet & Spicy, and Chipotle) and a kitchen cabinet full of new products under the TABASCO name (such as steak sauces, spicy beans, a chili mix, salsas, jalapeno nacho slices, and even spicy chocolate and a TABASCO lollipop).

Finally, the company can try *modifying the marketing mix*—improving sales by changing one or more marketing mix elements. The company can offer new or improved services to buyers. It can cut prices to attract new users and competitors' customers. It can launch a better advertising campaign or use aggressive sales promotions—trade deals, cents-off, premiums, and contests. In addition to pricing and promotion, the company can also move into new marketing channels to help serve new users.

Decline Stage

The sales of most product forms and brands eventually dip. The decline may be slow, as in the cases of stamps and oatmeal cereal, or rapid, as in the cases of cassette and VHS tapes. Sales may plunge to zero, or they may drop to a low level where they continue for many years. This is the **decline stage**.

Decline stage
The PLC stage in which a product's sales decline.

Sales decline for many reasons, including technological advances, shifts in consumer tastes, and increased competition. As sales and profits decline, some firms withdraw from the market. Those remaining may prune their product offerings. They may drop smaller market segments and marginal trade channels, or they may cut the promotion budget and reduce their prices further.

Carrying a weak product can be very costly to a firm, and not just in profit terms. There are many hidden costs. A weak product may take up too much of management's time. It often requires frequent price and inventory adjustments. It requires advertising and sales-force attention that might be better used to make "healthy" products more profitable. A product's failing reputation can cause customer concerns about the company and its other products. The biggest cost may well lie in the future. Keeping weak products delays the search for replacements, creates a lopsided product mix, hurts current profits, and weakens the company's foothold on the future.

For these reasons, companies need to pay more attention to their aging products. A firm's first task is to identify those products in the decline stage by regularly reviewing sales, market shares, costs, and profit trends. Then management must decide whether to maintain, harvest, or drop each of these declining products.

Management may decide to *maintain* its brand, repositioning or reinvigorating it in hopes of moving it back into the growth stage of the PLC. P&G has done this with several brands, including Mr. Clean and Old Spice. Management may decide to *harvest* the product, which means reducing various costs (plant and equipment, maintenance, R&D, advertising, sales force), hoping that sales hold up. If successful, harvesting will increase the company's profits in the short run.

Finally, management may decide to *drop* the product from its line. It can sell it to another firm or simply liquidate it at salvage value. In recent years, P&G has sold off several lesser or declining brands, such as Folgers coffee, Crisco oil, Comet cleanser, Sure deodorant, Duncan Hines cake mixes, and Jif peanut butter. If the company plans to find a buyer, it will not want to run down the product through harvesting.

Table 9.2 summarizes the key characteristics of each stage of the PLC. The table also lists the marketing objectives and strategies for each stage.[33]

TABLE | 9.2 Summary of Product Life-Cycle Characteristics, Objectives, and Strategies

	Introduction	**Growth**	**Maturity**	**Decline**
Characteristics				
Sales	Low sales	Rapidly rising sales	Peak sales	Declining sales
Costs	High cost per customer	Average cost per customer	Low cost per customer	Low cost per customer
Profits	Negative	Rising profits	High profits	Declining profits
Customers	Innovators	Early adopters	Middle majority	Laggards
Competitors	Few	Growing number	Stable number beginning to decline	Declining number
Marketing Objectives				
	Create product awareness and trial	Maximize market share	Maximize profit while defending market share	Reduce expenditure and milk the brand
Strategies				
Product	Offer a basic product	Offer product extensions, service, warranty	Diversify brand and models	Phase out weak items
Price	Use cost-plus	Price to penetrate market	Price to match or beat competitors	Cut price
Distribution	Build selective distribution	Build intensive distribution	Build more intensive distribution	Go selective: phase out unprofitable outlets
Advertising	Build product awareness among early adopters and dealers	Build awareness and interest in the mass market	Stress brand differences and benefits	Reduce to level needed to retain hard-core loyals
Sales Promotion	Use heavy sales promotion to entice trial	Reduce to take advantage of heavy consumer demand	Increase to encourage brand switching	Reduce to minimal level

Source: Philip Kotler and Kevin Lane Keller, *Marketing Management*, 13th ed. (Upper Saddle River, NJ: Prentice Hall, 2009), p. 288. © 2009. Printed and Electronically reproduced by permission of Pearson Education, Inc., Upper Saddle River, New Jersey.

