

SECTION 3

The Hospitality Service Delivery System

Design systems that allow you to do the job right the first time. All the smiles in the world are not going to help you if your service is not what the participant wants.

—Joseph J. Bannon, Hospitality academic, educator, and author.

Chapter 9 Communicating for Service

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CHAPTER 9

Communicating for Service

HOSPITALITY PRINCIPLE: GLUE THE GUEST EXPERIENCE ELEMENTS TOGETHER WITH INFORMATION

Like a human being, a company has to have an internal communication mechanism, a “nervous system,” to coordinate its actions.

—Bill Gates, chairman and co-founder, Microsoft Corporation.

If you make customers unhappy in the physical world, they might each tell 6 friends. If you make customers unhappy on the Internet, they can each tell 6,000 friends.

—Jeff Bezos, founder, Amazon.com

Communicate everything you can to your associates. The more they know, the more they care.

—Sam Walton, founder, Wal-Mart

LEARNING OBJECTIVES

After reading this chapter, you should understand:

- The importance and uses of information to hospitality organizations.
- Ways in which information enhances the service product, setting, and delivery system.
- The sophisticated information systems that hospitality organizations are now using and their advantages and disadvantages.
- The impact of the Internet on communication with customers and employees.
- The hospitality organization itself as a large information-processing system.

KEY TERMS AND CONCEPTS

managing information

information system

economic ordering quantity
(EOQ)

internal customer

integrated information system

cross-sell

daily count

decision support systems (DSS)

data mining

information overload

organization as an information
system

THE CHALLENGE OF MANAGING INFORMATION

A traveler was waiting for her breakfast to be served at a business hotel. Within a reasonable time, the server brought her eggs and bacon. She looked at the bacon and realized it was too undercooked to eat. She moved it to the side and proceeded to eat the rest of her meal. During a routine visit to the tables, the manager asked how the breakfast was. All right, she said, except the bacon was not cooked properly. The manager apologized and went on to another table. A short time later, the server appeared and asked the same question. The second time the traveler was annoyed. Not only did the restaurant do nothing about the poorly cooked bacon; the manager didn't even share the information with the server so that he would know of a problem with one of his customers.

At another restaurant, a guest wants to order a bottle of wine and is presented with a wine menu longer than some novels. Hundreds of options are provided, choices of different varietals from regions around the world. After pretending to study the list for a period of time, the guest simply gives up. Frustrated, he decides to just have water with his dinner. The frustration and embarrassment of not knowing what to do with the information available diminishes the quality of the dining experience and, at the same time, the restaurant loses a profitable sale.

Both situations illustrate the challenge of **managing information**. In the first case, the manager did not communicate important information to the server to alert him about a possible problem with one of his customers. The manager had the information but did not communicate it, so the server was unable to make the dining experience better. In the second illustration, the guest was provided with a near encyclopedia of wine, but he could not use any of it.

Creating a system that manages information effectively is one of the most important and challenging issues facing any hospitality organization. Information is data that informs, and an **information system** is a method to get data that informs to those who need to be informed. A well-designed information system gets the right information to the right person in the right format at the right time so that it adds value to that person's decisions. The right person in hospitality organizations could be an employee, the manager, the guest, a supplier, a combination of all these people, or many others. Information that does not add value to either the guest's or the organization's decisions is useless. Informing a guest standing in line waiting for a table at a Ralph's Restaurant that they had plenty of empty tables last night is not only useless, it is infuriating. Similarly, receiving a free-beverage coupon in the mail the day after the offer expires does not enhance the potential guest's fondness for the sending organization.

Informing the Guest

Since service is by definition intangible, the information that the hospitality organization provides to help the guest make the intangible tangible is a critical concern of the information system. What information should the organization provide, where, in what format, and in what quantity, in order to help create the experience that the customer expects? If the experience is a formal dinner, the restaurant should organize all the information it provides to the patron to cue the perception that this is a formal-dining environment, and an excellent one at that. The restaurant should be set up to look appropriate for a formal-dining experience. The chef should have the clean white coat and chef's hat that announce, "I am a chef, not a mere cook; I create a fine-dining experience, not merely cook food." The silverware and plates should be elegant, and the rest of the environment should communicate the message *fine-dining experience*. While the focus of a fine-dining experience is usually the food, the total experience includes everything from the food, to the environment, to the delivery system that provides the service. The restaurant must manage the many bits of information that the guest tastes, touches, hears, sees, and smells to be sure that each one contributes to helping that guest define the intangible elegance of a fine-dining experience in the way that the restaurant wants the guest to define it.

Cues Communicate

Regardless of the hospitality experience being offered, all informational cues in the service setting should be carefully thought out to communicate what the organization wants to communicate to the guest about the quality and value of the experience.¹ If the experience is themed, all cues should support the theme and none contradict or detract from it. The less tangible the service, the more important consistent communication will be. By recognizing that information is the glue that connects the service product, the service environment, and the delivery system together to make a *whole* experience for the guest, the organization should use information to make the guest experience seamless. The organization can manage its information and use the available information technology to tie together all the elements of the guest experience to ensure that the guest enjoys it and will want to come back. Similarly, an organization that looks at each manager and employee as a customer for its information can design the organization's information system to facilitate the optimal flow of useful information to those people. Information systems can even connect all parts of the industry supply chain so that vendors, suppliers, and distributors can know what they need to provide, in what quantities, and when, all to ensure that the organization can deliver a seamless guest experience.

Adding Quality and Value through Information

Organizations can use information in many ways to add quality and value to the service experience. Occasionally, information technology becomes so important that it can even transform the organization itself.

Information can help employees personalize the service to make each customer, client, or guest feel special. For example, having caller ID to allow the service representative to address the customer by name when answering the customer's phone call adds a special touch to the experience. Information and information technology can improve the service. While a barcode on a retail product or an RFID (radio frequency information device) on a gaming chip provides the basis for recording the transaction, it also provides a wealth of other information that enhances the service experience for both the organization and the customer. For casinos, having a real-time record of which customers are betting what provides for more accurate player tracking, better bet recognition, and labor-cost savings.

With an RFID reader at each table, casinos can track bets, ensure that customers get the comp meals and rooms they deserve, and check to see if any player is using a banned betting system.² Just as retail stores can track inventory and sales patterns with these information systems, casinos can track players. Even more interesting is the opportunity to keep track of what types of products or bets the customer is buying or making so that options can be suggested or offered as an enhanced service. If you buy a book online from Amazon.com, the online retailer may let you know about choices others buying the book you bought have made, track previous searches, or even offer new books on the same subject the next time you visit its Web site. Also, cross-selling between organizations is possible. If you purchase an airplane ticket using any of the many Internet retailers, you will be presented with opportunities to purchase an array of other services, including hotel rooms and rental cars.

Finally, information technology can transform an organization or even an industry. Online bookstores and travel Web sites, customized print-on-demand book publishers, e-book readers, social networking sites, and the amazing array of applications on smartphones are all transforming their respective industries in important ways. The easier, cheaper, and faster provision of information and services for customers made possible by advancing information technology, especially in innovative Web-based applications, has rapidly changed the dynamics of many industries. When Google became a verb, it meant the end of the encyclopedia business. When JetBlue offers those whom it twitters special discounts on airfares, the rest of the airlines will have to respond to this competitive initiative or risk losing contact with an entire segment of customers.

Radio frequency information devices (RFIDs) on gaming chips allow casinos to know where, when, and how much people are betting, giving management a wealth of information that can be used to create greater efficiencies in the casino and to enhance the guest experience.

