

9

Service Processes

NOTES

LEARNING OUTCOMES

After reading this chapter, you will be able to

- LO 9.1** Describe the characteristics of service processes.
- LO 9.2** Explain how service systems are organized.
- LO 9.3** Analyze simple service systems.
- LO 9.4** Contrast different service designs.

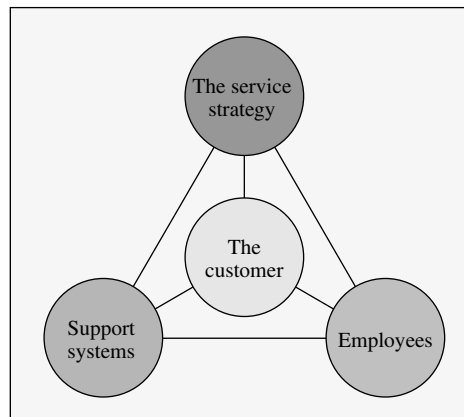
LEARNING OUTCOME 9.1

THE NATURE OF SERVICES

A glance at the management book section in your local bookstore gives ample evidence of the concern for service among practitioners. The way we now view service parallels the way we view quality: The *customer* is (or should be) the focal point of all decisions and actions of the service organization. This philosophy is captured nicely in the service triangle in Exhibit 9.1. Here the customer is the center of things—the service strategy, the systems, and the employees who serve him or her. From this view, the organization exists to serve the customer, and the systems and the employees exist to facilitate the process of service. Some suggest that the service organization also exists to serve the workforce because they generally determine how the service is perceived by the customers. Relative to the latter point, the customer gets the kind of service that management deserves; in other words, how management treats the worker is how the worker will treat the public. If the workforce is well trained and well motivated by management, they will do good jobs for their customers.

The role of operations in the triangle is a major one. Operations is responsible for service systems (procedures, equipment, and facilities) and is responsible for managing the work of the service workforce, who typically make up the majority of employees in large service organizations. But before we discuss this role in depth, it is useful to classify services to show how the customer affects the operations function.

Exhibit 9.1 *The Service Triangle*



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Check Your Progress

1. What is a service package?
2. What do you mean by customer contact?
3. Write a note on designing service organizations.

Every service has a **service package**, which is defined as a bundle of goods and services that is provided in some environment. This bundle consists of five features:

1. *Supporting facility*: The physical resources that must be in place before a service can be offered. Examples are a golf course, a ski lift, an airline, and an auto repair facility.
2. *Facilitating goods*: The material purchased or consumed by the buyer or the items provided by the customer. Examples are golf clubs, skis, beverages, and auto parts.
3. *Information*: Operations data or information that is provided by the customer, to enable efficient and customized services. Examples include tee-off times, weather reports, medical records, seat preferences, parts availability.
4. *Explicit services*: The benefits that are readily observable by the senses and that consist of the essential or intrinsic features of the service. Examples are response time of an ambulance, air conditioning in a hotel room, and a smooth-running car after a tune-up.
5. *Implicit services*: Psychological benefits that the customer may sense only vaguely, or the extrinsic features of the service. Examples are the status of a degree from an Ivy League school, the privacy of a loan office, and worry-free auto repair.

An Operational Classification of Services

Service organizations are generally classified according to who the customer is, for example, individuals or other businesses, and to the service they provide (financial services, health services, transportation services, and so on). These groupings, though useful in presenting aggregate economic data, are not particularly appropriate for OSCM purposes because they tell us little about the process. Manufacturing, by contrast, has fairly evocative terms to classify production activities (such as intermittent and continuous production); when applied to a manufacturing setting, they readily convey the essence of the process. Although it is possible to describe services in these same terms, we need one additional item of information to reflect the fact that the customer is involved in the production system. That item, which we believe operationally distinguishes one service system from another in its production function, is the extent of customer contact in the creation of the service.

Customer contact refers to the physical presence of the customer in the system, and *creation of the service* refers to the work process involved in providing the service itself. *Extent of contact* here may be roughly defined as the percentage of time the customer must be in the system relative to the total time needed to perform the customer service. Generally speaking, the greater the percentage of contact time between the service system and the customer, the greater the degree of interaction between the two during the production process.

From this conceptualization, it follows that service systems with a **high degree of customer contact** are more difficult to control and more difficult to rationalize than those with a **low degree of customer contact**. In high-contact systems, the customer can affect the time of demand, the exact nature of the service, and the quality, or perceived quality, of service because the customer is involved in the process.

LEARNING OUTCOME 9.2

DESIGNING SERVICE ORGANIZATIONS

In designing service organizations we must remember one distinctive characteristic of services: We cannot inventory services. Unlike manufacturing, where we can build up inventory during slack periods for peak demand and thus maintain a relatively stable level of employment and production planning, in services we must (with a few exceptions) meet demand as it arises. Consequently, in services capacity becomes a dominant issue. Think about the many service situations you find yourself in—for example, eating in a restaurant or going to a Saturday night movie. Generally speaking, if the restaurant or the theater is full, you will decide to go someplace else. So, an important design parameter in services is “What capacity should we aim for?” Too much capacity generates excessive costs. Insufficient capacity leads to lost customers. In these situations, of course, we seek the assistance of marketing. This is one reason we have discount

airfares, hotel specials on weekends, and so on. This is also a good illustration of why it is difficult to separate the operations management functions from marketing in services.