Author Comment Let's look at just a few more product topics, including regulatory and social responsibility issues and the special challenges of marketing products internationally.

Additional Product and Service Considerations (pp 280–282)

We wrap up our discussion of products and services with two additional considerations: social responsibility in product decisions and issues of international product and services marketing.

Product Decisions and Social Responsibility

Marketers should carefully consider public policy issues and regulations regarding acquiring or dropping products, patent protection, product quality and safety, and product warranties.

Regarding new products, the government may prevent companies from adding products through acquisitions if the effect threatens to lessen competition. Companies dropping products must be aware that they have legal obligations, written or implied, to their suppliers, dealers, and customers who have a stake in the dropped product. Companies must also obey U.S. patent laws when developing new products. A company cannot make its product illegally similar to another company's established product.

Manufacturers must comply with specific laws regarding product quality and safety. The Federal Food, Drug, and Cosmetic Act protects consumers from unsafe and adulterated food, drugs, and cosmetics. Various acts provide for the inspection of sanitary conditions in the meat- and poultry-processing industries. Safety legislation has been passed to regulate fabrics, chemical substances, automobiles, toys, and drugs and poisons. The Consumer Product Safety Act of 1972 established the Consumer Product Safety Commission, which has the authority to ban or seize potentially harmful products and set severe penalties for violation of the law.

If consumers have been injured by a product with a defective design, they can sue manufacturers or dealers. A recent survey of manufacturing companies found that product liability was the second-largest litigation concern, behind only labor and employment matters. Product liability suits are now occurring in federal courts at the rate of over 20,000 per year. Although manufacturers are found at fault in only 6 percent of all product liability cases, when they are found guilty, the median jury award is \$1.5 million, and individual awards can run into the tens or even hundreds of millions of dollars. Class-action suits can run into the billions. For example, after it recalled some nine million vehicles due to problems with sudden acceleration, Toyota faced at least 234 class-action lawsuits that could end up costing the company \$6 billion or more.[34]

This litigation phenomenon has resulted in huge increases in product liability insurance premiums, causing big problems in some industries. Some companies pass these higher rates along to consumers by raising prices. Others are forced to discontinue high-risk product lines. Some companies are now appointing "product stewards," whose job is to protect consumers from harm and the company from liability by proactively ferreting out potential product problems.

Many manufacturers offer written product warranties to convince customers of their products' quality. To protect consumers, Congress passed the Magnuson-Moss Warranty Act in 1975. The act requires that full warranties meet certain minimum standards, including repair "within a reasonable time and without charge" or a replacement or full refund if the product does not work "after a reasonable number of attempts" at repair. Otherwise, the company must make it clear that it is offering only a limited warranty. The law has led several manufacturers to switch from full to limited warranties and others to drop warranties altogether.

International Product and Services Marketing

International product and services marketers face special challenges. First they must figure out what products and services to introduce and in which countries. Then they must decide how much to standardize or adapt their products and services for world markets.

The Nestlé Kit Kat chocolate bar in Japan benefits from the coincidental similarity between the bar's name and the Japanese phrase *kitto katsu*, which roughly translates to "You will surely win!" The brand's innovative "May cherries blossom" campaign has turned the Kit Kat bar and logo into national good luck charms.

On the one hand, companies would like to standardize their offerings. Standardization helps a company develop a consistent worldwide image. It also lowers the product design, manufacturing, and marketing costs of offering a large variety of products. On the other hand, markets and consumers around the world differ widely. Companies must usually respond to these differences by adapting their product offerings. For example, Nestlé sells a variety of very popular Kit Kat flavors in Japan that might make the average Western chocolate-lover's stomach turn, such as green tea, red bean, and red wine. Beyond taste, Kit Kat's strong following in Japan may also be the result of some unintended cultural factors:[35]