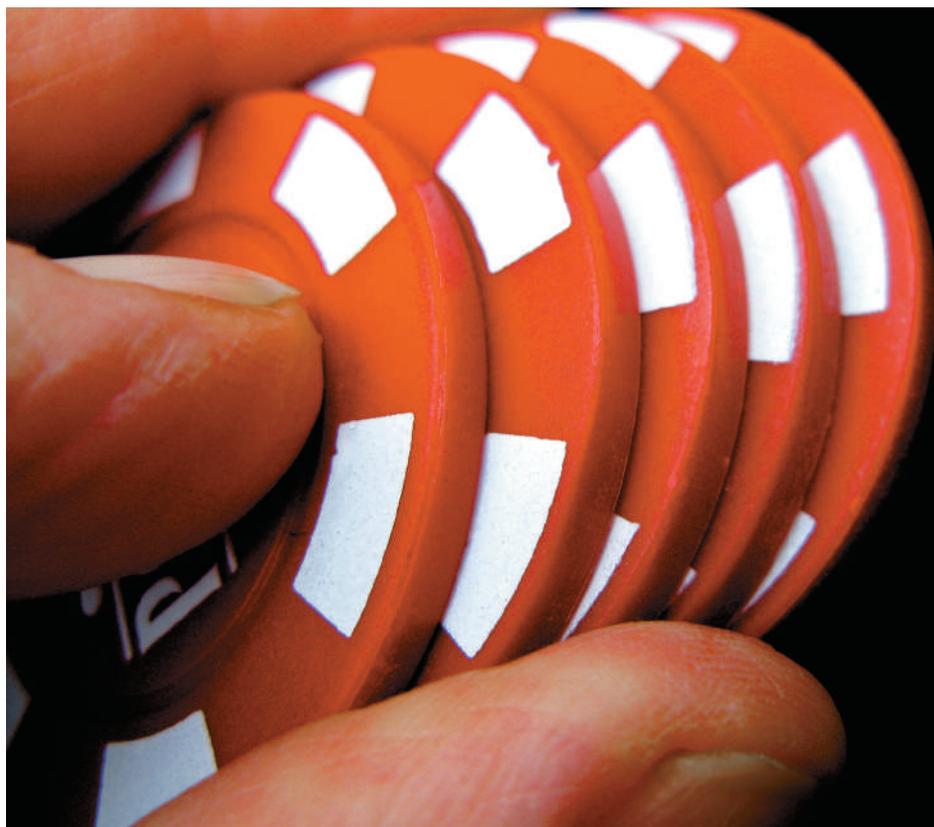


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New Information from Virtual Worlds

Even more dramatic has been the technology that enhances information quality through the creation of virtual worlds, where customers can have an experience without leaving their homes. Rather than look at a two-dimensional picture, guests can take virtual tours on Web sites like synthtravels, a virtual-reality travel agency.³ It, and others like it, can arrange virtual tours of art museums, VIP homes, and even red light districts. Second Life and other massive multiplayer online games offer a window into online virtual worlds, where people can gather, buy, sell, and generally do the same things that they do in the real world. Starwood used Second Life to test market the design of a new concept hotel, Aloft, and to observe how avatar visitors used the space and furniture.⁴ Indeed, Second Life can be so real that one writer discussed the dilemma when a man's avatar married a woman's avatar in his Second Life virtual identity while still married to his real wife. The article asked the question "Is this man cheating on his wife?"⁵ Virtual experiences have grown so popular that there are protests when companies eliminate or modify them in ways that are unpopular with their players. Disney, for example, closed down its free Virtual Magic Kingdom in 2009 and immediately was inundated by people representing the 1 million avatars who wanted to stay in the virtual theme park.⁶

Getting Information Where It Needs to Go

The challenge for hospitality managers, then, is to gather the data that can inform, organize the data into information, and distribute that information to the people—both customers and employees—who need it just when they need it. Hospitality organizations that are effective in getting information to where it needs to be recognize that providing information is in itself a service to guests, often as important as the primary service itself, and a necessity for employees.

Just as it is important to develop information systems that get the right information to the right person at the right time, it is equally important to develop systems and procedures to prevent the wrong information from getting to the wrong person at the wrong time. Every organization needs a plan that not only protects sensitive information from unauthorized access but also details other information rules, such as who can say what to whom when a major disaster strikes, who will talk to the press when a guest complains publicly, or who is the spokesperson for the organization on key decisions and policy. When information is not managed well, the information that is in the public domain will confuse and not inform. When statements that shouldn't have been made are made, they may even lead to law suits. Employees need to be taught what not to say as much as what to say. In this era of instant communication, they also need to be reminded of what information they have that should not be shared on their social networking site.

The whole challenge of information systems is to figure out exactly how to provide only the required information just when and where it is required. Designers of information systems must, therefore, identify the information needs of both guests and hospitality employees in regard to all three components of the guest experience: the service product itself, the service setting, and the delivery system. Let's talk about information as it relates to each of these elements.

INFORMATION AND THE SERVICE PRODUCT

Information about services offered is usually found within the environment rather than as part of the service product itself. Chapter 3 showed the many ways in which the hospitality organization can plant cues or information in the service setting. Such "tangibilizing"

leads guests to favorable judgments about the quality and value of the guest experience. Just as doctors hang diploma certificates on the wall, restaurants display food reviews, and hotels display American Automobile Association ratings, all in the effort to say to guests, “This experience will definitely be good and may be a wow.” Similarly, sensory information can communicate a message about the guest experience. The smell of bread baking, fresh flowers, or even antiseptic will communicate information to guests that can help make an intangible experience tangible. We shall presently speak in more detail about information in the service setting.

With the dramatic growth of the Web and its use by hospitality guests for making reservations, co-producing experiences, and giving feedback, there is increasing concern with ensuring that the self-service capabilities of Web-based services meet customers’ expectations. After all, it can be just as frustrating for a guest to wait for a Web page to load as it is to wait for the phone to be answered or to be served in a restaurant. There are many aspects of guests’ use of self-service technologies for hospitality organizations to plan for and manage. Besides the obvious things like “do they work?” “will they work fast enough?” or “will they work consistently?” managers must think through and plan for the different users’ needs, wants, expectations, and capabilities just as they would with any aspect of the hospitality experience.⁷

Information as Product: FreshPoint

A good illustration of a sophisticated information and decision system properly used is that developed by Orlando’s FreshPoint. FreshPoint sells more fresh fruits and vegetables to central Florida restaurants, hotels, theme parks, and other hospitality customers than all its competition combined, and its information system is one of the big reasons why. FreshPoint has developed its information system so that it can accurately predict what all its customers will need and when they will need it. In effect, FreshPoint has moved beyond the business of supplying fruits and vegetables into the business of managing its customer inventories. Its computerized models are so accurate that FreshPoint frequently knows better than its customers what they need, how much, and when. This is important to FreshPoint because its Orlando location is about a week away from its suppliers, and fruits and vegetables are extremely perishable. Since freshness is critical to most chefs, effective inventory management is a competitive advantage. Through the capabilities of its information system, FreshPoint is able to become responsible for the freshness and adequacy of fruits and vegetables for its foodservice customers. For one large customer, FreshPoint has taken over the management of more than 50 percent of its inventory, and its purchasers are no longer required to physically place those orders.

FreshPoint uses what is called an **economic ordering quantity (EOQ)** model to determine the optimum number of units to reorder. Based on the EOQ model, the customer’s inventory is monitored, future demand estimated, and orders generated automatically via EDI (Electronic Data Interchange) for next-day delivery. Although most of its customers do not have the technical capability to connect to its inventory management system through its EDI, FreshPoint predicts demand patterns for them anyway and uses its decision models to monitor called-in or Web orders for accuracy and completeness. When customers call in or log onto its online ordering system, they are prompted to order items they typically request, alerted when their orders are not large enough to accommodate a big weekend or large convention, advised when they made a mistake on quantity, and made aware of special deals and products. With this information in its database, FreshPoint can call and help its customers avoid a problem before it happens. Work is also underway to allow users to simply select menu items, and the system



Photo courtesy of FreshPoint, and Kent Shoemaker.

Although FreshPoint delivers food items to its customers, its competitive advantage is the information services it supplies to help its customers order the right items at the right time in the right quantities.

will both determine what ingredients they need *and* determine the most efficient way for the customers to receive the product. FreshPoint's market share attests to the appreciation its restaurants have for the help FreshPoint's information system provides.

Giving Employees the Information They Need

Employees also need relevant, timely, and accurate information to do their jobs effectively. When you consider information to be a service product, the employee is an **internal customer** for that product. For this internal customer, the service provided is the delivery of the information that the employee needs for making decisions about how to satisfy external customers. This information-as-product is provided to the internal customer by an employee or information-gathering unit acting as an internal "service organization."

For example, if your hotel is hosting a conference with more than 10,000 attendees, and they are all ready for dinner, your employees need up-to-date information to deliver exceptional service. The Gaylord Opryland Resort and Convention Center uses an **integrated information system** to help employees serve guests at their four full-service restaurants more effectively. Using a small hand-held wireless device, employees find out what tables are available, can clear and close any table, or can update seating arrangements from anywhere in the four restaurants. Employees can get immediate information on wait times, can find out if a table's food has been ordered, if a quoted wait time is about to expire, or even if it is a repeat customer's birthday. All this information allows employees to be more efficient, as well as deliver better service. The information provided to employees allows them to fulfill the company's mission. As Rickie Hall, the senior vice president and chief information officer says, "It's all about the guest service."⁸

Providing information is the service product for many internal employees/customers, and all hospitality organizations seek to provide it as effectively and efficiently as possible. Indeed, the entire movement toward frontline employee empowerment that

characterizes benchmark hospitality organizations depends upon employees having easy access to needed information. Without some systematic way to provide it, empowerment would be impossible. Managers and empowered employees alike must have information to make good decisions and to measure the results of their decision-making activity.