Waiting line models, provide a powerful mathematical tool for analyzing many common service situations. Questions such as how many tellers we should have in a bank or how many telephone lines we need in an Internet service operation can be analyzed with these models.

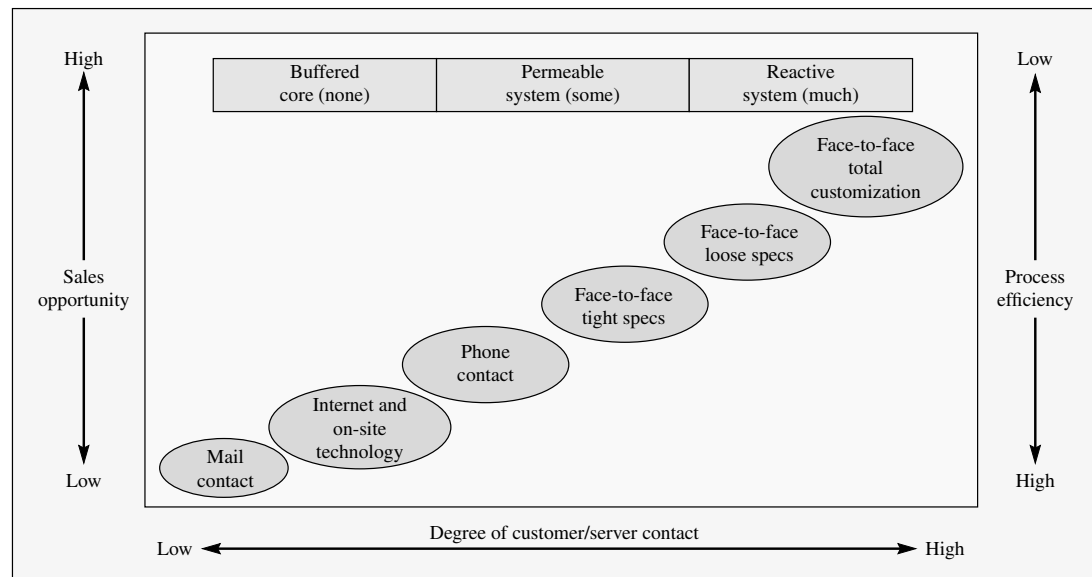
Several major factors distinguish service design and development from typical manufactured product development. First, the process and the product must be developed simultaneously; indeed, in services, the process is the product. (We say this with the general recognition that many manufacturers are using such concepts as concurrent engineering and DFM [design for manufacture] as approaches to more closely link product design and process design.)

Second, although equipment and software that support a service can be protected by patents and copyrights, a service operation itself lacks the legal protection commonly available to goods production. Third, the service package, rather than a definable good, constitutes the major output of the development process. Fourth, many parts of the service package are often defined by the training individuals receive before they become part of the service organization. In particular, in professional service organizations (PSOs) such as law firms and hospitals, prior certification is necessary for hiring. Fifth, many service organizations can change their service offerings virtually overnight. Routine service organizations (RSOs) such as barbershops, retail stores, and restaurants have this flexibility.

Structuring The Service Encounter: Service-System Design Matrix

Service encounters can be configured in a number of different ways. The service-system design matrix in Exhibit 9.2 identifies six common alternatives.

Exhibit 9.2 Service-System Design Matrix



Characteristics of Workers, Operations, and Innovations Relative to the Degree of Customer/Service Contact

	Degree of customer/server contact					
	Low					High
Worker requirements	Clerical skills	Helping skills	Verbal skills	Procedural skills	Trade skills	Diagnostic skills
Focus of operations	Paper handling	Demand management	Scripting calls	Flow control	Capacity management	Client mix
Technological innovations	Office automation	Routing methods	Computer databases	Electronic aids	Self-serve	Client/worker teams

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Check Your Progress

What are the common alternatives in a service-system design matrix?

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Check Your Progress

1. What is meant by a “face-to-face tight specs” entry in a matrix?
2. Detail some strategic uses of the service-system design matrix.

The top of the matrix shows the degree of customer/server contact: the *buffered core*, which is physically separated from the customer; the *permeable system*, which is penetrable by the customer via phone or face-to-face contact; and the *reactive system*, which is both penetrable and reactive to the customer’s requirements. The left side of the matrix shows what we believe to be a logical marketing proposition, namely, that the greater the amount of contact, the greater the sales opportunity; the right side shows the impact on production efficiency as the customer exerts more influence on the operation.

The entries within the matrix list the ways in which service can be delivered. At one extreme, service contact is by mail; customers have little interaction with the system. At the other extreme, customers “have it their way” through face-to-face contact. The remaining four entries in the matrix contain varying degrees of interaction.

As one would guess, process efficiency decreases as the customer has more contact (and therefore more influence) on the system. To offset this, the face-to-face contact provides a high sales opportunity to sell additional products. Conversely, low contact, such as mail, allows the system to work more efficiently because the customer is unable to significantly affect (or disrupt) the system. However, there is relatively little opportunity for additional product sales.