> In recent years, Kit Kat—the world's number two chocolate bar behind Snickers—has become very popular in Japan. Some of this popularity, no doubt, derives from the fact that the notoriously sweet-toothed Japanese love the bar's taste. But part of the bar's appeal may also be attributed to the coincidental similarity between its name and the Japanese phrase *kitto katsu*, which roughly translates in Japanese as "You will surely win!" Spotting this opportunity, marketers for Nestlé Japan developed an innovative *Juken* (college entrance exam) Kit Kat campaign. The multimedia campaign positions the Kit Kat bar and logo as good luck charms during the highly stressful university entrance exam season. Nestlé even developed a cherry flavored Kit Kat bar in packaging containing the message "May cherries blossom," wishing students luck in achieving their dreams. And it partnered with Japan's postal service to create "Kit Kat Mail," a postcardlike product sold at the post office that could be mailed to students as an edible good-luck charm. The campaign has been such a hit in Japan that it has led to a nationwide social movement to cheer up students for *Juken*. Kit Kat has also become an even broader national good luck charm. For example, a large flag featuring the Kit Kat logo and the phrase *Kitto Katsu!* has been used by fans of professional football team Jubilo IWATA, which is sponsored by Nestlé Japan.

Packaging also presents new challenges for international marketers. Packaging issues can be subtle. For example, names, labels, and colors may not translate easily from one country to another. A firm using yellow flowers in its logo might fare well in the United States but meet with disaster in Mexico, where a yellow flower symbolizes death or disrespect. Similarly, although Nature's Gift might be an appealing name for gourmet mushrooms in America, it would be deadly in Germany, where *gift* means poison. Packaging may also need to be tailored to meet the physical characteristics of consumers in various parts of the world. For instance, soft drinks are sold in smaller cans in Japan to better fit the smaller Japanese hand. Thus, although product and package standardization can produce benefits, companies must usually adapt their offerings to the unique needs of specific international markets.

Service marketers also face special challenges when going global. Some service industries have a long history of international operations. For example, the commercial banking industry was one of the first to grow internationally. Banks had to provide global services to meet the foreign exchange and credit needs of their home country clients wanting to sell overseas. In recent years, many banks have become truly global. Germany's Deutsche Bank, for example, serves more than 13 million customers through 1,981 branches in 72 countries. For its clients around the world who wish to grow globally, Deutsche Bank can raise money not only in Frankfurt but also in Zurich, London, Paris, Tokyo, and Moscow.[36]

Professional and business services industries, such as accounting, management consulting, and advertising, have also globalized. The international growth of these firms followed the globalization of the client companies they serve. For example, as more clients employ worldwide marketing and advertising strategies, advertising agencies have responded by globalizing their own operations. McCann Worldgroup, a large U.S.-based advertising and marketing services agency, operates in more than 130 countries. It serves international clients such as Coca-Cola, GM, ExxonMobil, Microsoft, MasterCard, Johnson & Johnson, and Unilever in markets ranging from the United States and Canada to Korea and Kazakhstan. Moreover, McCann Worldgroup is one company in the Interpublic Group of Companies, an immense, worldwide network of advertising and marketing services companies.[37]

Retailers are among the latest service businesses to go global. As their home markets become saturated, American retailers such as Walmart, Office Depot, and Saks Fifth Avenue are expanding into faster-growing markets abroad. For example, since 1991, Walmart has entered 15 countries; its international division's sales grew more than 9 percent last year, skyrocketing to more than $98.6 billion. Foreign retailers are making similar moves. Asian shoppers can now buy American products in French-owned Carrefour stores. Carrefour, the world's second-largest retailer behind Walmart, now operates more than 15,000 stores in more than 30 countries. It is the leading retailer in Europe, Brazil, and Argentina and the largest foreign retailer in China.[38]

The trend toward growth of global service companies will continue, especially in banking, airlines, telecommunications, and professional services. Today, service firms are no longer simply following their manufacturing customers. Instead, they are taking the lead in international expansion.

REVIEWING Objectives AND KEY Terms

A company's current products face limited life spans and must be replaced by newer products. But new products can fail—the risks of innovation are as great as the rewards. The key to successful innovation lies in a customer focus, total-company effort, strong planning, and a systematic *new-product development* process.