INFORMATION AND THE SERVICE SETTING

The service setting and its features and aspects can provide several kinds of useful information for guests.

The Environment and the Service

First, the service setting can be a source of information related to the service itself, and that information must be efficiently and effectively provided. If the tangible product in the guest experience is a quick-service meal, the patron needs to know how to get quick service, which quick-service meals are available, and when the meal is ready. Signs are therefore placed in the service environment to facilitate quick customer access to the order taker, menus are posted in easy-to-find places to aid the diner in selecting the meal, a picture of what the meal looks like may be located next to each menu item so that the diner knows what the menu item is, and the customer order number may be displayed on an overhead video screen to let the customer know as soon as the order is ready.

Many hotels have attractive graphics on their Web sites showing room interiors or offering panoramic 360 degree views of a sleeping room or other places in and around the hotel. Some even allow the site visitor to take a virtual tour of the hotel and the surrounding destination. These visuals of the setting help to make the service tangible for potential guests.

Many hotels provide images of their rooms on-line so guests can see what they are booking.



Image courtesy of Marriott International.

The Environment as Information System

In a larger sense, the service environment itself can be thought of as an information system of sorts by the way it is themed and laid out. Not only does the environment provide information on the location of various points of interest, but the environment itself becomes part of the service and therefore influences the customer's perception of the service.⁹

The information embedded in the environment can enhance or detract from the service experience. This information can be in the form of carefully located walls and shrubbery that tell guests where they should not go and paths that tell them where they should. Simple orientation maps tell customers where they are, and arrows and signs allow customers to obtain the information they need to fully enjoy the service experience.

Casinos have long known this, and their environments are carefully designed to send the desired messages to the customers. Interiors of casinos are full of information. Signs are carefully located to quickly show where different restaurants, bars, the theatre, and the night club are located. In addition to signage, casinos use environmental stimuli—such as architectural design, colors, furnishings, textures, lighting, ceiling height, and aromas—for both functional and marketing purposes.¹⁰ Casinos know that the longer they can keep customers inside their establishment, the laws of probability will ultimately lead to financial success. Casinos are designed not only to enhance the customers' experience, but also to present information that keeps them there longer.

Customer-Provided Information

Guests do not need to wait for companies to provide information to them. There are now many sources of information available to customers to help evaluate a hospitality experience before they decide to have it. In the previous chapter, we listed a number of Web sites where customers post information about their experiences to share with anyone who wants it. There are numerous other online sources for customers to post reviews and find information on nearly any hospitality organization that exists in any part of the world: their prices, service quality, quality of destination attractions, and anything else the inquiring visitor might wish to know. New sites are being created all the time in response to customers' demands for this sort of information. Figure 9-1 provides a list of some—but certainly not all—Web sites.

FIGURE 9-1 Some Web Sites Hospitality Customers Can Use

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Guests Sharing Information with Other Guests

Fodders: User-generated reviews of hotels and restaurants

Consumeraffairs: Consumers can give their opinions and try to get needs met

Consumerist: Spotlights poor customer service

Cruisecritic: Reviews boat by boat and port by port

IgoUgo: Travel advice, deals, reviews from other travelers

Ripoffreport: Gives consumers a chance to fight back against erring service providers

TripAdvisor: Reviews lodging places, travel packages, and other travel services

Virtualtourist: Source for user-generated travel content and reviews

World66: Open content travel guide, with user-posted information on destinations from around the world

(continued)

FIGURE 9-1 Some Web Sites Hospitality Customers Can Use
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 (continued)

Finding Deals or Comparing Prices

AirlineConsolidator: Sells unsold seats from airlines at steep discounts
 Bingtravel: Searches for prices and offers predictions on whether to buy now or wait
 Ctrip: For information on hotels, flights, and cars in China
 Cheaptickets: For plane tickets, hotel rooms, car rentals, events, and cruises
 ebookers: For flights, hotels, car rentals, cruises, and travel insurance
 eLong: For flights and hotels in China
 Expedia: Travel agency for airlines, rental cars, and lodging
 FareCompare: Search for discounted first-class seats, historical data
 Flyingfees: Compare airline fares with all included fees and extras
 hotels: Search for airfares, hotel deals, and vacation packages
 Hotwire: Offers discounts; supplier not disclosed until after purchase
 Kayak: For both online agencies and suppliers
 lastminute: Search for last minute deals
 Opodo: Travel agent search site
 Orbitz: Travel agency for airlines, rental cars, and lodging
 Priceline: Allows travelers to bid on fares
 Shoretrips: Links and reviews of shore trips
 SideStep: Searches online agencies and suppliers
 travelocity: Travel agency for airlines, rental cars, and lodging
 travelzoo: Search to find best air fares from other search engines
 Usaca: Sells unsold seats from airline at steep discounts
 Yapta: Notifies of price drops and refund possibilities
 zuji: Travel guide and engine for flights, hotels, rail travel, cruises, and packages in a number of Asia Pacific countries

Information Tools for Guests

away: Provides ideas and recommendations based on user-specified travel interests
 cdc.gov: Center for Disease Control posts cruise-ship inspection scores
 DisneyFamilyTravel: Go-to source of family-oriented travel
 Flightstats: Notice of flight changes, cancellations, or delays
 frommers: Travel guide intended to give a local's perspective on worldwide destinations.
 goby: To help find area attractions
 Gusto: Hotels, mostly North America-centric
 HotelShark: Composite summary of hotel reviews
 IgoUgo: Provides background information on person writing review
 lonelyplanet: Provides reviews and information for responsible tourism
 maps.google: Provides information and driving directions
 maps: Provides information and driving directions
 Mytravelguide: Source of travel information around the world by city
 OpenTable: Finds restaurants and makes bookings

realtravel: Source of travel information for the United States and Canada
 Roadfood: Lists memorable eateries along highways and back roads of America
 roadsideamerica: Source of information for odd, strange, or otherwise peculiar destinations around the United States
 trails: Information and travel guides for hiking and biking
 travbuddy: An online community for meeting other travelers and sharing travel reviews, photos, and blogs
 Travelmuse: Online travel planning Web site
 Trazzler: A Web site specializing in local travel opportunities
 Triplt: Puts all confirmation numbers in one document
 TripWiser: A site for users to share travel interests, experiences, plans, and advice
 Tripwolf: A worldwide travel guide
 uptake: A travel site that allows users to ask travel questions and find answers and recommendations based on their preferences
 Walkscore: Walkability of more than 2500 neighborhoods
 Wayn: Lifestyle and travel social network
 Whereivebeen: A Facebook application that marks where users have traveled on a color-coded map
 Zoomandgo: Reviews and video clips of hotels and vacations

Companies definitely need to pay attention to guest-provided content. Because potential customers are making purchase decisions in part (and sometimes entirely) based on this information, technology has allowed “word of mouth” to travel far beyond what it ever could even just one decade ago. Some people habitually evaluate anything they do. Others only post comments when something particularly good or, more often, particularly bad happens. A bad customer experience can hurt a company more than losing a customer or those friends whom the customer tells about the experience: It will likely lose many potential guests with Internet access who are trying to find information about the quality of its service. In this information-rich environment, many hospitality organizations have created new monitoring units whose only responsibility is to track and correct, if necessary, what is being said about the company on the Web.

INFORMATION AND THE DELIVERY SYSTEM

Finally, and perhaps most obviously, information is required to make the service delivery system work. That system includes both people and the processes by which the service and any accompanying tangible product are delivered to the customer. Here again, the nature of the service product and the delivery system unique to that product and guest will determine what the information system ideally should be. If the end result of the service is a properly prepared hotel room, the information system needs to be set up in a way that communicates to the front desk agent that the room is properly serviced and ready for a guest. Such an information system could be as simple as having the housekeeper bring the room key back to the front desk only after the room has been cleaned. In this way, no guest could be checked into a dirty, unprepared room because the key wouldn’t be at the desk.

