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Transforming the Hospitality Industry into E-Business

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Abstract
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Transforming the hospitality industry into e-business

by Carol Pernsteiner and Nancy Rauseo

The emergence of a technology-intensive economy requires the transformation of business models in the hospitality industry. Established companies can face technological, cultural, organizational, and relationship barriers in moving from a traditional business model to an e-business model. The authors suggest that market, learning, and business process orientations at the organizational level can help remove some of the barriers toward e-business and facilitate the development of e-business within existing organizational infrastructures.

The economy is experiencing an increasingly turbulent and changing environment as a result of the globalization of business, changes in demographics, and sophisticated communication technologies. In the logic of the new global economy, there are expanded territories for greater distribution, changing market force dynamics and world development, the potential for global prosperity, and the growing impact of electronic business (e-business). One of the most powerful driving forces redefining the new economy is technology.

The Internet and World Wide Web (WWW) have created the platform for new business models, enabling organizations to streamline complex business processes, expand relationships, decrease operating expenses, and improve productivity. These technologies are changing the way businesses communicate, share information, and buy and sell products and services.

The motivation to grow and remain competitive within the new global marketplace drives mergers, acquisitions, joint ventures, alliances, and partnerships in all industries. In the hospitality industry, this motivation may be driven by a desire to enter new geographical markets, to enter new markets within existing
boundaries, or to compete with new electronic businesses. Starwood gained an international presence through its purchase of Westin Hotels and ITT's Sheraton and Ciga brands, whereas Marriott gained entry into the five-star luxury market through its purchase of Ritz-Carlton Hotels.

Business growth in all industries is now being driven by e-commerce, which represents a significant force for generating competitive advantage at the organizational level. E-commerce, a form of e-business, provides a cost-effective, time-efficient means of transacting business and distributing goods and services, lowering expenses and increasing the likelihood of global commerce. The scope of e-commerce has gone from finite applications such as EDI to a wide variety of methods for sharing information and transacting business electronically within and outside an organization.

E-commerce is only one aspect of e-business, a term introduced by IBM in 1997. Essentially, e-business encompasses all business activities conducted by an organization and leveraged through Internet technology to minimize inter- and intra-organizational distances and to automate transaction processing, strengthen relationships, and reduce costs. Prominent authors in the field of e-business define it as the integration of business processes, enterprise applications, relationships and organizational structure to create a high-performance business model, capable of delivering differentiated business value. E-business applications include electronic data interchange (EDI), the intranet, business-to-business (B2B) commerce using extranets, and business-to-consumer (B2C) commerce.

E-business defined

Although there are numerous definitions of e-business, the authors use the following as the foundation:

E-business is the complex fusion of business processes, enterprise applications, and organizational structure necessary to create a high-performance business model.

This definition implies that existing companies must be flexible and adaptable to continuous change, speed responsive, and customer-focused. What organizational-level orientations can facilitate e-business models in existing companies within the hospitality industry? It is proposed that market, learning, and business process orientations within an organization are needed for an e-business.

The hospitality industry is considered a leader in online web sales in travel-related products and services. Online purchases of travel services are expected to reach $9 billion by 2002. The American Hotel and Motel Association expects e-commerce in lodging to reach $2.9 billion by 2001. Despite the industry's leadership, there has been little research on

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the use of Internet technology in the lodging and hotel industry. E-business represents a significant innovation with infinite business opportunities for companies in all industries. Researchers and practitioners have placed emphasis on the technology and marketing aspects of implementing e-business strategies. Very little attention has been given to the organizational characteristics necessary for the effective infusion of this innovation into organizations.

Several existing theories and concepts from the management literature can be used to further understand e-business requirements in relation to organizational issues. These concepts can also aid companies in the transition to e-business.

**Internet is two decades old**

The Internet was developed over 20 years ago in an effort to connect the U.S. Defense Department and various radio and satellite networks. The demand for this networked communications protocol grew rapidly as other government agencies, universities, and private institutions began seeking more efficient and effective methods of communication. Today, the Internet has evolved into a highly decentralized digital network of computers communicating through an Internet Protocol (IP) environment.

Technically, the Internet is a highly decentralized digital network of computers. The web on the Internet is the first and current electronic global network. This network is called a hypermedia, computer-mediated environment (CME) and is the foundation for e-business.

Electronic commerce is one of the fastest growing sectors in the United States economy. The expanding literature on electronic commerce is primarily focused on business-to-consumer e-commerce, although business-to-business (B2B) e-commerce has a larger potential impact on the economy. Forrester Research estimates that B2B e-commerce revenues will reach over $1.3 trillion by 2003, which is close to 7 percent of United States consumer retail spending.