Objective 1 Explain how companies find and develop new-product ideas. (pp 260–261)

Companies find and develop new-product ideas from a variety of sources. Many new-product ideas stem from *internal sources*. Companies conduct formal R&D. Or they pick the brains of their employees, urging them to think up and develop new-product ideas. Other ideas come from *external sources*. Companies track *competitors'* offerings and obtain ideas from *distributors and suppliers* who are close to the market and can pass along information about consumer problems and new-product possibilities.

Perhaps the most important source of new-product ideas are customers themselves. Companies observe customers, invite their ideas and suggestions, or even involve customers in the new-product development process. Many companies are now developing *crowdsourcing* or *open-innovation* new-product idea programs, which invite broad communities of people—customers, employees, independent scientists and researchers, and even the general public—into the new-product innovation process. Truly innovative companies do not rely only on one source or another for new-product ideas.

Objective 2 List and define the steps in the new-product development process and the major considerations in managing this process. (pp 261–273)

The new-product development process consists of eight sequential stages. The process starts with *idea generation*. Next comes *idea screening*, which reduces the number of ideas based on the company's own criteria. Ideas that pass the screening stage continue through *product concept development*, in which a detailed version of the new-product idea is stated in meaningful consumer terms. In the next stage, *concept testing*, new-product concepts are tested with a group of target consumers to determine whether the concepts have strong consumer appeal. Strong concepts proceed to *marketing strategy development*, in which an initial marketing strategy for the new product is developed from the product concept. In the *business-analysis* stage, a review of the sales, costs, and profit projections for a new product is conducted to determine whether the new product is likely to satisfy the company's objectives. With positive results here, the ideas become more concrete through *product development* and *test marketing* and finally are launched during *commercialization*.

New-product development involves more than just going through a set of steps. Companies must take a systematic, holistic approach to managing this process. Successful new-product development requires a customer-centered, team-based, systematic effort.

Objective 3 **Describe the stages of the product life cycle (PLC) and how marketing strategies change during the PLC.** **(pp 273–279)**

Each product has a *life cycle* marked by a changing set of problems and opportunities. The sales of the typical product follow an S-shaped curve made up of five stages. The cycle begins with the *product development stage* in which the company finds and develops a new-product idea. The *introduction stage* is marked by slow growth and low profits as the product is distributed to the market. If successful, the product enters a *growth stage*, which offers rapid sales growth and increasing profits. Next comes a *maturity stage* in which the product's sales growth slows down and profits stabilize. Finally, the product enters a *decline stage* in which sales and profits dwindle. The company's task during this stage is to recognize the decline and decide whether it should maintain, harvest, or drop the product. The different stages of the PLC require different marketing strategies and tactics.

Objective 4 **Discuss two additional product issues: socially responsible product decisions and international product and services marketing.** **(pp 280–282)**

Marketers must consider two additional product issues. The first is *social responsibility*. This includes public policy issues and regulations involving acquiring or dropping products, patent protection, product quality and safety, and product warranties. The second involves the special challenges facing international product and services marketers. International marketers must decide how much to standardize or adapt their offerings for world markets.

KEY Terms

OBJECTIVE 1

New-product development (p 260)

OBJECTIVE 2

Idea generation (p 261)
Crowdsourcing (p 263)
Idea screening (p 264)
Product concept (p 264)
Concept testing (p 265)
Marketing strategy development (p 265)
Business analysis (p 266)
Product development (p 266)
Test marketing (p 267)
Commercialization (p 268)
Customer-centered new-product development (p 269)
Team-based new-product development (p 270)

OBJECTIVE 3

Product life cycle (PLC; p 273)
Style (p 274)
Fashion (p 274)
Fad (p 274)
Introduction stage (p 275)
Growth stage (p 275)
Maturity stage (p 277)
Decline stage (p 278)

PEARSON mymarketinglab

- Check your understanding of the concepts and key terms using the mypearsonmarketinglab study plan for this chapter.
- Apply the concepts in a business context using the simulation entitled **Product Life Cycle**.