Really Knowing Your Customers

Many hotels seek to provide more than just a simple clean room, and their information systems are designed to provide this extra level of guest service. The Wyndham Hotels and Resorts uses data warehousing applications to allow customers enrolled in its frequent-guest programs to use its Web site to configure rooms to their liking. Members of Wyndham ByRequest can log on and create a detailed guest profile of their preferences (what floor they like, nearness to elevator, pillows, drinks, etc.). This information is combined with members' guest history data to customize and thereby enhance their experience at any Wyndham hotel. This technology allows frontline employees to access comprehensive guest information stored in Wyndham's database. Housekeepers are empowered and enabled, for example, to customize rooms and amenities for individual guests without the need of supervisory intervention or direction.¹¹

The Ritz-Carlton Hotels also has a similar database, called *Mystique*, for its guests. It goes further, however, as it asks its employees to listen for and record any information that can be used to help The Ritz-Carlton Hotels improve or add value to a guest's experience. For example, if a floor sweeper overhears guests talking about celebrating their anniversary, the sweeper is supposed to pass the information along so that the hotel can take some notice of this special event. The employees help deliver the wow Ritz-Carlton experience by inputting useful information into the organization's information system.¹²

Delivering Freshness

In restaurants, the information system can improve service delivery by including in the database information about the freshness of the food products used to prepare the meals. Chefs could know how fresh an ingredient is on the basis of its freshness date. Labels with date of production or purchase on food products, "day dots" on fresh-food items, and online inventory systems are all examples of how an information system can be designed to ensure that the chefs have the information they need to make the right decisions about using or not using the available ingredients to produce the fresh meals they are responsible for preparing. Though the information is related to the product—the ingredients—and to the service delivery system, its primary purpose is to ensure that product delivery is "just-in-time"—available fresh when the chef needs it.¹³

Ensuring freshness has another dimension that information systems can help manage: food safety. With the increased emphasis on food safety caused by disease outbreaks linked to fresh food, traceability to identify where fresh fruits and vegetables were grown and processed has become an important part of the information kept on the food supply chain. Some growers place RFIDs on their shipments so the buyer can trace the source back to the specific location using a GPS. Buyers can even view the location, using geographic information programs like Google Earth. In one instance where a contaminated supply of vegetables was found, a Google Earth picture of where the produce was grown showed a barn next to the growing field that housed contaminants that had spilled onto the field.

Information on Service Quality

Perhaps one of the more important uses of service delivery information systems is in the systematic gathering of information on service quality. Acquiring this information, organizing it into a usable form, and disseminating it to managers and service providers is

critical to ensuring that service delivery and other problems are identified and resolved. Inputting the fact into the information system that a guest is annoyed because she is allergic to the feather pillows typically used in the rooms is important, but the information is worthless unless the manager and other employees responsible for guest satisfaction are able to access that same information promptly. Finally, the information system must be designed so that the person concerned follows up on this information to ensure high service quality in the future.

Information to the People

The information system can be used to ensure that all the people involved in delivering the service have the information they need to do their jobs in the best possible way. Here is where the most powerful applications of modern information technology have been developed. Providing the hospitality employee with the information necessary to satisfy and even wow the guest is an effective way to add value to the guest experience.

At Hyatt

Every employee phone at the Hyatt hotels has a caller ID system that allows any employee to greet the caller by name when answering the phone. To a hotel manager, this information “allows the guest to experience a higher level of guest satisfaction and find greater value in the hotel’s service.” To the guest, it’s “a nice personal touch.” The technology provides information that was previously unavailable; it gives the service delivery employee the opportunity to add quality and value to the guest experience. The system should be designed to accommodate multiple users who want the same information at the same time. If simultaneously (1) a telephone operator is attempting to find a particular guest for a telephone caller, (2) the front desk agent is trying to find the name of the same guest on the database, and (3) the restaurant is trying to bill the same guest for tonight’s meal, the need for multiple access to databases becomes obvious. As the Wyndham example showed, even the frontline housekeepers need access to the database to do their part in providing a guest experience that exceeds expectations.

High Tech Becomes High Touch

In many other situations, information systems make it possible for the organization and its employees to provide service to customers quickly and efficiently. As technology has advanced and customers have become accustomed to self-service kiosks in various venues (e.g., airports, rental cars, retail stores), self-serve devices have become increasingly accepted in hotel environments, and even in some of the luxury establishments.¹⁴

The use of technology is a challenging issue for hospitality organizations, as they want to capture the benefits and economies that technology offers without losing the human contact that is so vital to the guest experience. The key, not surprisingly, is giving guests what they want, need, and expect.

Says Pierre-Louis Giacotto, General Manager of the Sofitel Chicago O’Hare, “I believe that self-service in luxury and higher end establishments can dilute customer service if that is the only method offered. However, if technology is in addition to the traditional way of checking in, I don’t see a problem at all.”¹⁵ Walter Brindell, Vice President of Rooms for Hyatt Hotels and Resorts, echoes the point: “You have to have both, depending on your market. Some customers need personal interaction and others prefer the availability of technology that they can control, select, and orchestrate themselves.”¹⁶

Hospitality organizations therefore try to use as much technology behind the scenes as they can, primarily to save on back-of-the-house labor costs and give the customer a choice of service options in the front of the house.

Technology for Expertise

In many ways, information technology now allows the hospitality organization to provide expert skills without paying experts to provide them. A concierge who knows every good restaurant in town or how to get last-minute tickets to a sold-out play is a valuable hotel asset and is generally paid accordingly. Acquiring this level of expertise takes time and experience, and the organization and the guest pay for that expertise. On the other hand, if this knowledge is online, through a guest-room Internet connection, accessible through a touch-screen device in the lobby, or even available through an employee who can easily find it in a computerized database, the cost to the guest and the organization of accessing that information is reduced while the quality of the information and the ease of access are increased.

The Web is also making it possible for customers to provide expertise to each other, and guests increasingly want to get this information for themselves. Rather than asking a concierge for the information, they prefer to do a Google search for nearby restaurants and walking tours themselves, ask for suggestions from other guests on Web sites like TripAdvisor and food411, search blogs, or text their friends for suggestions. With billions of text messages sent every day, there is a lot of communication going on besides what the organization itself offers. Guests may use Second Life avatars or access virtual customer environments, which can range from discussion blogs about the organization's ability to deliver the guest experience to product prototyping.¹⁷ This trend has resulted in hotels reducing costs as they do not need to staff as many people at the concierge desk while still providing the service their guests want and expect. Further, it provides an opportunity for hotels that traditionally do not offer this level of service to provide their guests with this information via the Web. There are increasing opportunities for hospitality organizations to use information and information technology to enhance the hospitality experience, or they can enhance the guest experience by providing the guest with easy access to information. The best organizations are constantly seeking them out to enhance their guests' experiences.

Centralized Reservations at Hyatt

Like most hotel chains, Hyatt has a centralized reservation system that all callers reach when calling in for rooms or access via the Web. Hyatt's reservationists have access to the entire inventory of rooms available in all Hyatt properties and can help the caller find a room that best matches the desired price point and time when the caller wants to come. Instead of calling each Hyatt hotel, the person needing a room calls the centralized reservation system and speaks to a reservationist, who offers complete information about how best to meet that person's lodging needs.

Cross-Selling

Even better, from an organizational perspective, is that having the information system set up in this manner allows the organization to **cross-sell** its other products and services. A potential guest calling the Hyatt reservation number for a hotel room can also be offered a room upgrade or other available products or services. The net result of this integrated reservation information system is to ensure that the guest becomes aware of the many options that Hyatt provides. The reservationist can not only sell a room in one location

for one hotel, but is empowered with the expertise to offer hotel rooms for every night at every location the traveler will visit. Travel agents and Web sites do the same type of cross-selling when they book hotel rooms, arrange for rental cars, and offer other services when people call in or log in to make airplane reservations.

The Front and the Back of the House

The hospitality service delivery information system ties together the front of the house with the back of the house. Coordination between those people and operations serving the guest and those people and operations serving those who serve the guest is critical in providing a seamless experience for the guest. The guest does not care that the communications system between the cook and the server is faulty. The guest cares only about the quality of the overall restaurant experience, and the organization is responsible for serving the ordered food in a timely and appropriate manner.

Point-of-Sale Systems

Point-of-sale (POS) systems have been developed to help managers, servers, and cooks do their jobs better. The server enters the order on a touchscreen or handheld wireless touch screen device, and it is transmitted back to the cook station for preparation. POS systems ensure that the orders are entered in the proper sequence so that the hot foods are served hot and the cold foods are served cold and not the other way around.

Some systems help the cooks do their jobs more effectively, such as by accompanying each order with a display of the recipe and a picture of the final plated meal so the cook can verify if the meal being produced matches the standard.¹⁸ This extra



Image courtesy of Darden Restaurants.

POS systems, like those used by Darden, track a myriad of data on employees, food sales, and financial information.

informational feature lets cooks self-monitor their work; they can review the proper preparation procedures for the meals they are producing to assure a consistent, high-quality meal.

Modern POS systems are so powerful they can provide information that influences almost any dimension of the business. For example, some POS systems can produce financial reports, track individual server performance, determine which menu items are big sellers, track inventory, and even post the nutritional information of different menu items.¹⁹ They can also support strategic decision making. For example, by tracking coupon use and sales, a system can determine whether a promotional campaign is profitable. POS systems also collect and analyze data to make sales forecasts, provide inventory recommendations, and create employee schedules that meet employee preferences and reduce labor costs. Some systems help with guest retention, by identifying lapsed customers and sending them a coupon.²⁰ In short, advances in POS systems are allowing managers to gather and use vast amounts of information quickly and easily. The information they provide can then help managers improve nearly every operational and strategic decision they make.