According to PricewaterhouseCoopers, business-to-business e-commerce is becoming the way to do business in all industries and for companies of all sizes. The emergence of the Internet now allows smaller companies to participate in automated business-to-business communications, a once cost-prohibitive strategy for these companies. For example, electronic data interchange (EDI) could only previously be used by large companies due to the high implementation and maintenance expenses. Now all participants of the web can have an equal voice, without regard to size, power, and authority mechanisms.

As the Industrial Revolution initiated the growth of firms, the Internet expands this growth potential, making possible a global marketplace. The speed of
change in technology is unparalleled as exemplified in the "Law of the Photon" that bandwidth triples every year. The changes made possible by the Internet are strategic and fundamental.

The new Internet geography lets local businesses go global overnight. Centralized information technology (IT) structure and administration extend a firm's reach beyond local and regional boundaries and create economies of scale and scope. Physical distance between consumers and suppliers becomes largely irrelevant. Companies that establish a strong position or brand on the Internet can grow rapidly, differentiating their services for many different customers, and a small number of companies or brands can meet the needs of large segments of the new global market. As customers return to sites and brands with which they are familiar, the Internet will act as a naturally concentrating medium, resulting in fewer, larger firms.

**Local presence needed**

Building brand recognition in new regional markets requires establishing some sort of local presence. According to strategists, participation in a synergistic business network provides a business with better access to employees, suppliers, specialized information, and customers. Placing an entity or a hotel within the framework of a brand of hotels may also provide an image or identity for the property.

The Internet allows an important shift in which navigation can be unbundled from the production, marketing, and distribution functions. The three dimensions of navigation — reach, how many customers a business can access or how many products it can offer; affiliation, whose interests the business represents; and richness, the depth and detail of the information that the business gives or collects about the customer — create new dimensions for competitive advantage. The reach advantage of the Internet can be seen by considering a brick and mortar business versus an e-business.

The Internet has helped fuel the trend toward a more entrepreneurial economy and lowered or eliminated entry barriers in dozens of industries. This benefits the customer, since easy access to comparison-shopping is expected to keep prices down. Through companies such as Priceline.com, discount prices for hotel rooms are available on the Internet. Hotels list short-term unused inventory and customers have a new means of comparison shopping.

There is a shift in the focus of communication activity from marketing as distribution of information to marketing in response to consumer demand. This change will place major pressure on marketing organizations, most of which are set up to research, plan, develop, implement, and distribute communication, rather than to listen and respond.
A push for the use of Internet technologies in the hotel industry began in the mid-1990s. By the end of 1996, 20 of the world’s top 25 hotel chains had established web sites. Industry publications and trade journals are now filled with current developments in the world of e-business. *Hotel and Motel Management* dedicates a section of its magazine to new e-business projects, success stories, Internet technologies, and trends in the hospitality industry. The American Hotel and Motel Association has also made e-business a top research priority.

At the 2000 Cornell University Conference on Hospitality Industry Strategy, industry leaders discussed e-distribution and its influence in transforming hotel marketing and distribution. Key issues include the Internet’s impact on a hotel’s choice of the most effective distribution channel to meet its needs, intermediation versus disintermediation, customer segmentation, change in distribution costs, and the auction phenomenon’s impact on pricing, revenue per available room (revpar), customer perceptions, and brand loyalty.

**Brochures go electronic**

The industry’s first attempts at a presence on the Internet were electronic brochures, now referred to as "brochureware." This was followed by bookings of individual hotel rooms, and finally a move to the more complex group bookings which include linking a reservation to a group block, various types of meetings, meeting room layout, meal planning, amenities, billing, rate structures, rooming lists, etc. Due to the complexity of the group booking process, the systems available to handle group bookings continue to be primarily referral systems. These include Global Delphi (New Market Software), Miracle (National Guest Systems), and Envision/Function Book (SABRE Decision Technologies).

**Marriott is pioneer**

Marriott International, Inc., was one of the pioneers in web-based reservations, launching its website in 1995. Rich Hanks, Marriott’s executive vice president of sales, indicates that the website began as an experiment. “It all makes sense now, but back then, it was like, wow, we didn’t know if we were going to get any sales.” This illustrates a culture willing to learn and take risks. Marriott expects web sales to reach 2.5 percent of its total revenues in 2000.

Marriott also identifies the importance of business process redesign as a result of Internet technologies. A delay in feeding the proper hotel rates onto the website could lead to conflicting rate quotes and ultimately frustrated customers. New processes now allow global travel agents, 800 numbers, the website and individual hotels to quote the same rates.

Marriott is also testing Intranet/extranet applications. By the end of 2000, the company’s managers and franchisees will be able to access a website...
supply store, allowing suppliers to hook up with individual hotels. Members will be able to buy any supplies necessary to run a Marriott hotel.26

While the Internet was introduced as a disintermediating force, displacing large numbers of traditional travel agencies as customers arranged their own reservations, it is giving rise to a new generation of fewer, more specialized intermediaries. Routine, commodity travel customers may bypass an intermediary, but consult a professional for special occasions to ensure a memorable experience. As the Internet decreases the need for intermediaries, distribution costs decrease.