DISCUSSING & APPLYING THE Concepts

Discussing the Concepts

1. Name and describe the major steps in developing a new product. (AACSB: Communication)
2. Define *crowdsourcing* and describe an example not already presented in the chapter. (AACSB: Communication; Reflective Thinking)
3. Compare and contrast the terms *product idea, product concept*, and *product image*. (AACSB: Communication)
4. Explain why successful new product development requires a customer-centered, team-based, and systematic effort. (AACSB: Communication)
5. Why do products enter the decline stage of the product life cycle? Discuss marketers' options at this stage. (AACSB: Communication)
6. Discuss the special challenges facing international product and service marketers. (AACSB: Communication)

Applying the Concepts

1. Visit http://creatingminds.org/tools/tools_ideation.htm to learn about idea generation techniques. Form a small group and have each group member explain a different technique to the rest of the group. Apply one or more of the techniques to generate four new product ideas. Present your ideas to the rest of the class and explain the techniques your group applied to generate the ideas. (AACSB: Communication; Use of IT; Reflective Thinking)
2. Coca-Cola has sustained success in the maturity stage of the product life cycle for many years. Visit Coca-Cola's Web site (www.thecoca-colacompany.com/heritage/ourheritage.html)

and discuss how Coca-Cola has evolved over the years. Identify ways that Coca-Cola can continue to evolve to meet changing consumer needs and wants. (AACSB: Communication; Use of IT; Reflective Thinking)

3. To acquire new products, many companies purchase other firms or buy individual brands from other companies. For example, Disney purchased Marvel Entertainment and its portfolio of more than 5,000 characters, such as Spider-Man and Captain America. Discuss two other examples of companies acquiring new products through this means. (AACSB: Communication; Reflective Thinking)

FOCUS ON Technology

Technology is speeding up new product development while also reducing its costs. What formerly took months and cost millions of dollars can now be done in seconds and for pennies. Because technology is making new product testing easy and accessible to just about any employee, from the chief executive officer to maintenance personnel, predictions are for a groundbreaking change in corporate cultures surrounding new product development—much like the Google culture described at the beginning of this chapter. An employee may come up with a great idea and test it—all in a single day. This new environment may present some challenges, however. One is that managers must be prepared to give up control and empower employees. Another is "scaling," which means companies must be able to scale or implement new ideas rapidly and efficiently.

1. What skills would you need to function in this type of work environment? (AACSB: Communication; Reflective Thinking)

2. As described at the beginning of this chapter, Google is already ahead of this curve. Visit Google Labs (www.googlelabs.com) to learn about new products that are still in the testing stage—what Google calls the "playground stage." Briefly discuss two of the experiments and explain why Google hosts a site such as Google Labs. (AACSB: Communication; Reflective Thinking; Use of IT)

FOCUS ON Ethics

There is usually lots of publicity surrounding the launch of a new Apple product. The iPhone 4 was no exception. Unfortunately, much of it was negative, with some critics even labeling the introduction "antenna-gate." Within days of the product's release, reports surfaced of reduced signal strength and dropped calls. The problem resulted from the sleeker, slimmer phone's antenna, consisting of a metal band around the side of the phone. Apple's response was that all smartphones have signal problems, users should hold the phone differently, and users should purchase a case for about $30 to fix the problem. It turns out that Apple engineers knew of this issue a year before the product was launched, but Steve Jobs, CEO of Apple Inc., liked the design and opted to go ahead with it. The controversy even caught the ear of a U.S. senator, who urged Jobs to fix the problem at no cost to consumers. Contrary to typical industry practice, AT&T, the exclusive service provider for Apple's phones, was allowed to test only a disguised phone for a very limited time without touching it, so the problem was not discovered during testing. Apple later announced that all purchasers would receive a free case and reimbursed users who had already purchased one. This controversy didn't hurt sales, though; Apple sold three million of the new phones in just three weeks and could not keep up with demand.

1. Should Apple have released the iPhone 4 when engineers were aware of the antenna problem? Discuss the pros and cons of further testing before launching the product. (AACSB: Communication; Ethical Reasoning; Reflective Thinking)

2. Did Apple handle the situation effectively? Did Apple's iPhone lose brand equity from this controversy? (AACSB: Communication; Ethical Reasoning; Reflective Thinking)

MARKETING & THE Economy

Coach, Inc.

