Chapter 4
Service Principles, Design, and Strategies

ABSTRACT
The purpose of this chapter is to explain the concepts and principles of service science, management and engineering, and the basic constructs of innovative service strategies. It highlights why service is increasingly being conceptualized as a process rather than a unit of production output. The chapter first describes the evolving service perspectives and their associated characteristics and principles. It then addresses the service “implementation” aspects and describes the definitions and interrelationships of service concept, design, and strategies to create differentiating customer experience.

INTRODUCTION
The purpose of this chapter is to explain the concepts and principles of service science, management and engineering, and the basic constructs of innovative service strategies. It will highlight why service is increasingly being conceptualized as a process rather than a unit of production output, an intangible good. Consequently, it will explain (consistent with the knowledge-based theory of the firm in chapter 1) why the unique knowledge, skills, and competencies, or organizational capabilities (described in chapter 3), of a firm, which are collectively categorized as “operant resources” (which have the capacity to act on other resources including operant resources to produce a beneficial effect), are the foundation, and competitive advantage, of a service firm.

The study of service science, management, and engineering is an emerging field of research. Service conceptual models and theories have evolved, over more than two decades, from a series of seminal work from disparate disciplines. However, they remain emergent with different perspectives and emphases being advanced by different leading scholars. Therefore, the chapter will first describe the evolving service perspectives and their associated characteristics and principles. It will explain the difference between product and service, and the emerging process models of a service. It will then describe the emerging, and increasingly popular, process-oriented Service-Dominant Logic (S-DL)—an all-encompassing logic that can be consistently applied to the conceptualization of both products and services. The underlying constructs of the S-DL—adaptive value networks, service systems, operant resources, customer value co-creation—are then explained in detail. It will highlight the power of S-DL in embracing the conceptual “liquefaction”
of information from the physical value networks prevalent in nearly all business models of the so-called knowledge economy of our modern society.

The chapter will then address the service “implementation” aspects and describe the definitions and interrelationships of service concept, design, and strategies to create differentiating customer experience; and how they may be dependent on or related to information technologies.

Service Perspective

In the early days (pre-1980) of services marketing, services were seen as a special kind of products, treated as units of production output. They were defined as residues of (or subordinate to) products in the context of a goods-dominant (G-D) logic (Vargo & Lusch, 2004; Lovelock & Gummesson, 2004). Services scholars were debating the characteristic differences between products and services. Viewed from the lens of G-D logic, services seem to possess four distinctively different characteristics from products, namely Intangibility, Heterogeneity, Inseparability, and Perishability—the so-called IHIP characteristics (Lovelock & Gummesson, 2004). The G-DL view of services also leads to the study of “Product-Service System” which is particularly popular in Europe and Japan (Morelli, 2006; Sakao, et al., 2007; Voss. et al., 2009). Product-service system is regarded as an integrated product and service system that delivers value in use in such a way that reduces the impact on the environment (Aurich, et al., 2010).

Intangibility arose from the view that services are intangible “products,” unlike physical products, which are tangible. Heterogeneity arose from the view that services have variable input resources and performance outcomes, unlike products, which can be manufactured consistently in a standardized fashion. Inseparability arose from the view that the production and consumption of services occur simultaneously, unlike products, which are manufactured (in factories) and consumed (elsewhere) separately. Perishability arose from the view that service outputs are not durable and therefore cannot be stored and inventoried like products. In sum, services’ IHIP characteristics are derived in stark contrast to (and at times regarded to be less desirable than or residue to) the tangible qualities of manufactured goods: the separation of production from consumption, standardization, and nonperishability of physical products (Vargo & Lusch, 2004).

The origins of IHIP were carefully traced and described in some depth by Lovelock and Gummesson (2004) and these so-called services characteristics were actually shown to be not generally applicable to all services (p. 31). Apart from Lovelock and Gummesson (2004) and Vargo and Lusch (2004), several other scholars of services marketing, have also rigorously challenged and refuted the G-D logic based view of IHIP characteristics as not being uniquely those of services. For instance, as noted by Metters and Marucheck (2007), “a mass-customized manufactured product like the running shoe ‘mi Adidas’ may be better fit with IHIP characteristics than a standard service industry product like term life insurance.” Edvardsson et al. (2005), in their survey of leading service scholars around the globe, also find that the IHIP ‘paradigm’ is outdated. Because the IHIP characteristics are seen from the provider perspective in relation service delivery (Fitzsimmons & Fitzsimmons, 2001), but they do not capture the process and interactive nature of services. Moreover, they are not related to co-producing and consuming services from the customer perspective.

Instead, Edvardsson et al. (2005) suggest service is best seen as a perspective on value creation rather than a category of market offerings; and the focus should be on value through the lens of the customer. This means value co-creation with customers is fundamental to service concept, and the interactive, processual, experiential, and relational nature of service form the basis for its characterization. This interactive-process view