Web services for individual travel include Travelocity, Preview Travel, Expedia Travel, Hotel Reservations Network, Quickbook, Disney World, and Internet Travel Network. Priceline allows customers to name the price that they are willing to pay for hotels and other products and services. It does not disclose the name of a hotel or brand to a buyer until after the buyer commits to a non-refundable reservation, asking only the city and class of hotel the buyer desires.

The Internet goes beyond customer segmentation to marketing to individual customers, allowing customization not available using traditional distribution channels. The auction phenomenon has captured the attention of hotel owners and managers fearing a dilution of average rate and revpar. These channels are effective as a medium for selling perishable room inventory during off-peak periods. A room sold at a decreased average rate will make a greater contribution than an unsold room, enhancing revpar. Customers continue to look for brands with which they are familiar, giving branded hotels an advantage over non-branded properties.

**Starwood stresses visual**

In March 2000, Starwood Hotels & Resorts Worldwide announced the use of iPIX, Internet Pictures Corporation, as its solution for visual content for its websites. According to Doug Stone, vice president of interactive marketing for Starwood, the Internet has emerged as a mission-critical facilitator of e-business strategies for the hotel industry. Starwood believes that iPIX will enable the organization to leverage the power of the Internet by adding rich visual content to websites, and travel portals. It will also send the content to customers and travel agents, improving the organization's online presence in the industry.

Starwood also designed the Starwood Preferred Guest frequency program in 1999, a website with the capability to offer its members a personalized web page. A personalized profile with historical information on hotel visits and award redemption as well as current promotions and program terms and conditions are among the many types of information that will be available to the members. Starwood's
customer relationship management will be enhanced through the tailoring of its promotions to customer's specific interests, resulting in increased guest satisfaction and loyalty.

IBM's Travel and Transportation Industry Solutions group recently partnered with InfoGenesis, point of sale solution provider, to install Revelation in several resorts and cruise lines. Revelation is point of sale software designed for hospitality operations. Royal Caribbean International will use Revelation to handle all food, beverage, and retail operations throughout 3,200 passenger cruise ships.

La Quinta Inns, a Dallas-based lodging company, recently announced its plans to fully automate its purchasing process, streamline billing, and improve communications between departments and with vendors. A project for new e-procurement software is scheduled for 2000 and will cost close to $2 million.

Collaborative technology facilitates e-mail and calendaring infrastructures. In mid-1999, Hilton Hotels Corporation implemented a Lotus Notes/Domino platform to aid in the company's building of an e-business foundation. With this new platform, Hilton expects to speed up the development of applications for web collaboration and e-commerce.

Competitors collaborate

The Internet is also changing the relationships between competitors. Recently, Hyatt Hotels and Hilton Hotels detailed plans for a collaborative arrangement to consolidate their online offerings and develop e-procurement strategies. Hyatt is considering e-procurement strategic alliances with other hotel chains and even with institutions outside the hospitality industry.27

The Internet brings fundamental changes to the hotel industry, and addresses key needs of the industry, including the need to expand its customer base from a local to a global reach; achieve global connectivity of worldwide reservations offices, sales offices, and hotels; develop common databases and learning communities to allow sharing of best practices and customer profile and preference information; and achieve standardization to provide consistency in guest services and build brand equity. Some of the organizational issues that may facilitate the transformation of companies toward an e-business model need to be considered.

Many companies are new

Today's successful e-businesses, with the exception of very few companies such as IBM, are new entrants into the marketplace. Because new start-up companies have no legacy systems or old habits, there are very few hurdles for them to overcome. Existing companies may find challenges in competing with e-business competitors, therefore requiring the reengineering of these firms to radically change business strate-
gies on all levels. According to Oliva, a shift from a traditional business to an e-business requires "fundamental changes in management thinking and behavior."

Legacy systems, assets, and corporate cultures hamper existing firms. Although there is an increasing slope of Internet technology adoption in established organizations, it has been relatively slow because companies struggle to fit it into their processes. Organizations can be faced with several barriers to e-business transformation, also called the "e-Wall" and illustrated in Figure 1. The breaking down of the e-Wall is believed to be the critical success factor for an established company to become an e-business.

Although there is a growing amount of literature on the technical and operational aspects of Internet technologies, there is little research on why some organizational orientations are better than others in adopting and implementing e-business models. It appears that, to date, no researcher has attempted to identify the organizational orientations affecting the infusion of e-business into an organization's business practices. Business process, market, and learning organizational-level orientations can help existing companies make the transition to e-business.