There can be some shifting in the positioning of each entry. For our first example, consider the “Internet and on-site technology” entry in the matrix. The Internet clearly buffers the company from the customer, but interesting opportunities are available to provide relevant information and services to the customer. Because the website can be programmed to intelligently react to the inputs of the customer, significant opportunities for new sales may be possible. In addition, the system can be made to interface with real employees when the customer needs assistance that goes beyond the programming of the website. The Internet is truly a revolutionary technology when applied to the services that need to be provided by a company.

Another example of shifting in the positioning of an entry can be shown with the “face-to-face tight specs” entry in the matrix. This entry refers to those situations where there is little variation in the service process—neither customer nor server has much discretion in creating the service. Fast-food restaurants and Disneyland come to mind. Face-to-face loose specs refer to situations where the service process is generally understood but there are options in how it will be performed or in the physical goods that are part of it. A full-service restaurant and a car sales agency are examples. Face-to-face total customization refers to service encounters whose specifications must be developed through some interaction between the customer and server. Legal and medical services are of this type, and the degree to which the resources of the system are mustered for the service determines whether the system is reactive, possibly to the point of even being proactive, or merely permeable. Examples would be the mobilization of an advertising firm’s resources in preparation for an office visit by a major client or an operating team scrambling to prepare for emergency surgery.

The changes in workers, operations, and types of technical innovations as the degree of customer/service system contact changes are described in the bottom of Exhibit 9.2. For worker requirements, the relationships between mail contact and clerical skills, Internet technology and helping skills, and phone contact and verbal skills are self-evident. Face-to-face tight specs require procedural skills in particular, because the worker must follow the routine in conducting a generally standardized, high-volume process. Face-to-face loose specs frequently call for trade skills (bank teller, draftsman, maitre d’, dental hygienist) to finalize the design for the service. Face-to-face total customization tends to call for diagnostic skills of the professional to ascertain the needs or desires of the client.

Strategic Uses of the Matrix

The matrix in Exhibit 9.2 has both operational and strategic uses. The operational uses are reflected in their identification of worker requirements, focus of operations, and innovations previously discussed. The strategic uses include

1. Enabling systematic integration of operations and marketing strategy. Trade-offs become more clear-cut, and, more important, at least some of the major design variables are crystallized for analysis purposes. For example, the matrix indicates that it would make little sense relative to sales for a service firm to invest in high-skilled workers if it plans to operate using tight specs.

2. Clarifying exactly which combination of service delivery the firm is in fact providing. As the company incorporates the delivery options listed on the diagonal, it is becoming diversified in its production process.
3. Permitting comparison with how other firms deliver specific services. This helps to pinpoint a firm's competitive advantage.
4. Indicating evolutionary or life cycle changes that might be in order as the firm grows. Unlike the product–process matrix for manufacturing, however, where natural growth moves in one direction (from workcenter to assembly line as volume increases), evolution of service delivery can move in either direction along the diagonal as a function of a sales–efficiency trade-off.

Managing Customer-Introduced Variability

Among the decisions that service managers must make is how much they should accommodate the variation introduced by the customer into a process. The standard approach is to treat this decision as a trade-off between cost and quality. More accommodation implies more cost; less accommodation implies less-satisfied customers. Francis Frei has suggested that this narrow type of analysis overlooks ways that companies can accommodate the customer while at the same time control cost. To develop these, she says that a company must first determine which of five types of variability is causing operational difficulties and then select which of four types of accommodation would be most effective.

The five basic types of variability, along with examples, are *arrival variability*—the arrival time of customers at a restaurant may be inconsistent with average demand, leading to times when servers are overloaded or underutilized; *request variability*—travelers requesting a room with a view at a crowded hotel; *capability variability*—a patient being unable to explain his or her symptoms to a doctor; *effort variability*—shoppers not bothering to put their shopping carts in a designated area in a supermarket parking lot; and *subjective preference variability*—one bank customer interpreting a teller addressing him by his first name as a sign of warmth, while another customer feels that such informality is unbusinesslike.

The four basic accommodation strategies are *classic accommodation*, which entails, for example, extra employees or additional employee skills to compensate for variations among customers; *low-cost accommodation*, which uses low-cost labor, outsourcing, and self-service to cut the cost of accommodation; *classic reduction*, which requires, for example, customers to engage in more self-service, use reservation systems, or adjust their expectations; and *uncompromised reduction*, which uses knowledge of the customer to develop procedures that enable good service, while minimizing the variation impact on the service delivery system.

LEARNING OUTCOME 9.3

SERVICE BLUEPRINTING AND FAIL-SAFING

Just as is the case with manufacturing process design, the standard tool for service process design is the flowchart. Recently, the service gurus have begun calling the flowchart a **service blueprint** to emphasize the importance of process design. A unique feature of the service blueprint is the distinction made between the high customer contact aspects of the service (the parts of the process that the customer sees) and those activities that the customer does not see. This distinction is made with a “line of visibility” on the flowchart.

