CHAPTER EIGHT

MANAGING PRODUCTS AND SERVICES

Quality in a product or service is not what the supplier puts in.
It is what the customer gets out and is willing to pay for.

—Peter Drucker, founder of modern management theory

Product and service management aims to optimize the value that a company's products and services deliver to target customers and do so in a way that benefits the company and its collaborators. The key product and service decisions are the focus of this chapter.

Overview

The product and service aspects of an offering capture its key functional characteristics. *Products* typically change ownership during purchase; once created, they can be physically separated from the manufacturer and distributed to end users via multiple channels. Based on their consumption pattern, products are often classified as either durable or nondurable. Durable goods—cars, household appliances, and machinery—are consumed over multiple occasions and over an extended period. In contrast, nondurable goods—food, disposable items, and cosmetics—are typically consumed on a single occasion or over a short period.

Services are in many respects similar to products, with two main exceptions: change of ownership and inseparability. Unlike products, which typically change ownership during purchase (from the seller to the buyer), services do not usually involve a change in ownership; instead, the customer acquires the right to use the offering within a given time frame. Furthermore, unlike products, which can be physically separated from the manufacturer, services are usually delivered and consumed at the same time.

Because services are created and delivered at the same time, they are difficult to standardize, and their quality varies depending on the interaction between the service provider and the customer. To illustrate, a customer might receive different levels of service from the same service provider at different times and in different locations, and the same service provider might have different interactions with different customers depending on customers' behavior. The inseparability of creating and deliver-

ing value also makes services perishable in the sense that they cannot be inventoried—an important consideration in industries such as airlines, hotels, and call centers, where companies with a fixed service capacity face fluctuating customer demand.

Based on the level of uncertainty associated with their benefits, product and service attributes can be classified into one of three categories: search, experience, and credence.[1]

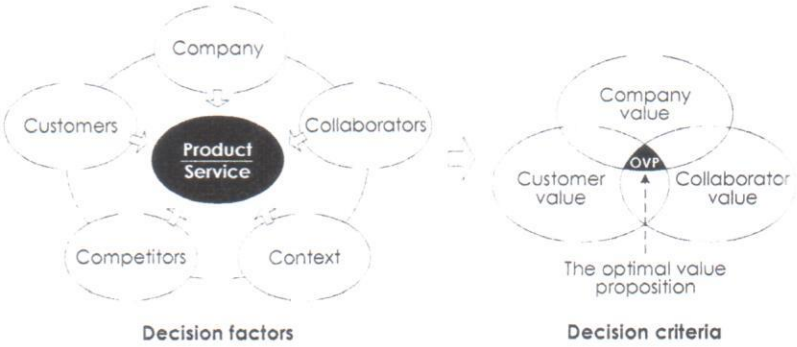
- **Search** products and services are associated with the least amount of uncertainty and are typically identifiable through inspection before purchase.
- **Experience** products and services carry greater uncertainty and are revealed only through consumption.
- **Credence** products and services have the greatest amount of uncertainty and their quality is not truly revealed even after consumption.

For example, in the case of toothpaste, size is a search attribute, taste is an experience attribute, and cavity prevention is a credence attribute. In general, search attributes are more common for tangible offerings, whereas credence attributes are more typical for intangible offerings. Because services have more intangible properties relative to products, they are heavy on experience and credence attributes; in contrast, search attributes are more typical for products than services.

Product and Service Management as a Value-Creation Process

When designing products and services, a manager's goal is to create value for target customers in a way that benefits the company and its collaborators. To achieve this goal, a manager must consider five key factors—target customers, the company's goals and resources, its collaborators, competitors, and the context in which the company operates—and design products and services that deliver market value. The Five Cs are the key decision factors that must be considered in order to design products and services that can create value for target customers, the company, and its collaborators (Figure 1).

Figure 1. Product and Service Management as a Value-Creation Process



The five decision factors—customers, company, collaborators, competitors, and context (the 5-C framework)—are of strategic importance when designing the product and service aspects of offerings. Because the primary function of an offering is to create value for its target customers, customers' needs play a key role in the development of the company's products and services. A company's products and services also depend on the company's collaborators. For example, a company might seek to minimize the channel's inventory costs by creating space-efficient packaging and/or by extending the shelf life of perishable products. Because most consumer decisions involve a choice among competitive offerings, these offerings often serve as benchmarks for designing new products and services. A company's products and services are also a reflection of its goals and resources because they determine the capability of the company's products to fulfill customer needs. Finally, product and service design is also influenced by the economic, business, technological, sociocultural, regulatory, and physical *context*, including the technological specifications imposed by various government and nongovernment agencies, import/export regulations, and compatibility standards.