The Daily Count

Another illustration of how an information system can improve experiences for customers and performance results for the company is a **daily count** system, like the one used at Disney. Every guest entering the park is counted and added to the total in the park at that time. Based upon its extensive attendance database and knowledge of arrival-rate distributions, Disney can accurately predict after the first hour of operation how many guests will come into the park during the whole day. This information can then be used to inform the food and beverage people how much food needs to be taken from central storage facilities and brought into the park's various restaurant and food-service locations, and how many salads, soups, and other prepared food items need to be on hand.

Further, the same data is made available to human resources managers to ensure that an appropriate number of employees are scheduled to handle the total number of guests Disney now knows will be coming into the park that day. Similarly, the supervisors and area managers of the various attractions can access this data to know how many cars, boats, and trains need to be available for their attractions. The first-hour guest count can be used in a number of important decision areas to ensure that the park is prepared to serve all of the day's guests with the level of service quality that Disney strives to provide. This one data source flowing through the information system can be used simultaneously across the entire service experience to improve the quality of the service delivery system, the service setting, and the service itself. The information generated by the system will make the many different experiences a guest will have of higher quality than would otherwise be possible and enables Disney to deliver these experiences with high efficiency and consistency.

The Information Flow between Levels

The last major requirement of the information system, as it relates to the service delivery system, is providing for information flows across organizational levels. This level-to-level flow can be as simple as an employee newsletter or a routing slip, or as complicated as an online, real-time, data-retrieval and decision system. Information can also be provided through a centralized database or intranet made available through computer connections

to all employees, so they can access the specific information they need to interpret corporate policy, identify the dates and places of training opportunities, or the availability of alternative jobs.

All these methods, whether on paper or in electronic form, are ways in which hospitality managers can reinforce the organizational culture, motivate employees, and educate them to enhance the guest experience. Of course, many other communication channels flow up and down between management and employees. For example, employee-of-the-month programs allow the organization to communicate to all employees by example what types of behavior are desired and rewarded. Employee suggestion programs are another way for management to pick up new ideas and other types of information from their employees that let it quickly identify problem areas in the service delivery system. Building an information system into the design, structure, and operation of the hospitality organization is vital to gather and distribute the necessary information in a timely way to manage and monitor the contribution of all parts of the organization to the quality and value of each guest's experience.

DECISION SUPPORT SYSTEMS

With computers collecting so much information across so many aspects of the hospitality business, many companies are finding that they now have vast databases with information on customers and their behaviors. Data come from centralized reservation, POS, and Mystique-type property management systems. As discussed earlier in the Wyndham and The Ritz-Carlton Hotels examples, data also come from customers who voluntarily provide information that can be entered into a database for future reference. It is possible for companies to purchase consumer data containing demographic information and information on past purchasing behavior. Organizations like National Demographics make a business of collecting and providing such data, and some state driver-license bureaus make money by selling information about their licensed drivers. In order to sell targeted advertising, some companies have added "history sniffing" capabilities to their web sites so that they can surreptitiously track what other sites their users are visiting. All these data clearly have the potential to provide more information about one's guests, and what they want and expect from the hospitality organization. But having a lot of data does not mean you have good information. You have to use the data to change how you make decisions, and there are a number of ways technology can help accomplish this task.

Systems that go beyond getting information to the right person at the right time, and actually help improve business decisions, are called **decision support systems (DSS)**. Built into these systems are analytical methods and decision rules that either help a decision maker make a decision or, in some cases, replace the decision maker altogether. An example of a decision system that aids a decision maker would be an automatic warning that signals a manager when an inventory level of a critical product gets low, a computer icon that flashes on a computer screen to warn a cruise-ship engineer that a piece of equipment is heating up or malfunctioning, or a report that alerts a manager if a worker has not received mandatory training within a specified amount of time since she was hired.

A DSS can help support decision making in a number of ways. Most obviously, it can help collect, synthesize, and present data in meaningful ways. DSSs frequently generate reports that help in both tactical and strategic decision making. DSSs can also provide recommendations. One way to generate recommendations is to model how experts make decisions. That is, a DSS can be programmed to mimic the process used by a recognized

expert; once captured in a computer program, this expertise can be shared with anyone who uses the system. DSSs can use sophisticated algorithms and statistical methods to analyze data and present recommendations based on these models' results.

Using Data to Drive Decisions

In general, DSSs collect and present information. It is up to the user to ask the right questions. Capturing the power of information systems and DSSs to improve an organization's decision making capabilities requires gathering the right data, finding the right experts, and using the right models. DSSs can support organizational decision making using a variety of approaches.

Modeling Decisions

Some decisions can be modeled because the environment in which they occur is generally predictable. Since situations that call for such decisions recur frequently, it is worth the organization's time and trouble to develop a mathematical model describing the situation and to discover the appropriate decision rule. For example, if a pressure sensor in a Tunnel of Love ride registers a change in the weight of the car carrying guests, the DSS which monitors the ride makes the "decision" to shut the ride down because past experience has shown that someone has probably left the car and started walking on the track. Since this behavior is dangerous, the DSS is programmed to check the weight sensor continuously to ensure that no person is walking where people shouldn't be. If someone is out of place, the system shuts the ride down until the operator can check. Other illustrations of automatic decision making can be seen in recommended staffing and preparation levels of certain food items based on statistical projections, prepositioning taxis in locations and at times that match demand patterns, and rerouting buses based on analysis of real-time load factors.

As is true of any procedure designed to improve service to customers, the organization needs to assess the relationship between the value and the cost of the information before it establishes such a system. Because professional chefs are artists and not accountants, they may not get around to gathering and organizing data about ingredient supplies often enough to justify the expense and sophistication of an online system. Just because a company has a lot of data does not mean its systems necessarily support the types of decisions it needs to make. If the input of data is haphazard, or the available data irrelevant, the value of the frequently out-of-date or inaccurate information would be low and the expense of installing a sophisticated system unjustified.

Statistical Analysis

Another way to use available data is to statistically analyze it to detect relationships. Statistical data analysis can either be used to test certain expectations (e.g., test to see if prepositioning taxis led to quicker response times to customer calls) or be exploratory in nature (e.g., looking to see what variables are related to greater spending at the hotel spa). Statistical analysis is relatively easy to use. Microsoft Excel has a Data Analysis tool, and there are many statistical packages available in the market. The challenge is that the person conducting the analysis must understand the basics of how to use and interpret statistics. Someone must also be willing and able to devote the time to organize the data and perform the desired analyses. While this may be a task the authors of this book, professors that they are, enjoy, it is not a task many others may relish. Furthermore, as companies gain more data, it is possible that the sheer size of the database will make it unmanageable

for statistical analysis on a single computer. So, while statistical analysis is actually within the reach of many hotels, restaurants, casinos, and other service providers, many are unable to drill down into their data to take full advantage of the large amount they collect.

Data Mining

When companies have massive datasets, completely analyzing the data is simply not feasible. Often, companies do not have the time or expertise to conduct sophisticated statistical analyses to take advantage of the true potential their huge data stores may provide. The process of **data mining** has emerged to help resolve these issues.

Data mining is a largely automated process that uses statistical analyses to search massive datasets for useful and meaningful patterns. The process is user friendly as it does not require complete understanding of the underlying analytical methods. The system identifies relationships in the data that can then be used in a variety of ways to improve the ability of the organization to satisfy its customers. In hotel marketing, for example, data mining allows the organization to create more focused direct-mail campaigns, offer more effective seasonal promotions, time and place its ad campaigns better, define which market segments are growing most rapidly, and determine the number of rooms to reserve for wholesale customers and business travelers.²¹

Data mining, however, can be expensive, requiring sophisticated software and hardware to analyze large amounts of data. Nonetheless, it is a technology being employed by many large hospitality companies, including Hilton, Starwood, Marriott, and Harrah's. Because these large companies can combine information from many properties, they have the potential to track their best customers and create highly targeted promotional campaigns. For instance, Harrah's Hotels and Casinos combine information from every customer transaction, including which casino games the customer prefers and psychographic and demographic information on the customer. Analyzing these data, the system can determine which customers are potentially the most profitable, and then provide appropriately customized incentives to attract their repeat business. For example, customers who live outside the Las Vegas area received complimentary hotel rooms or transportation, while drive-in customers received food, entertainment, or cash incentives.²² Harrah's also estimates that it has saved over \$20 million by not offering incentives to customers who were unlikely to return.²³

Data mining, of course, does not guarantee finding information that will help improve either business success or the guest experience. Although it generally requires a substantial investment, it is a technology that many companies with large amounts of data can turn into information that will enable them to get a better idea of what guests want, how they behave, and perhaps how they can be influenced to become more loyal, profitable, and satisfied.