As consumer shopping patterns began to shift during a slowing economy in late 2007, executives at Coach, Inc., were paying attention. Through ongoing research, they determined that a new "normal" was emerging—one in which more frugal consumers shopped less and spent less when they did shop. At that time, the average price of a Coach handbag was about $330. Coach knew it had to become more innovative, relevant, and value oriented without cheapening the brand's image. Coach's managers went to work to find new sources of materials, renegotiate terms with suppliers, and develop new products. As the result of a yearlong effort, Coach unveiled a new line of products called "Poppy." With the average price of a Poppy handbag at $260, the line is designed to be more affordable without compromising the brand's image. Unlike most luxury brands, Coach's revenue has maintained moderate but steady growth over the past four years. And although profit growth wavered somewhat, the company has remained in the black. Perhaps that's why during the most recent 18 months, its stock price is up 167 percent. Coach really does seem to understand the new "normal."

1. Explain how a $260 purse can be viewed as a good value in the context of the Coach brand.

2. Is Coach safe or will the new "normal" still catch up with the company's financial performance?

3. What suggestions would you make to Coach management for future product development?

MARKETING BY THE Numbers

Apple introduced the iPhone 4 in 2010 but still continued to offer the iPhone 3G. The 16GB base version of the iPhone 4 was priced at $199, with unit variable costs equal to $187. The iPhone 3G's price had decreased to $99 by the time the iPhone 4 was introduced, and its unit variable costs were $65.

1. Refer to Appendix 2 and calculate the incremental contribution realized by adding the new iPhone 4 if sales during the first six months of launch were five million units. However, the company also estimated that 30 percent of iPhone 4 sales came from customers who would have purchased the iPhone 3G but instead purchased the base model of the iPhone 4. (AACSB: Communication; Analytic Reasoning)

2. Apple also offered a 32GB version of the iPhone 4 at $299. Variable costs for that version were $250. Besides its higher price, explain why Apple would encourage customers to purchase the 32GB over the 16GB version. (AACSB: Communication; Analytic Reasoning; Reflective Reasoning)

VIDEO Case

General Mills—FiberOne

General Mills has been mass marketing food since 1860. Today, it sells over $15 billion worth of packaged food each year in over 100 countries. In the United States alone, General Mills markets over 100 leading brands, such as Cheerios, Betty Crocker, Pillsbury, and Green Giant. With all this experience, General Mills certainly has an advantage when it comes to introducing and managing products.

Not many years ago, FiberOne was a little-known brand without much of a footprint. The FiberOne video illustrates how General Mills grew the brand's annual sales from $35 million to more than $500 million in just five years. This growth came primarily from creating and managing new products. FiberOne was originally a line of food bars. But the FiberOne brand name is now found on numerous products, including toaster pastries, bread, yogurt, cold cereal, and even cottage cheese. After viewing the video featuring FiberOne, answer the following questions about the company.

1. Most new products fail. Why has General Mills had success with so many new product introductions in the FiberOne line?

2. Give an example of a FiberOne product in each phase of the product life cycle. Give evidence to support your decisions.

3. For each product identified in question 2, identify one strategy that General Mills is employing for each product that is appropriate for its life-cycle phase.

COMPANY Case

Samsung: From Gallop to Run

In the world of consumer electronics, copycat brands are a dime a dozen. These are the brands consumers turn to if they don't want to pay the price for the high-end market leaders. So if consumers want a top-tier television, they'll probably look at one from Sony or LG. If they want something cheaper that's probably not quite as good, they'll look at brands such as Insignia, Dynex, or Vizio.

But what about Samsung? Believe it or not, Samsung Electronics was a maker of cheap consumer electronic knock-offs from the time it started making calculators and black-and-white TVs in 1969 through the mid 1990s. Today, however, Samsung is the world's largest television manufacturer and offers the most cutting-edge models around.

Putting the brand in context, Samsung Electronics is part of the world's largest conglomerate, South Korea's Samsung Group. Founded in 1938, the huge Samsung Group also owns the world's second largest shipbuilder, a major global construction company, and the largest life insurance company in Korea. The conglomerate is so big that it accounts for 25 percent of all corporate profits in South Korea, well ahead of the number two Hyundai-Kia Automotive Group at 6.4 percent. Under the direction of Lee Kun-hee, CEO and chairman, the third son of founder Lee Byung-Chull, Samsung Electronics has made major strides.