In addition to being a function of the Five Cs, product and service design is also influenced by the other elements of the offering's marketing mix: its brand, price, incentives, communication, and distribution. Thus, an offering's products and services should be consistent with its brand, such that high-performance brands are represented by superior products and services and vice versa. Products and services are also contingent on price, such that higher priced offerings typically call for higher quality offerings. Products and services also depend on the offering's communications and should be designed in a way that facilitates informing customers about the key aspects of the offering. Finally, products and services are often designed to optimize their distribution—for example, by facilitating their transportation, storage, and on-shelf display.

Product and Service Decisions

Creating and managing products and services involves a series of specific decisions concerning factors such as performance, consistency, reliability, durability, compatibility, ease of use, technological design, degree of customization, form, style, and packaging. These factors are described in more detail below.

- **Performance**. Products vary in their performance on different attributes. For example, cars vary in engine power, acceleration, comfort, safety, and fuel efficiency; computers vary in processing power, battery life, display size, and connectivity; snacks vary in taste, nutritional value, and calorie content. The key principle when deciding on the level of performance of a given offering is optimizing its value for the relevant market entities: target customers, the company, and its collaborators. In cases when a given offering is part of a product line, its performance also needs to be coordinated with the other offerings included in this product line (see Chapter 17 for more details).

- **Consistency**. An important aspect of designing an offering is ensuring that in-kind products and services are identical and consistent with specifications. Because variability is a key characteristic of services, consistency is of vital importance in service delivery and is one of the main contributors to the success of companies such as McDonald's, Starbucks, and Ritz-Carlton. A popular approach to managing product consistency is the Six Sigma method described in more detail at the end of this chapter.

- **Reliability**. Reliability refers to the probability that the product or service will operate according to its specifications and will not malfunction for the duration of its projected life cycle. Reliability is often used as a differentiating point to create a unique positioning for a company's offering. For example, FedEx promises "absolutely, positively overnight" next-day delivery service, the discount brokerage TD Ameritrade guarantees that certain trades will be executed within five seconds, and Verizon claims to be the most reliable wireless network in the United States with a call-completion rate of more than 99.9%.

- **Durability**. Another important consideration in product design involves the expected length of the offering's life cycle. Because durability is an important consideration in buyers' decision processes, products that are perceived to be more durable tend to be preferred by customers. At the same time, while durable products help companies attract new customers and build loyalty among existing customers, durability tends to have a negative impact on the frequency of repeat purchases because users are often reluctant to replace fully functioning products with new ones. As a result, manufacturers have to design superior models that will encourage customers to upgrade. This process of designing new products in a way that makes prior generations inferior is often referred to as planned obsolescence (see Chapter 16 for more details).

- **Compatibility**. Compatibility refers to the degree to which an offering is consistent with certain already existing standards and complementary products. Compatibility can be used strategically by companies to create barriers to entry by ensuring that offerings are uniquely compatible with customers' existing systems and processes. Product compatibility is also an effective strategy in networked environments, where users are forced to adhere to a certain standard. To illustrate, the popularity of Microsoft Office products is to a great degree a function of the need for compatibility when sharing information. Compatibility is also a key consideration in multipart pricing, where a company charges a relatively low price for the first part of the offering and higher prices for the complementary parts (e.g., razors and blades). In this case, unique (patented) compatibility is essential so that only parts manufactured by the same company can work together (e.g., only Gillette-manufactured blades should fit a Gillette razor).

- **Ease of use**. An important aspect of many products and services is their ease of use. There is a common misconception that greater functionality, such as a greater number of features, inevitably leads to greater satisfaction. In reality, however, this is not the case: Adding functionality in cases when customers lack the knowledge necessary to utilize it can backfire. To illustrate, in an attempt to incorporate the latest technology in its newly redesigned 7-series, in 2003 BMW introduced iDrive, an over-engineered computer system used to control most secondary functions of a car, including the audio system, climate, and navigation. Designed to manage more than 700 functions with a single knob, the iDrive had a steep learning curve and quickly became the most controversial feature of the 7-series.

- **Technological design**. Depending on the novelty of the offering, two technology-development methods can be identified: product innovation and product variation. The product-innovation approach involves technology-based innovations and innovative use of existing technology to design new offerings. Unlike the product-innovation strategy, which leads to substantive functional differences among offerings, the product-variation approach leads to offerings characterized by relatively minor variations in their functionality, such as adding different colors, flavors, tastes, sizes, designs, or packaging variations.