Using Information

Market Segmentation

By finding out more about individual customers, companies have found that they can customize their products to serve customers more personally. Rather than treating all customers the same, there is an increased emphasis on relationship marketing, or the *market-segment-of-one* concept, which has been made possible through the increasing power of computers to store, analyze, and interpret large quantities of information. The idea is to find out so much about customers that the organization can treat each person as a separate "market." When customers return warranty cards on products, fill out the online

customer feedback surveys, send in for discount coupons, or request free company-logo coffee mugs, they provide information that companies can use to gain a better understanding of their customers and their unique needs. As discussed earlier in the Wyndham and The Ritz-Carlton Hotels examples, customers themselves may voluntarily provide information when they know it will enhance their experience or employees may be asked to listen, learn more about their customers, and enter what they hear and learn into the database for future reference. Knowing the individual customers better allows the company to customize and target its marketing campaigns, offer the services that they know specific individuals want, and, ultimately, best meet the guests' needs with the goal of providing a wow experience.

Identifying and Targeting Your Best and Worst Customers

Just as market segmentation helps identify the different preferences and purchasing behaviors of customers, gathering customer information can be used to identify how profitable each customer is. The fact is that not all customers are equally profitable. In truth, some are simply unprofitable. Instead of taking a “come one, come all” approach to customers and guests, more and more organizations are using information to determine customer value. Organizations use this information to establish closer relationships with their best guests. These customers are targeted to encourage their repeat business and continued loyalty. At the other extreme, companies can use information technology to identify unprofitable customers, allowing the company to change how it markets to this segment, and sometimes even severing relationships with them.

Using information on purchasing behavior, Dorothy Lane Market, a small supermarket chain that offers gourmet food and attentive customer service, identifies its best and worst customers with sophisticated technology. It knows that 30 percent of its customers generate 80 percent of its profits, and 1 percent of its customers are responsible for 11 percent of its profits.²⁴ Instead of advertising in newspapers and providing coupons to everyone, the market uses the Internet and direct mailing to provide specific incentives to its best customers. For example, during a milk price war, select customers received coupons to purchase milk at \$1.49 per gallon; those who simply stopped in off the street paid \$3.89.²⁵ Similarly, Harrah's Casino has different room rates, depending on their estimate of customer value.²⁶ Harrah's is willing to take a loss on a single room to attract a customer who will spend a significant amount of time gambling in the casino; those who are not expected to spend time at the casino pay a much higher rate.

While a few customers are often responsible for much of a company's profits, it is also true that some customers actually cost a company more than it gains. These customers demand more attention than they may be warranted given their spending and profitability.²⁷ Companies may want to get rid of these customers to become more profitable. The danger, of course, is that the organization may be cutting loose presently unprofitable customers who might generate large future profits or who might, if treated well, recommend the organization to potentially profitable friends.²⁸

Collaborative Filters

Internet-based programs allow customers to make information about themselves available to companies and each other through collaborative filtering and social networking sites.²⁹ Collaborative filters can be found on many Web sites, like Amazon, eBay, and iTunes, where customer patterns are gathered and organized. This allows the customers to see what others searching in ways like them have purchased (Amazon) or listened to (iTunes) while adding their information to the database. An innovative software agent program called Firefly, designed in the middle 1990s, organized and categorized individual's

judgments about music and then compared them with those of others like that person in a single database. The program was able to know what you liked, what you liked to do, and what you were likely to do in the future. It could then act as your personal intelligence agent. Firefly built vivid profiles of the people that used its Web site and sorted them to recommend new products and services based on what people like themselves are doing. In effect, it allowed the powerful influence of informal word-of-mouth marketing to be used even from strangers whose recommendations you'd never heard before.³⁰ Although the development of collaborative filters has been slowed somewhat by the need to ensure privacy, these filters offer powerful tools for providing experiences and products to targeted customers whose own database history indicates their specific preferences.

Social networking sites, on the other hand, reduce the concerns with privacy as they are created by the people themselves. People willingly share their data and personal information to any who find their Web site and view their public profile. While some restrict access to more personal information, it is surprising how many do not. With the growing popularity of the iPhone and similar wireless communication devices with their ever-increasing information-sharing applications like Facebook and Latitude, more people (and companies) can learn more about other people than ever before. One interesting application is offered by one company, Sense Network, which has found a way to track wireless communicators whether the person wants to be tracked or not. This company avoids privacy concerns by not identifying specific people holding the phones and tracks electronic dots representing individual cell phone users as they move in a geographical area. Observing customer behaviors by tracking the movement of cell-based communicators by day and time across their maps allows the company to see what people are really doing and where they are.³¹

Problems with Information Systems

Although no hospitality organization is going to give up its information system, these systems have potential and actual problems associated with them. One is **information overload**, the tendency of the system to produce and transmit too much data. A second is the creation of a false sense of information preciseness. Since these systems produce such apparently accurate numbers, managers tend to focus on the numbers instead of on less definite but often more important qualitative and human factors. Another problem is that an information system can produce bad information that looks good. Still another major concern is that organizations have crucial and sometimes proprietary information within their system, so maintaining security is an issue. Finally, the costs of installing and learning the systems must be matched against the benefits those systems can confer. These points will be discussed in turn.

Information Overload

Information systems are helpful and have revolutionized business, but they are far from perfect. The most obvious problem in the hospitality industry is the possibility of creating information overload for both guests and employees. As anyone who has ever done a Google search knows, too much information is as bad as not enough. While sophisticated systems are designed to provide only the right information to the right person when that person needs it, many information systems (and search engines) provide a lot of raw data, and leave it to the recipients to discover whatever information they need in the pile. Indeed, many systems are designed by having systems planners ask users what information they need. Human nature being what it is, most users will ask for as much information as they can get, instead of only as much as they really need. Most people believe

having too much is better than not having enough; their proof is that they have seen people disciplined for having too little information but never for having too much. Another aspect of this same issue is that when asked, most people indicate that they use many informational data sources, instead of mentioning the one or two they actually use. Not wanting to admit ignorance or own up to how little information they use, they ask for a lot and then get lost in the pile.

Travelocity offers an example of how a company dealt with a very large information overload problem. Every month, Travelocity received 30,000 customer survey results, 50,000 emails, and notes sent by a half-million calls that it did not have enough employee time to read and respond to. Its managers knew that in this large pile of information, however, was important information about customer problems, sources of dissatisfaction, and issues that needed their response and resolution. Their solution was to turn to software based on *text analysis*. These programs can scrutinize text documents, quickly identify crucial terms and concepts, and put this information into an easily searchable format. Other companies have used this same technology to keep track of blogs and other online communications that may mention the company's name. This customer-created information on the Internet can be a gold mine of useful data about how its customers view the company and the service it provides. Data mining offers one promising way for organizations to dig out from under this information overload.³² As Domino's Pizza found out much to their surprise, a practical joke by two employees in North Carolina, who put a fictitious video on YouTube showing them putting cheese sticks up their nose and then sneezing the sticks into a sandwich they were making, can become a national marketing problem requiring quick reaction. If an organization has no way of sorting through the large volume of information that is on the Web to know that something like the Domino's video is out there, then it has no opportunity to get the right information to the right person at the right time in the right format so that the person can fix it.

Focusing on the Numbers

A second problem with information systems is the tendency to get tied up in numbers. Since computers excel in transmitting, organizing, and analyzing numbers, much information is provided in numeric form. While this aids accurate conversion of data into information, it does tend to focus attention on only those things that can be quantified or somehow expressed in numerical terms. Unfortunately, much of a manager's job focuses on subjective, qualitative information and not quantitative data. The availability of numerical information creates an overemphasis in decision making on such information and an underemphasis on qualitative information.

Bad Information

Related to the problem of falling in love with numbers is the third problem with information systems: that of assuming that the numbers are accurate when they may not be. The saying "garbage in, garbage out" is quite true. A sophisticated information system can quickly get a lot of bad data to a lot of people. If bad data get into the organization's decision-making structure, that bad data will be used in many decision situations. The results can be worse than garbage: they can be catastrophic. Bad information leads to bad decisions. A ship captain who gets a false reading of crossing traffic in a narrow ship channel can make a steering error that collides with rather than avoids another ship. Likewise, bad information widely circulated by means of a sophisticated information and decision system can lead to disaster.