THE NEW MANAGEMENT STRATEGY

In 1993, Lee unveiled what he called "new management," a top-to-bottom strategy for the entire company. As part of Lee's new management, he took Samsung Electronics in a very ambitious new direction. The goal: He wanted Samsung to become a premier brand that would dethrone Sony as the biggest consumer electronics firm in the world. Instead of being a copycat, Samsung was to become a cutting-edge product leader. The company hired a new crop of fresh, young designers who unleashed a torrent of new products—not humdrum, me-too products, but sleek, bold, and beautiful products targeting high-end users. Samsung called them "lifestyle works of art." Every new product had to pass the "Wow!" test: If it didn't get a "Wow!" reaction during market testing, it went straight back to the design studio.

As part of Samsung's revamped strategy and positioning, along with developing stylish and innovative new products, the company altered distribution to match. It abandoned low-end distributors like Walmart and Kmart, choosing to build strong relationships with specialty retailers like Best Buy and Circuit City. "We're not el cheapo anymore," said one Samsung designer.

In less that two decades, Samsung Electronics has achieved its lofty goals—and much more. In 2009, the company rang up revenues of $117 billion with profits of $8.3 billion. Compare that to Sony at $77 billion in revenues and a net loss of almost $1 billion. Interbrand crowned Samsung as the world's fastest growing brand over one five-year period. Most recently, Samsung hit number 17 on Interbrand's list of most valuable global brands as Sony fell to number 29.

Samsung is now by far the largest consumer electronics company in the world and has been since 2005. It's the world's largest TV manufacturer and the second-largest cell phone producer. Samsung competes strongly in the markets for DVD players, home theaters, digital cameras and camcorders, home appliances, and laser printers. But more than just making finished consumer products, Samsung Electronics is also the world's largest technology electronic components company. It makes a sizable share of LCD and LED panels, mobile displays, and telecommunications components used in other company's products. It's also the world's largest manufacturer of flash memory.

WORKS OF ART

Samsung has become more than just big. It has also achieved its goal to become a producer of state-of-the-art products. In fact, both *Fast Company* and *BusinessWeek* recently placed Samsung high on their lists of most innovative companies. As evidence of its design prowess, Samsung took home eight prizes at the International Design Excellence Awards (IDEA), where entries are judged based on appearance, functionality, and the thinking behind each one. Design darling Apple took home only seven awards.

Consider some of this year's winners. A Samsung "Touch of Color" Blu-ray DVD player featuring a hint of red tone blended naturally into a piano black frame had the judges ogling. Comments indicated that, with color and appearance that changed in different lighting, the DVD player looked like a work of art made of glass. Samsung's Luxia LED TV series also packed "wow" appeal. With specs that exceed anything on the market, a 55-inch model is a mere one-inch thick and weighs just 49 pounds. Samsung's EcoFit monitors feature a transparent stand that give the appearance of floating in the air. The Samsung YP-S2 Pebble is part MP3 player, part fashion item. Designed to conjure up images of nature with its pebble shape and stunning colors, it can be worn around the neck and sports five tactile keys that make it simple enough for grandma to use. And the Samsung Kiwi mini notebook PC is a 10-inch laptop that is high-tech, convenient, cute, and familiar all at once. These and the other Samsung winners at last year's IDEA awards earned Samsung the designation of "a company that's hitting its design stride."

Samsung is moving many of its product categories forward. For example, as the cell phone industry moves from "dumbphones" to smartphones, Samsung aims to double its market share of the higher-end market from 5 to 10 percent. With the release of its latest high-tech communication phone, the Galaxy S, Samsung no doubt has a shot. One industry analyst says, "Samsung may easily meet [its] target as the handset market is sharply transferring to smartphones and the hardware features of the Galaxy S are pretty competitive in the market." Running on Google's new Android operating system, the phone features a four-inch screen, an e-book reader, a five-megapixel camera, and a high-definition video recorder and player. But perhaps the best thing going for it is the fact that it will not be tied exclusively to any single carrier, as are many of the top smartphones. More than 100 mobile operators around the world will offer the Galaxy S.