Integration is vital

E-business requires high levels of information sharing and integration among partnerships, whether internal or external to the organi-

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**Figure 1**
The E-Wall for existing organizations

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zation. Some researchers have raised the need for advanced network organizational forms to address the business trends for the 21st century. These organizational network structures are based around horizontal and cross-functional business processes inside and outside the organization. Network organizations can extend business processes across the entire value chain.

Business process orientation is defined as the degree to which a company is focused on business processes and cross-functional activity. The new e-business model couples Internet technologies with business process redesign techniques to transform key business processes, a blend of TQM, reengineering and organizational knowledge and learning as leading principles. The competitiveness of e-business companies "places a premium on the swift and flawless execution of processes." Hammer and Stanton contend that simply automating a business process using Internet technologies merely "advertises its flaws."

A process-oriented organization has a culture that accepts and adapts to "continuous change and improvement, teamwork experience and the customer focus." An approach to becoming an e-business is to "examine all aspects of your company's current business processes and determine which e-business technologies can create the best and most cost-effective e-business strategy for your company." Only when information technology and business processes become fully integrated can an organization emerge into an e-business.

As an initial phase toward e-business, organizations in the hospitality industry can define the value-adding business processes as the foundation of an e-business model. The implementation of Internet technology without regard to processes can create chaos and lost investments.

**Innovation permits change**

E-business is creating a more complex and competitive marketplace, pressuring existing organizations to anticipate and respond more quickly to market changes. Some business leaders believe that an innovative organizational culture adapts more readily to change. Many theorists and practitioners contend that innovativeness exists only when organizational learning continuously takes place.

The phrase, “learning organization,” has existed in the literature for several decades. Peter Senge popularized the term in the 1990s; however, other writers have made significant contributions to this topic. Senge defines systems thinking, team learning, shared vision, personal mastery, and mental models as the elements of a learning organization. Systems thinking is a primary discipline for viewing "the whole picture" and the interrelationships between the various parts of the organization. Senge's five disciplines can generate an organization where all lev-
els focus on the same goals, trust each other, complement each other's strengths and weaknesses, and produce results that succeed in the marketplace.

The distinction between the learning organization and organizational learning is not always clear in the literature. Organizational learning can be viewed as the processes used by organizations to acquire, disseminate, interpret, and file in memory new knowledge from its external and internal environments. The learning organization is one which is skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights. This organization creates the culture and structure and provides the mechanisms that enhance learning.

Organizations that are learning oriented have employees who can put aside old habits and adopt new practices, learn to be open with each other, form shared strategies, and work together to achieve the strategies.

The transformation of business processes, coupled with new technologies and relationships, can be enhanced through an organization's ability to learn faster than the competition, specifically new entrants to e-business. Learning is considered the most important organizational resource. Baker and Sinkula conducted empirical studies on the effects of learning and market orientation on organizational performance and found that a superior learning environment produces better performance outcomes.

Several researchers have identified the orientations or cultures that generate organizational learning and, consequently, innovation. Hult defines team, systems, learning, and memory orientations as the degrees to which organizations behave as market-driven learning organizations. Other authors view learning orientation as openness in the organization, a shared vision, and a commitment to learning and development.

Learning is continuous

An orientation toward the customer, market, or external environment provides a source of new ideas for change and improvement, the foundations for e-business. Organizations are utilizing market intelligence to become more competitive in today's knowledge-intensive economy. To sustain a competitive advantage, companies have realized that they need to continuously acquire and use knowledge about their customers, markets, competitors, and partners when developing marketing strategies.

Knowledge utilization requires that organizations strive to design cultures, structures, and business processes favorable for constant learning. An innovative culture is one which is believed to facilitate the effective use of information and knowledge. A culture that promotes and encourages change and innovative behavior is believed to increase the communication flows.
inside and outside the company and to increase the utilization of knowledge. Network structures, which are expected to be dominant in an e-business, require a constant flow of external as well as internal information.

Market orientation is considered the foundation of organizational learning. An orientation toward learning facilitates the assimilation and infusion of new ideas and innovations. Stronger market and learning orientations are associated with stronger organizational innovativeness and a stronger capacity to innovate.

An e-business can harness its internal competencies when combined with an ability to continuously learn and diffuse knowledge about its external environment. The rate of organizational learning determines the company’s ability to anticipate change. When combined with market orientation, the company measures itself against the market, a necessity for surviving in today’s e-business environment.

Companies that are most successful at implementing an effective e-business strategy are flexible, adaptable to continuous change, speed responsive, and customer focused. They are able to adopt a new business paradigm based on market-focused organizational learning and business process orientation, cultural characteristics needed for an e-business. A company that can develop the use of e-business as a core competency will have a strong competitive advantage within its market.

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