Exhibit 9.3 is a blueprint of a typical automobile service operation. Each activity that makes up a typical service encounter is mapped into the flowchart. To better show the entity that controls the activities, levels are shown in the flowchart. The top level consists of activities that are under the control of the customer. Next are those activities performed by the service manager in handling the customer. The third level is the repair activities performed in the garage; the lowest level is the internal accounting activity.

Basic blueprinting describes the features of the service design but does not provide any direct guidance for how to make the process conform to that design. An approach to this problem is the application of **poka-yokes**—procedures that block the inevitable mistake from becoming a service defect. Poka-yokes (roughly translated from the Japanese as “avoid mistakes”) are common in

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Check Your Progress

1. What is request variability?
2. What do you mean by uncompromised reduction?
3. Write a short note on the service blueprint.
4. What does the word Poka-Yokes mean?

Exhibit 9.3 Fail-Safing an Automotive Service Operation

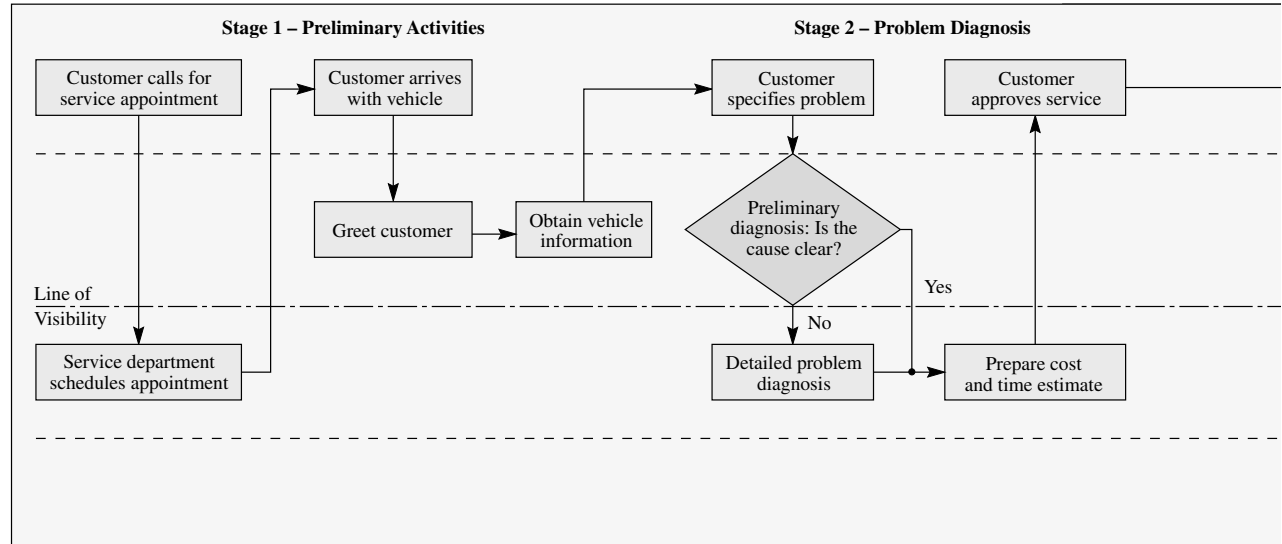
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Failure: Customer forgets the need for service.
Poka-yoke: Send automatic reminders with a 5 percent discount.

Failure: Customer cannot find service area, or does not follow proper flow.
Poka-yoke: Clear and informative signage directing customers.

Failure: Customer has difficulty communicating problem.
Poka-yoke: Joint inspection—service adviser repeats his/her understanding of the problem for confirmation or elaboration by the customer.

Failure: Customer does not understand the necessary service.
Poka-yoke: Preprinted material for most services, detailing work, reasons, and possibly a graphic representation.



Failure: Customer arrival unnoticed.
Poka-yoke: Use a bell chain to signal arrivals.

Failure: Customers not served in order of arrival.
Poka-yoke: Place numbered markers on cars as they arrive.
Failure: Vehicle information incorrect and process is time-consuming.
Poka-yoke: Maintain customer database and print forms with historical information.

Failure: Incorrect diagnosis of the problem.
Poka-yoke: High-tech checklists, such as expert systems and diagnostic equipment.

Failure: Incorrect estimate.
Poka-yoke: Checklists itemizing costs by common repair types.

factories and consist of such things as fixtures to ensure that parts can be attached only in the right way, electronic switches that automatically shut off equipment if a mistake is made, kitting of parts prior to assembly to make sure the right quantities are used, and checklists to ensure that the right sequence of steps is followed.

There are many applications of poka-yokes to services as well. These can be classified into warning methods, physical or visual contact methods, and what we call the *Three Ts*—the Task to be done (Was the car fixed right?), the Treatment accorded to the customer (Was the service manager courteous?), and the Tangible or environmental features of the service facility (Was the waiting area clean and comfortable?). Finally (unlike in manufacturing), service poka-yokes often must be applied to fail-safing the actions of the customer as well as the service worker.