Maintaining Security

A fourth potential problem with information systems is security, or maintaining the integrity of the database. An organization's information system must be protected so that another organization cannot access its confidential or proprietary data, or worse yet, crash the system or destroy the data. In this era of telecommuting and managers working at home or on the road with wireless connections to the information system, protecting the integrity of the database from unauthorized or inappropriate access is an important concern. As the newspaper headlines often report, when employees are able to download sensitive information on laptop hard drives or flash drives, they can also misplace them, sell the information, or leak it to the press. Moreover, if hackers can get into Defense Department and CIA computers—as they have—competitors may find ways to get into your database as well. Protecting against such unauthorized entry is a big problem and big expense for organizations. The problem exists even internally, as database managers need to ensure that unauthorized persons cannot obtain confidential employee data. Outsiders and company insiders need to be prevented from snooping around in the organization's database.

Value Versus Cost

Another problem is determining the true value and true cost of the information. Even though it often seems like it in this era of instant access to endless amounts of information on the Web, information is not really free. Buying computers, routers, and servers, hiring programmers, Web designers, operating a network, and maintaining an accurate and user-friendly information system are hugely expensive. On the other side of the expense are the largely intangible benefits of employees having access to the right information at the right time in the right format to do their jobs. How does one measure the value of an employee being able to instantaneously access a guest database so that the guest is identified by name, a piece of information the guest wants is immediately available, and the guest's unique expectations are known so that they can be met?

Obviously, the difference in price between a hotel room at the Four Seasons and the Econolodge is one way to estimate the presumed value of these information-driven



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Adding new technology adds costs, in both equipment and personnel. State-of-the-art computer systems add potential for huge customer databases, data mining initiatives, and powerful decision support systems, but you also have to be able to purchase, support, and maintain the new technology.

services to a guest. If guests didn't think these amenities were worth the price, they wouldn't select the Four Seasons. Since many guests do, they must place a value on these services, but their exact value in relation to their cost is usually impossible to establish. Deciding how much better a decision was because the manager had the right information available is all but impossible. Yet, most organizations believe their systems are worth the cost and give them a competitive advantage over others that do not have the same capabilities. The problem is that when budget time comes and paybacks on investments are calculated, defending information system upgrades and improvements is difficult because evaluating the exact contribution of the system is so challenging.

Though determining costs and benefits of information systems is complex, companies can make estimates. Consider how Google has forged its entire business model and financial success on understanding the value of information. In part, Google computes what it calls Page-Rank to estimate the relevance of information on Web pages to over 2 billion search terms. Google also factors in the full content of a page to consider its relevance to a search query in addition to the quantity and quality of the sites that are linked to a given Web page.³³ At the same time, Google uses data collected from every search and advertising click (millions a day) to estimate a host of metrics, all aimed at helping estimate the value of information to users and advertisers.³⁴ The result is a completely different way of doing business than nearly all other companies: Google gives away its best services, doesn't set prices for the advertisements it sells to support its business, makes businesses bid for advertising, and even turns away advertisers if its algorithms determining value and relevance suggest the ad has a poor fit.

Learning the System

The final problem with information systems involves the costs of learning how to use the new system and evolving tools that become available. People with decision-making responsibilities are the very group who need to learn how to use the organization's information system. At the same time, because these individuals are often those who have been out of school the longest, they frequently are the very people who are most uncomfortable and unfamiliar with it. Worse yet, given the problems in quantifying the value of the technology, these are the same people who make the decisions about buying the equipment and investing in the system. Obviously, a lot of learning has to take place before those who are uncomfortable with new technology—such as those who are uneasy talking about tweets and mayorships; don't know the difference between MMSs, SMSs, and RSSs; and don't really understand how many Gs their phones have—are at ease when using the new systems. Nonetheless, it is critical to get employees familiar with the technology necessary for them to make high-quality decisions. Even though increasingly user-friendly software has made it easier for these managers to learn and use the powerful technology available to them, the challenge for them will be that as soon as they master one technology, a newer and more powerful one will come along and they will need to learn that one. The rapid changes in what technology can do in managing information will require managers to rapidly adapt to new situations. With so many other things to worry about in performing their jobs, many managers' use of technology can be predicted by what was available when they were growing up rather than what is available to them now. This can cause a challenge when trying to communicate needed information to people from different technological generations.

THE HOSPITALITY ORGANIZATION AS AN INFORMATION SYSTEM

Perhaps the easiest way to understand how information ties the hospitality organization together is by considering the organization itself as a big information system. The main purpose of the information network is to provide each person with whatever information

that person needs to serve the customer when that person needs it. Looking at the organization in that way, everyone becomes a transmission point on the organizational network—gathering, sending, and processing information into a user-friendly format. Those responsible for designing the **organization as an information system** must consider how all these network participants are linked together along with what information each participant needs to provide to others and what information each participant needs to have provided by others. If a Delta Airlines customer service representative is responsible for telling an inquiring customer exactly how to get from Arrival Gate #72 to the limousine service phones by Baggage Carousel #1, the information system had better be designed to obtain and provide that information to the representative when the phone rings. Likewise, if the Delta customer service desk needs to know that Flight 1582 is arriving late and will have to rebook passengers with missed connections, the late arriving pilot needs to communicate that information to the person scheduling staff at the customer service desk. The Delta system design will therefore require communication linkages, across all parts of the organization, providing access to all information needed by the customer service representatives so that the person responsible can solve customer problems. Reengineering the organization and its information system around the customer's needs is a necessity in our present-day competitive marketplace.

Integrated Systems

Retail stores illustrate how organizations can design their entire physical and record-keeping setup around an integrated information system. The system has structure and, to gain the full benefit of the information system and its database, the organization designs its other functions to accommodate the requirements of that structure. Here's how it might work at a Cracker Barrel gift shop. The shop's POS system uses barcodes on the items similar to the way in which restaurants use their POS systems. When a customer brings an item to the counter to pay for it, the employee responsible for registering the sale runs a scanner wand over its barcode to gather the price and quantity information from a central database and then register that information on the customer's receipt. At the same time, the inventory of that product is adjusted to reflect the sale of one unit, and the customer payment is added to the daily sales cash or credit ledger, the gift shop's daily profit-and-loss figures, the particular salesperson's record of sales for the day, and other corporate databases that collect information about how the shop's operations are doing. This simple act of running scanners over product barcodes ultimately leads to information that tells Cracker Barrel management how the product is selling, how the store is doing, and how the salespersons are producing.

When all the parts of an organization are connected via technology, the company collects a wealth of data over time. The best hospitality companies use this integrated information system philosophy to determine how well all parts of their service operations are working, and what can be done to better meet customer needs, improve efficiency, and continuously improve their service product.

The Primacy of Information

The logic of organizing around the availability and flow of information changes the way in which jobs are organized and tasks are performed. It may even drive changes in the sequence of operations and the organization of departmental units. The organization should be designed in a way that responds to information requirements. Jobs and departments dealing with uncertain, ever-changing, ambiguous situations require a lot of information to ensure that the managers, employees, and co-producing guests making

decisions in those units can get all the information they need to create a successful service product. Jobs or units that are relatively insulated from uncertainty, ambiguity, and changing circumstance may not require the same volume or quality of information; they can anticipate that whatever happened or was true yesterday will pretty much be the same today and tomorrow. In either case, though, the final goal—to create a great service product—remains the same.

Organizational units facing uncertainty need to add the information capacity that will allow the necessary information to be gathered, or they must find ways to reduce the need for that information. Both strategies involve integrating the organizational design into the information system and vice versa. We shall now take a more detailed look at these two strategies.

Increasing Capacity

When the organization must increase its information-handling capacity, its system designers must consider the ways in which information is transmitted across the organization. The system will need to be designed in a way to filter and analyze data so that unnecessary or distracting information is not offered while the essential information is presented in a clear and readily usable format. Furthermore, the system will have to create redundant sources of critical information. Information that a decision maker absolutely must not miss should be provided in more than one channel of communication to ensure that the manager has it when it is needed. That way, if one channel breaks down or fails to get the information to the person needing it, it can be provided through another means. A simple example would be sending someone an e-mail, followed by a text message, followed by a fax, followed by a mailed hard copy, with the same information in all four communications. Building in this redundancy obviously creates additional demand upon the information system, and organizations should carefully consider what information is so important that it needs to be sent in more than one way.

Reducing Need

An alternative to building additional information-processing capacity into the organization is reducing the need to handle information. One major way to do this is to create self-contained decision-making units with employees who are empowered and enabled to make decisions about their areas of responsibility. By increasing the number of decisions made at the point where the information is generated, usage of the information channels is reduced. This is the classic strategy of decentralized decision making or, in the more current literature, the growing use of individual or group empowerment. The idea here is that with proper training in asking for job-related data and turning it into information used for decision making, the individual employee or department can make many decisions that would otherwise have been routed up the administrative chain of command. If a furious guest is standing in front of the employee, that guest does not want to wait until some unseen manager gives approval for resolving a problem. This is why The Ritz-Carlton Hotels gives its employees the authority to use up to \$2000 to resolve a customer's problem without seeking permission from a supervisor. As Vivian Deuschl, Vice President of Public Relations, says, "I've come to learn that the least costly solution is the one that happens immediately. The longer and higher a customer complaint lives in an organization, the more it grows."³⁵ The time and effort it takes to check with a supervisor or higher-level organizational unit can use up information channel capacity, but even worse for a hospitality organization, it also slows down the response to the problem.

