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# Process completeness: Strategies for aligning service systems with customers' service needs

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**Abstract** Increasingly, customers are expecting more and better service. As such, enterprises need guidelines and frameworks for addressing these expanding requirements. The concept of *process completeness* helps us to consider service from the customer's viewpoint; arguably, the only perspective to take. Process completeness is achieved when a firm's service delivery system matches the typical customer's breadth of expectations. While customers think in sets of services (e.g., I need a flight, a hotel, airport parking, wireless Internet), firms think in terms of single services (e.g., we can provide a flight). There are four basic service systems: (1) *transaction*—execute a basic request and nothing else, (2) *process*—handling all firm-related service requests through one touch point, (3) *alliance*—handling service requests through a single touch point via stitching together a static firm-selected alliance of service partners, and (4) *agility*—handling service requests through a single touch point via stitching together a dynamic customer-selected alliance of service partners. In addition to exploring the four service systems, this article guides executives regarding the selection and implementation of the appropriate service strategy that meets their typical customer's process completeness expectations.


## 1. The growth of e-Service

The growth of electronic commerce, coupled with the continuing expansion of the service sector of the global economy, has spawned new-found attention to service systems. At the same time, attention to customer service is necessary across all segments of the economy, since products are increasingly being defined on the basis of customer needs—for example, safe and reliable transportation—rather than what the manufacturer produces—for example, cars (Cook, Goh, & Chung, 1999; Shostack, 1977). As Theodore Levitt (1972, p. 41) famously pronounced,

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"There is no such thing as a service industry. There are only industries whose service components are greater or less than those of other industries. Everybody is in service." Consistent with this view, other scholars have argued that any organization, whether in the service sector or not, is involved in offering customer service and delivering supplementary services (Lovelock, 1995; Vargo & Lusch, 2004). *Supplementary services* are those that are not considered core to the value proposition, but are nonetheless necessary for the value proposition to be delivered (e.g., tuition processing at a college).

Keen interest in the field of IT-enabled services and service management is evidenced by a special issue of the *Communications of the ACM*, which outlines the embryonic nature of a service science (Spohrer & Riecken, 2006). There is also widespread recognition that customer service is a key driver of competitive advantage (El Sawy & Bowles, 1997). Information systems are increasingly crucial to the design and delivery of customer service (Karimi, Somers, & Gupta, 2001; Keen, 1991; Orman, 2007). But despite growing attention to IT-enabled customer service, most organizations still struggle with designing and implementing process flows to enable their customer service strategy.

Consider the Hilton Hotels Corporation, which invested upwards of $100 million in OnQ, an integrated infrastructure that allows for consistent service at Hilton's 3,000 properties worldwide and across many touch points including branded hotel websites, front desks, on-property kiosks, online check-in, a rewards program website, and a company call center (Applegate, Piccoli, & Dev, 2008). OnQ supports and enables the delivery of supplementary services at each of the properties affiliated with one of nine Hilton brands. For example, OnQ facilitates customers' making reservations through the company website or call center, checking in at the hotel with an agent or via on-site kiosk, checking in using the company website, and checking out by means of the in-room television set, just to name a few. OnQ also stores customer preferences and previous behaviors, thereby enabling personalization of the service experience throughout the Hilton family of brands and hotels. In short, Hilton OnQ is the nervous system underpinning the Hilton service experience. While the need for design and development of systems like OnQ is escalating quickly, we lack a tested theory for guiding such initiatives.

The objective of this article is to outline such theory as it applies to the design of customer service strategies and the underlying optimal customer service process design. Our work is grounded in a field study of six organizations in which we interviewed marketing and information systems executives, as well as customer service representatives. In the following section, we provide the theoretical framework underpinning our work. We then outline the four strategies a firm can implement based on customer expectations. Finally, we close with a set of conclusions and guidelines stemming from our work.

## 2. Understanding service systems choices

The Hilton OnQ system is a prototypical example of a Network-based Customer Service System (NCSS). As defined by Piccoli, Brohman, Watson, and Parasuraman (2004, p. 424), an NCSS is a "computerized information system that delivers service to a customer either directly (e.g., via a browser, PDA, or cell phone) or indirectly (e.g., via a service representative or agent accessing the system)."

As regards an NCSS, the organization achieves network completeness when it is able to fulfill customer service expectations through the optimal deployment of the two components of its NCSS infrastructure: the data network and the process network (Brohman, Watson, Piccoli, & Parasuraman, 2003). While the significant attention garnered by Customer Relationship Management (CRM) and Business Intelligence (BI) initiatives, and some high profile cases—such as Harrah's Entertainment (Lal & Carrolo, 2002)—have demonstrated the value of pursuing a conscious data completeness strategy (Brohman et al., 2003), CRM systems do not adequately support process-centric customer interactions (Davis, 2002; Eager, 2002). In other words, a significant gap persists in our understanding of the optimal deployment of resources to support the customer service process.

### 2.1. Process completeness

A *process network* is a collection of software applications that manages and coordinates the workflow of activities designed to enable end-to-end customer services. The process network is a critical component of an NCSS, as it determines how service delivery occurs. Consider Delta Airlines. Following its latest website redesign, the company extended its ticket purchasing process to offer travel products from partnering firms. Chuck Jensen (2007), General Manager of Delta.com and Self-Service, provides the following rationale for the decision:

> After months of research, we determined that most of our customers needed one or more of these products as part of their travel experience, and would often come back to delta.com to buy these products or worse yet would visit other websites to complete these purchases.