Poka-yoke examples include height bars at amusement parks; indented trays used by surgeons to ensure that no instruments are left in the patient; chains to configure waiting lines; take-a-number systems; turnstiles; alarms on ATMs to warn people to take their cards out of the machine; beepers at restaurants to make sure customers do not miss their table calls; mirrors on telephones to ensure a “smiling voice”; reminder calls for appointments; locks on airline lavatory doors that activate lights inside; small gifts in comment card envelopes to encourage customers to provide feedback about a service; and pictures of what “a clean room” looks like for kindergarten children.

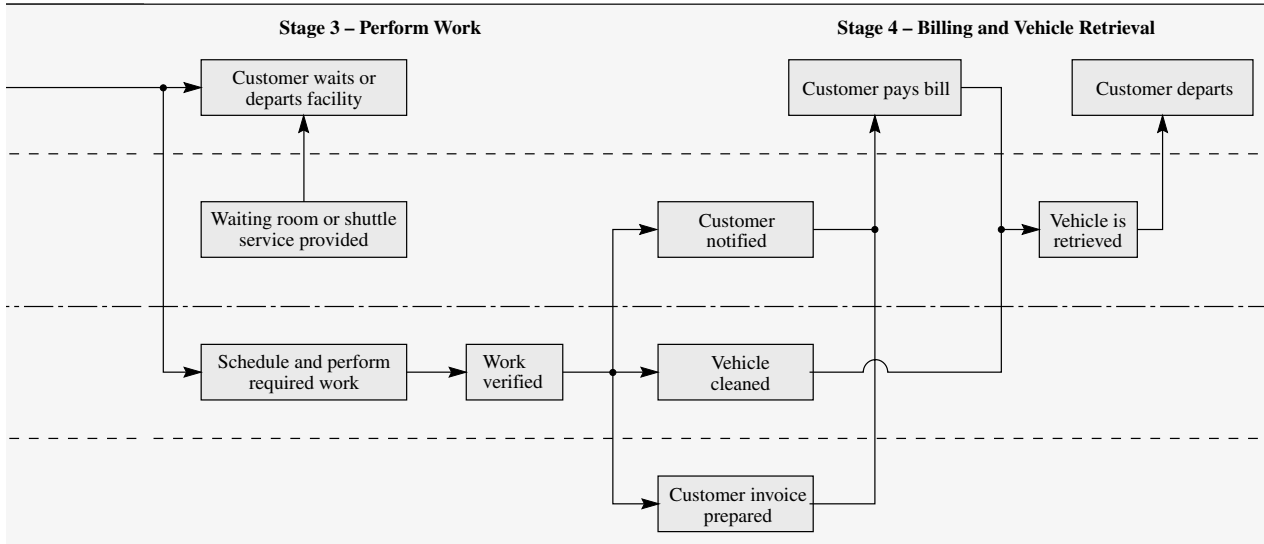
Exhibit 9.3 illustrates how a typical automobile service operation might be fail-safed using poka-yokes. As a final comment, although these procedures cannot guarantee the level of error protection found in the factory, they still can reduce such errors in many service situations.

Failure: Customer not located.
 Poka-yoke: Issue beepers to customers who wish to leave facility.

Failure: Bill is illegible.
 Poka-yoke: Top copy to customer, or plain paper bill.

Failure: Feedback not obtained.
 Poka-yoke: Customer satisfaction postcard given to customer with keys to vehicle.

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Failure: Service shuttle is inconvenient.
 Poka-yoke: Seating in available shuttles is allocated when scheduling appointments. Lack of free space indicates that customers needing shuttle service should be scheduled for another time.
 Failure: Parts are not in stock.
 Poka-yoke: Limit switches activate signal lamps when part level falls below order point.

Failure: Vehicle not cleaned correctly.
 Poka-yoke: Person retrieving vehicle inspects, orders a touch-up if necessary, and removes floor mat in presence of customer.

Failure: Vehicle takes too long to arrive.
 Poka-yoke: When cashier enters customer's name to print the bill, information is electronically sent to runners who retrieve vehicle while the customer is paying.

LEARNING OUTCOME 9.4

THREE CONTRASTING SERVICE DESIGNS

Three contrasting approaches to delivering on-site service are the production-line approach, made famous by McDonald's Corporation; the self-service approach, made famous by ATMs and gas stations; and the personal-attention approach, made famous by Nordstrom Department Stores and the Ritz-Carlton Hotel Company.

The Production-Line Approach

The production-line approach pioneered by McDonald's refers to more than just the steps required to assemble a Big Mac. Rather, as Theodore Levitt notes, it treats the delivery of fast food as a manufacturing process rather than a service process. The value of this philosophy is that it overcomes many problems inherent in the concept of service itself. That is, service implies subordination or subjugation of the server to the served; manufacturing, on the other hand, avoids this connotation because it focuses on things rather than people. Thus, in manufacturing and at McDonald's, "the orientation is toward the efficient production of results not on the attendance on others." Levitt notes that, besides McDonald's marketing and financial skills, the company carefully controls "the execution of each outlet's central function—the rapid delivery of a uniform,

Check Your Progress

Write a short note on the production-line approach.