Everybody Online

The most effective strategy for increasing the information flow is to give all employees access to a company intranet with immediate and easy access to the corporate database. Increasingly, rather than sending masses of hard copy information through the traditional communication channels, organizations are putting information online so that any employee with a computer connection can ask for it. Many organizations have an expanded intranet that allows any employee to ask any manager any relevant question over the internal e-mail system or even tweet them. The flow of information back and forth across all levels of the organization is incredibly enhanced by this technique. The recent move by many organizations to connect to external Web sites with the amazing databases and informational resources available on the Internet means that even more information is available to anyone who needs it whenever they need it. Frontline employees now have access to much the same information that their bosses do and, with proper education about corporate goals and training in decision making, can make decisions in specified job-related areas of the same quality that their bosses could in previous eras. Of course, this clearly underscores the importance of hiring the right people, training them, and motivating them in a way that leads to the effective use of this information and improved decision making and service.

Implications for Service

The impact that these communication systems have on empowering frontline employees to do their jobs better, faster, and cheaper is astonishing and will grow even more so in the future. These changes have important implications for middle managers and supervisors in the hospitality organization, who historically were responsible for transmitting information from senior managers to frontline employees. The impact that these technological trends have on organizational design, frontline-employee responsibilities, and need for middle managers is profound. When a frontline employee can obtain any information needed, training required, or questions answered via the Web, the information-processing responsibilities and requirements of the traditional middle manager and supervisor are greatly changed. Information technology has changed and will continue to change the way organizations are managed, responsibilities are organized, and the reporting relationships are structured; it has also changed in a fundamental way the nature and role of hospitality employees who are concerned with delivering high-quality guest experiences.

Designers of the information systems for hospitality organizations must be aware of the three components of the guest experience—service product, service setting, and service delivery system—and the best information system would integrate all three. Such a total information system would simultaneously be providing information to guests, management, guest-contact servers, and back-of-the-house staff, just when they need it 24/7. Achieving this end requires system designers to pay close attention to the needs of users, their capabilities, and the time available to them to find and use the information provided. It would not do any good to provide thirty pages of statistical output to a person who doesn't understand statistics or who doesn't have the time to sort through the pile of data to find the necessary information. If you're out of food in your restaurant, you don't want to review statistical predictions of how much food you were supposed to use this week, the sales forecast for next week, or the summary data for last week. You simply want to connect with somebody who can get some more food to you. You need all that other information, but not right now. When you're in the weeds, you don't care what the chemical composition of the weed killer is, as long as you have some. The list of chemicals may be data, but it is not information.

LESSONS LEARNED

1. Know the unique informational needs of each internal and external customer, and satisfy them.
2. Know the value of information to each customer, internal and external.
3. Know the cost of providing that information.
4. Make information available in a format that each customer expects, can use, and will use.
5. Ensure access to information to all in the organization who need it, and exclude access to those who do not.
6. Make organizational information available on-line, but make sure it is secure.
7. Make information flow in as many directions as possible.
8. Make it easy to get feedback from customer-contact employees to management.

REVIEW QUESTIONS

1. What is the difference between providing a guest with information and actually communicating with that guest? Give an example of each. How can hospitality organizations know if information has been communicated effectively to both guests and employees?
2. How is this chapter on communications related to meeting or exceeding the expectations of guests? Is an effective organizational information system important for providing quality to guests, providing value, or both equally, and why?
3. Think about a restaurant you go to frequently. The server probably listened to you place your order and then wrote the information down on a pad or entered it into a POS terminal. What decisions and activities might this order then trigger or affect throughout the entire restaurant organization? (Hint: Think about immediate, on-the-spot matters, but also about inventory, staffing, menu selection, profit and loss calculations, etc.)
4. Think of several different hospitality organizations with which you are familiar.
 - A. What are some significant decisions that those organizations must make?
 - B. Which of those decisions should perhaps be made by computer systems and which by a well-informed manager?
 - C. What differences do you note between the two types of decisions?
5. Some think of organizations as big information systems. According to that idea, the only function and responsibility of a hospitality organization is getting the right information to the right person at the right time so people can make the right decisions that will enable the providing of outstanding guest service.
 - A. To what extent does that kind of thinking make sense to you?
 - B. Does this idea of the organization as information system correspond to what you yourself have actually experienced in organizations?

ACTIVITIES

1. Interview a local hospitality manager. Find out what information technologies at that hospitality location are the most advanced and most basic. Does the manager want any technology that is not available? Find out which technology the manager thinks the organization could least afford to do without. Report back to the class.
2. Interview service employees at four levels within an organization. Ask them how they learn what's going on in the organization. What communication devices, channels, and sources do they use or have access to? Then compare the differences between information sources of the different levels. If any of the employees don't seem to be getting the adequate, timely information that they need or want, what strategies or devices could be used to improve the information flow?

ETHICS IN BUSINESS

Many restaurants now use the Internet to communicate with customers. This includes providing background information on the restaurant, menu items, contact information, and so forth. Some restaurants also allow customers to provide comments about the restaurant. Imagine you are a restaurant owner and have such a site. Most of the time, the site provides complimentary information and that helps business. But once in a while, someone complains. Because it is your own Web site, you have the power to delete the comment. Would you? Would any of the following factors affect your decision?

1. What if the post is anonymous versus signed?
2. What if the post complains about a specific server and gives the name?
3. What if the post uses profanity?
4. What if you think, but don't know for sure, that the post is possibly fictitious?
5. What if you simply disagree with the posting? Would you delete it? Would you respond?

CASE STUDIES

At the Country Club

While waiting to tee off at the country club, Lillian Hollowell and Sarah Dinsmore were arguing about handheld computers.

Hollowell, president of Conglomerate Restaurants, spoke this way: “Sarah, I don’t know how I got along before our restaurants purchased point-of-sale handheld units. I got them to improve communication between the servers and the kitchen, but they have really made my job easier, too. They instantly give me sales data I can combine with other databases. I can convert reams of numbers into colorful charts and graphs that my managers can easily understand. These units have enabled me to get more useful information, make decisions, and have more time for golf. I don’t have to depend any longer on summary reports from the branch restaurants. I have instant access to my company’s database, so I can call up info on current and past performance of any of my units, along with comparative industry and economic information from outside databases. If I see something out of the ordinary, I can get right to the restaurant manager responsible and check it out, or hold a teleconference with several managers.”

Sarah Dinsmore was president of International Restaurants. Although the chain had 1400 units, it specialized in friendly, personal attention. Sarah thought of her organization as high touch, as opposed to her high-tech

rival: “I want no part of those POS units. You don’t see the fine restaurants in Europe cluttered up with those machines. The blasted things churn out a ton of data, but I still can’t get much information. I’ve tried three different POS systems and I despised them all. If you want to do anything beyond the simplest operation, then you need to be very familiar with the system. I don’t have the time to gain that familiarity, so I’ve turned my link in our current system over to my executive assistant. She knows how to run it and I don’t think I’ll ever need to learn. Besides, when I go to a restaurant with handheld POS terminals, the servers as often as not are so busy punching in my order that they forget to make eye contact and they fail to give me the personal attention I expect. I think they spend too much time with the technology and not enough with me.”

1. Will Sarah Dinsmore be able to function effectively for very long with this attitude, or will she eventually have to learn how to use the data that the POS units make available?
2. How can she gain the advantages of high tech without losing the high touch she believes is a differentiating hallmark of her restaurants? Or is this a trade-off situation in which you can’t do both?

Fine Family Motels

The reservation agents at the 105 units of the Fine Family Motels chain worked hard, but the chain’s occupancy rate seemed to keep drifting lower. When that rate hit 58 percent, management realized that something had to be done.

While most locations had an acceptable occupancy rate, a few low-occupancy locations pulled down the overall rate. Unfortunately, the low-occupancy properties seemed to shift around from month to month. The local reservation agents, travel agents, and airline reservation networks weren’t notified of the low-occupancy areas until the problem became acute. The company was willing to

offer discounts of up to 50 percent in the low-occupancy properties to fill rooms, if it could identify them promptly and get the information out to tour organizations, online distributors, travel wholesalers, and other client sources.

1. What technological changes would benefit Fine Family Motels?
2. What structural changes might they make necessary?
3. How might Fine Family Motels use the World Wide Web to improve its occupancy rates?

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