MABULJUNGJE

Lee was recently named the top CEO of the Decade by *Fortune* Korea. True to that title, he has just recently announced that the "new management" is now old news. After 17 years of remarkable success, Lee admitted that the world's largest technology firm's current main products may likely become obsolete within the next 10 years. That forward thinking has him again in reform mode. He has dubbed Samsung's newest strategy "mabuljungje," a Chinese axiom that means "horse that does not stop." In a memo to Samsung employees, Lee said, "The 'new management' doctrine for the past 17 years helped catapult the company into being one of the world's best electronics makers. Now is not a time to be complacent but a time to run."

As with any truly forward thinking, innovative company, Samsung doesn't claim to know what will replace today's products as they become obsolete. Rather, it is investing heavily to ensure that it is the company that develops them. Samsung recently unveiled a $23 billion investment plan—its biggest to date. That amount is three times the one that Samsung discarded only months earlier. It's also bigger than the combined investment budgets of Intel, IBM, and Sony. Much of this year's budget is earmarked for capital expenditures, new equipment, and plants to ensure that Samsung stays ahead of the game. The rest is for R&D. At a groundbreaking ceremony for a new chip plant outside of Seoul, Lee announced that despite Samsung's past success, the company risked losing market share if it did not completely overhaul its business model.

According to Timothy Baxter, president of Samsung Electronics America, as a major pillar of mabuljungje, Samsung will capitalize on interactivity—as in mobile phones with TVs and TVs with the Internet. Samsung's future will bring many products that will talk to each other. At a recent expo, Baxter stared at a pair of aces displayed on his Samsung Omnia II mobile phone. After tapping a few phone buttons, up popped a poker table on a Samsung big-screen TV with a pile of cards held by his opponent—a poker buddy in another city. "There's no reason these phones can't interact with the TV," Baxter said, indicating that if he has his way, Texas Hold 'em is just the first in a series of such synergistic exchanges.

But such advances in product interactivity go beyond just presenting consumers with flashy hardware features. They will take Samsung into a competition for consumer eyeballs with companies such as Apple. Samsung knows that it cannot thrive in the long term by merely offering sharper colors or better sound quality. Pricing power comes only from unique features or control over content. Samsung is putting plenty into discovering the unique features. But its investment strategy will also position Samsung as somewhat of a broker between advertisers and the devices that carry the ads. Although Samsung is now hush-hush about its plans, it has announced its intention to unveil a tablet computer and an app store similar to Apple's that will give Samsung control over that content. Samsung sees apps as the advertising vehicle of the future.

In its favor, Samsung has access to a piece of the puzzle that Apple doesn't—big screens. Thus, as its small devices interact with its Web-enabled TVs, Samsung could bring in lots of ad dollars from companies eager to pitch their products on screens 25 times the size of an iPhone's. If successful, Samsung will pose a threat to not only Apple but also cable companies. That's because the type of network that Samsung has planned will also make it a data collector, privy to insight about the kinds of applications its TV owners like so that it could help suggest what ads they should receive.

Questions for Discussion

1. How was Samsung able to go from copycat brand to product leader?
2. Is Samsung's product development process customer centered? Team based? Systematic?
3. Based on the PLC, what challenges does Samsung face in managing its high-tech products?
4. Will Samsung likely achieve its goals in markets where it does not dominate, such as smartphones? Why or why not?

Sources: Mark Borden, "The World's 50 Most Innovative Companies: #36: Samsung," *Fast Company*, February 17, 2010, p. 90; Shinhye Kang, "Samsung Aims to Double Its Smartphone Market Share," *Bloomberg's BusinessWeek*, June 21, 2010, accessed at www.businessweek.com/news/2010-06-21/samsung-aims-to-double-its-smartphone-market-share-update1-.html; Laurie Burkitt, "Samsung Courts Consumers, Marketers," *Forbes*, June 7, 2010, accessed at www.forbes.com/global/2010/0607/marketing-apps-consumer-electronics-apple-samsungs-big-spend.html; Choi He-suk, "Samsung Renews Resolve to Reform," *Korea Herald*, June 8, 2010, accessed online at www.koreaherald.com.