NOTES

Check Your Progress

1. What is meant by the self-service approach?
2. Write in short about the personal attention approach.

high-quality mix of prepared foods in an environment of obvious cleanliness, order, and cheerful courtesy. The systematic substitution of equipment for people, combined with the carefully planned use and positioning of technology, enables McDonald's to attract and hold patronage in proportions no predecessor or imitator has managed to duplicate."

Levitt cites several aspects of McDonald's operations to illustrate the concepts. Note the extensive use of what we term poka-yokes.

- The McDonald's french fryer allows cooking of the optimum number of french fries at one time.
- A wide-mouthed scoop is used to pick up the precise amount of french fries for each order size. (The employee never touches the product.)
- Storage space is expressly designed for a predetermined mix of prepackaged and premeasured products.
- Cleanliness is pursued by providing ample trash cans in and outside each facility. (Larger outlets have motorized sweepers for the parking area.)
- Hamburgers are wrapped in color-coded paper.
- Through painstaking attention to total design and facilities planning, everything is built integrally into the (McDonald's) machine itself—into the technology of the system. The only choice available to the attendant is to operate it exactly as the designers intended. Using our service-system design matrix (Exhibit 9.2), we would categorize this as a face-to-face tight spec service.

The Self-Service Approach

In contrast to the production-line approach, C. H. Lovelock and R. F. Young propose that the service process can be enhanced by having the customer take a greater role in the production of the service. Company websites, automatic teller machines, self-service gas stations, salad bars, and e-tickets are approaches that shift the service burden to the consumer. Based on our service-system design matrix, these are great examples of the use of Internet and on-site technology. Many customers like self-service because it puts them in control. For others, this philosophy requires some selling on the part of the service organization to convince customers that it helps them. To this end, Lovelock and Young propose a number of steps, including developing customer trust; promoting the benefits of cost, speed, and convenience; and following up to make sure that the procedures are being effectively used. In essence, this turns customers into "partial employees" who must be trained in what to do and, as noted earlier, must be "fail-safed" in case of mistake.

The Personal-Attention Approach

An interesting contrast in the way personal attention is provided can be seen in Nordstrom Department Stores and the Ritz-Carlton Hotel Company.

At Nordstrom, a rather loose, unstructured process relies on developing a relationship between the individual salesperson and the customer (this is a face-to-face with total customization service). At the Ritz-Carlton, the process is virtually scripted, and the information system rather than the employee keeps track of the guest's (customer's) personal preferences (this is a face-to-face loose spec example). Tom Peters describes Nordstrom's approach here:

After several visits to a store's men's clothing department, a customer's suit still did not fit. He wrote the company president, who sent a tailor to the customer's office with a new suit for fitting. When the alterations were completed, the suit was delivered to the customer—free of charge.

This incident involved the \$8.3 billion, Seattle-based Nordstrom, a specialty clothing retailer. Its sales per square foot are about two times that of a typical department store. Who received the customer's letter and urged the extreme (by others' standards) response? Co-chairman John Nordstrom.

The frontline providers of this good service are well paid. Nordstrom's salespersons earn a couple of bucks an hour more than competitors, plus a 6.75 percent commission.

Its top salesperson moves over \$2 million a year in merchandise. Nordstrom lives for its customers and salespeople. Its only official organization chart puts the customer at the top, followed by sales and sales support people. Next come department managers, then store managers, and the board of directors at the very bottom.

Salespersons religiously carry a “personal book,” where they record voluminous information about each of their customers. The system helps in the goal of getting one new personal customer a day. Each salesperson has a virtually unlimited budget to send cards, flowers, and thank-you notes to customers. They are also encouraged to shepherd his or her customer to any department in the store to assist in a successful shopping trip.

He also is abetted by what may be the most liberal returns policy in this or any other business: Return *anything*, no questions asked. Betsy Sanders, the vice president who orchestrated the company’s entry in the California market, says that “trusting customers,” or “our bosses” as she repeatedly calls them, is vital to the Nordstrom philosophy. Past president Jim Nordstrom told the *Los Angeles Times*, “I don’t care if they roll a Goodyear tire into the store. If they say they paid \$200, give them \$200 (in cash) for it.” Sanders acknowledges that a few customers rip the store off—“rent hose from us,” to use a common insider’s line. But this is more than offset by goodwill from the 99 percent-plus who benefit from the “No Problem at Nordstrom” philosophy that the company lives up to with unmatched zeal.

No bureaucracy gets in the way of serving the customer. Policy? Sanders explains to a dumbfounded group of Silicon Valley executives, “I know this drives the lawyers nuts, but our whole ‘policy manual’ is just one sentence, ‘Use your own judgment at all times.’” One store manager offers a translation: “Don’t chew gum. Don’t steal from us.”

Seven Characteristics of a Well-Designed Service System

No matter what approach is taken to design a service, the following are typical characteristics of a well-designed system.