- **Degree of customization**. When designing its offerings, a company needs to decide on the degree to which these offerings will be customized for target customers. At one extreme, a company might decide to pursue a mass-production strategy, offering the same products and services to all customers. At the other extreme, the company might pursue a one-to-one customization in which the company's products and services are customized for each individual customer. A compromise between the mass-production approach and the one-to-one customization approach is segment-based customization. By developing offerings for groups of customers with similar needs, segment-based customization allows companies to develop fewer offerings while ensuring that these offerings fit customer needs. To illustrate, Dell offers more than 100 options from which customers can choose to customize their computers; Porsche offers nearly 1,000 customization options for its flagship 911 Carrera; and Nike offers more than 10,000 different design and color sport-shoe customization options through its website nikeid.com.

- **Form**. Product design typically involves decisions concerning the physical aspects of the offering, such as its size and shape. Design plays an important role in manufacturing, transporting, storing, inventorying, and consuming the product. Because customers vary in the amounts they consume, packaged goods are often available in a variety of sizes and shapes. For example, Johnson & Johnson's pain relief medicine, Tylenol, is available in more than fifty different SKU forms: regular, extra strength, and children's dosages; normal and extended relief; tablets, caplets, gelcaps, geltabs, and liquid—all in a variety of sizes.

- **Style**. The look and feel is particularly important for products that have a primarily hedonic and self-expressive function, such as luxury cars, designer furniture, and fashion apparel, and could be somewhat less relevant for utilitarian products, such as manufacturing equipment. Because product styling can create value above and beyond the functional characteristics of the product, it is used by companies to differentiate their offerings from the competition. For example, Apple revolutionized the personal computer industry by designing computers that were not only powerful and fast but also aesthetically pleasing. Method Products, a home and personal cleaning products company, has managed to successfully differentiate its products through innovative, futuristic styling of the containers.
- **Packaging**. Packaging serves several key functions: *protecting* the product during transportation and storage; physically *containing* liquid, powder, and granular goods; *agglomerating* small items into larger packages; *preventing* tampering, counterfeit, and theft; providing *convenience* in transportation, handling, storing, display, sale, and consumption; offering *information* on how to transport, store, use, and dispose of the product; and *promoting* the product to potential buyers by providing them with reasons to choose it. Packaging can also be used to create value above and beyond the value created by the product itself. To illustrate, Tiffany's signature blue box highlights the exclusivity of the offering and at the same time strengthens its brand image and helps differentiate it from the competition.

In addition to deciding on the characteristics of the individual products and services, companies often must decide how to differentiate them from the other offerings in their product lines, as well as how to manage products and services throughout their life cycles. A more detailed discussion of managing the product and service life cycle and product-line management is offered in chapters 16 and 17.

SUMMARY

Product and service management aims to optimize the company's offering so that it delivers superior value to target customers, the company, and its collaborators. Products typically change ownership during purchase; once created, they can be physically separated from the manufacturer and distributed to end users via multiple channels. In contrast, services imply a right of use (rather than ownership) and are typically delivered and consumed at the same time.

Managing products and services is influenced by two types of factors: *strategic*, which include the offering's customers, the company, collaborators, competition, and context, and *tactical*, which depend on the other marketing mix variables: brand, price, incentives, communication, and distribution.

Product and service management involves deciding on factors such as performance, consistency, reliability, durability, compatibility, ease of use, technological design, degree of customization, form, style, and packaging. In addition to deciding on the characteristics of

individual products and services, companies often have to decide on how to differentiate them from the other offerings in their product lines.

ANT CONCEPTS

Packaged Goods (CPG): A term used to describe consumer products packaged in containers: food, beverages, health and beauty aids, tobacco, and cleaning supplies.

Sigma: A methodology for managing process variations that cause defects, introduced Motorola and later adopted by General Electric. (Sigma refers to the Greek letter σ, commonly used in statistics as a measure of the degree of variance in a given population.) The *Six Sigma* approach builds on the idea that for an offering to be consistent with specifications, the difference between the actual and the desired outcomes should not exceed six standard deviations. In this context, a widely accepted definition of a *Six Sigma* process is one that achieves defect levels below 3.4 defective items per million outcomes. Over time, the term *Six Sigma* has evolved beyond its literal definition as a specific metric and is often used in reference to a more general methodology of improving business processes that focuses on understanding customer needs and aligning the business processes to fulfill these needs with minimal variation.

Keeping **Unit (SKU):** A unique identifier assigned to each distinct product or service.

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