1. **Each element of the service system is consistent with the operating focus of the firm** For example, when the focus is on speed of delivery, each step in the process should help foster speed.
2. **It is user-friendly** This means that the customer can interact with it easily—that is, it has good signage, understandable forms, logical steps in the process, and service workers available to answer questions.
3. **It is robust** That is, it can cope effectively with variations in demand and resource availability. For example, if the computer goes down, effective backup systems are in place to permit service to continue.
4. **It is structured so that consistent performance by its people and systems is easily maintained** This means the tasks required of the workers are doable, and the supporting technologies are truly supportive and reliable.
5. **It provides effective links between the back office and the front office so that nothing falls between the cracks** In football parlance, there should be “no fumbled handoffs.”
6. **It manages the evidence of service quality in such a way that customers see the value of the service provided** Many services do a great job behind the scenes but fail to make this visible to the customer. This is particularly true where a service improvement is made. Unless customers are made aware of the improvement through explicit communication about it, the improved performance is unlikely to gain maximum impact.
7. **It is cost-effective** There is minimum waste of time and resources in delivering the service. Even if the service outcome is satisfactory, customers are often put off by a service company that appears inefficient.

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Check Your Progress

Write in short about the characteristics of a well-designed service system.

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Pizza USA: An Exercise in Translating Customer Requirements into Process Design Requirements

A central theme of contemporary operations management is *focus on the customer*. This is commonly understood to mean that if a company does focus on its customers and if it is able to consistently deliver what the customer wants in a cost-effective manner, then the company should be successful. The hard part is to be able to truly understand what the customer wants. Translating what the customer wants into a deliverable product (meaning some combination of goods and services) and designing a set of processes that will consistently deliver the product in a cost-effective manner are every bit as difficult. Finally, connecting the management of these products and processes to obtain desired business outcomes of the organization is a further challenge.

The following exercise will try to illustrate how difficult all of this can be.

The Setting

Pizza Italiano is a chain of pizza restaurants that currently offers sit-down and take-out service. Many customers have said that they would buy more pizzas from Pizza Italiano if it offered a delivery service. This exercise is in two parts. In Part I, you play the customer. In Part II, you play the manager at Pizza Italiano who is responsible for developing the pizza delivery process design requirements.

Part I

To start with, you have to think *like* a customer. This should be easy since you probably have experience with *ordering pizza to be delivered*. Put that experience to work! Make a list of the attributes of *pizza delivery* that are important to you *AS A CUSTOMER!*

As we said, this should be easy. Right? Or is it? In devising your list, consider the following:

What must a pizza delivery service accomplish so that you are reasonably satisfied? Beyond your being reasonably satisfied, what could a pizza delivery service do that would make it really unique and create a differential advantage? In other words, what could a pizza delivery service do that might cause you to *ALWAYS* order from one particular service (and, perhaps, to pay more for the privilege)?

As you develop your list, remember that you are considering *only the delivery service* and *NOT* the pizza itself. Assume that this pizza restaurant can make whatever kind of pizza (and side items) that you want.

Part II

Now, put on your “*Pizza Italiano manager’s hat*.” For this part of the exercise, you will be teamed with some other students. First, using the lists of all of your team members, create a master list. Next, try to group the items on your list under a series of major headings; for example, “condition of the delivered pizza” or “quick, on-time delivery” or “order accuracy,” and so on. Finally, make a list of the “pizza delivery process design requirements” that your pizza delivery process will have to meet. As you do this, think about measurable standards; in other words, what would you measure in order to ensure that your process is operating effectively and efficiently? Why do you think that these measures will be useful?

Here’s an example of how a part of this analysis could go. One customer requirement may be that *the pizza should be hot when it is delivered*. The fact is that as soon as the pizza comes out of the oven, it starts to cool. So, how could you keep the pizza from dropping below some minimum temperature before you hand it to your customer?

Case Questions

1. Make a list of pizza delivery attributes that are important to you as a customer.
2. Combine your list with the lists of a few other class members and categorize the items under a series of major headings.
3. Make a list of pizza delivery process design requirements. Associate with each requirement a measure that would ensure that the process meets the requirement.

Key Terms

Poka-Yokes Procedures that prevent mistakes from becoming defects. They are commonly found in manufacturing but also can be used in service processes

Service blueprint The flowchart of a service process, emphasizing what is visible and what is not visible to the customer

Service guarantees A promise of service satisfaction backed up by a set of actions that must be taken to fulfill the promise

Service package A bundle of goods and services that is provided in some environment

NOTES

In Review

A service package is the bundle of goods and services that is provided to the customer in some environment. Services can be conveniently classified according to the degree of “contact” or physical presence of the customer in the system. In some cases, the customer need not be present at all, for example, when a customer order is processed from an online transaction. In other cases, the customer is directly involved, for example, when a tooth is removed at a dentist’s office.

Service systems differ from manufacturing systems in a number of significant ways including: (1) typically services cannot be placed in inventory for later use, (2) the process is the product, (3) patents and copyrights typically cannot be obtained, (4) a service is not a tangible item, and (5) specific training and certifications are often required (for example, for law offices and hospitals). The service-system design matrix explores the trade-offs between sales opportunity, efficiency, and characteristics of workers. A challenge in managing service systems, which is not as great in manufacturing, is the great variability introduced by a customer interacting directly with the system. Special strategies are available for managing this variability. Service guarantees are designed to provide a customer a clear idea of what to expect from a service.

Service blueprints are a special type of flowchart tool that places special emphasis on identifying the high customer contact and low customer contact aspects of a service. The distinction is made with a “line of visibility” on the flowchart.

Contrasting service designs include: (1) the production-line approach used by McDonald’s, (2) the self-service approach used by gas stations, and (3) the personal-attention approach used by Nordstrom’s Department Stores and the Ritz-Carlton Hotel Company. Well-designed service systems have the following characteristics: They have consistent elements, are user-friendly, are robust, are consistent, have integrated front- and back-office operations, generate value for the customer, and are cost-effective.

Multiple-Choice Questions

- Which of the following is a characteristic that can be used to guide the design of service systems?
 - Services cannot be inventoried.
 - Services are all similar.
 - Quality work means quality service.
 - Services businesses are inherently entrepreneurial.
 - Even service businesses have internal services.
- Which of the following is not part of “the service triangle”?

a. Employees	b. Support systems
c. Customers	d. Service strategy
e. Service encounter	

NOTES

3. Which of the following refers to the physical presence of the customer in a service system?
 - a. Creation of the service
 - b. Customer contact
 - c. Intermittent production
 - d. Continuous production
 - e. None of these
4. Which of the following is a major factor that distinguishes service design and development from manufacturing design and development?
 - a. The service process and service product can be developed independently.
 - b. The service package has the same legal protection available to manufactured goods.
 - c. The service package is the major output of the development process.
 - d. Manufacturing is far more capital intensive than services.
 - e. Capacity decisions are much more critical in manufacturing operations.
5. Which one of the following is not a major factor distinguishing service design and development from manufacturing design and development?
 - a. The process and product must be developed at the same time.
 - b. Many service organizations can change their service offerings virtually overnight.
 - c. Many parts of the service package are often defined by the training that individuals receive before they become part of the service organization.
 - d. The service package, rather than a definable good, is the output of the development process.
 - e. Service operations can be protected by patents; manufacturing operations cannot.
6. Which of the following are alternative possible service encounters included in the service-system design matrix?
 - a. Mail contact
 - b. Warranty
 - c. Sales call
 - d. Field service
 - e. None of these
7. Which of the following is an alternative possible service encounter included in the service-system design matrix?
 - a. Face-to-face distance
 - b. Internet
 - c. Questionnaire response
 - d. Automated teller machine (ATM)
 - e. Response card encounter
8. In the service-system design matrix, a face-to-face total customization service encounter is expected to have which of the following?
 - a. Low sales opportunity
 - b. Low production efficiency
 - c. High production efficiency
 - d. Low degree of customer/server contact
 - e. None of these
9. In the service-system design matrix, a mail contact service encounter is expected to have which of the following?
 - a. High sales opportunity
 - b. High degree of customer/server contact
 - c. High production efficiency
 - d. Low sales opportunity
 - e. None of these
10. In the service-system design matrix, a face-to-face loose specs service encounter is expected to have which of the following?
 - a. Low sales opportunity
 - b. Low production efficiency
 - c. High production efficiency
 - d. Low degree of customer/server contact
 - e. None of these

Key to MCQs

1. (a)	2. (e)	3. (b)	4. (c)	5. (e)	6. (a)	7. (b)	8. (b)
9. (d)	10. (b)						

Discussion Questions

1. What is the service package of your college or university?
2. List some occupations or sporting events where the ending is a dominant element in evaluating success.

3. Some suggest that customer expectation is the key to service success. Give an example from your own experience to support or refute this assertion.
4. Where would you place a drive-in church, a campus food vending machine, and a bar's automatic mixed drink machine on the service-system design matrix?
5. Why should a manager of a bank home office be evaluated differently from a manager of a bank branch?
6. Do you think a service operation can be successful by developing a system that combines characteristics from the three contrasting service designs presented in the chapter? Why or why not? Please provide examples.

NOTES

Further Readings

1. Chase, R. B. "The Customer Contact Approach to Services: Theoretical Bases and Practical Extensions." *Operations Research* 21, no. 4 (1981), pp. 698–705.
2. Chase, R. B., and U. Apte. "A History of Research in Service Operations: What's the Big Idea?" *Journal of Operations Management*, March 2007, pp. 375–86.
3. Chase, R. B., and S. Dasu. "Want to Perfect Your Company's Service? Use Behavioral Science." *Harvard Business Review* 72, no. 6 (May–June 2001), pp. 78–84.
4. Chase, R. B., and D. M. Stewart. "Make Your Service Fail-Safe." *Sloan Management Review*, Spring 1994, pp. 35–44.
5. Fitzsimmons, J. A., and M. J. Fitzsimmons. *Service Management: Operations, Strategy, Information Technology*. 7th ed. New York: Irwin/McGraw-Hill, 2010.
6. Frei, F. X. "The Four Things a Service Business Must Get Right." *Harvard Business Review* 86, no. 4 (April 2008), pp. 70–81.
7. Goldhar, J., Y. Braunstein, and D. Berg. "Services Innovation in the 21st Century: It All Begins with Defining Services vs. Products and Factory vs. Service Operations." University of California–Berkeley, Service Innovation Conference, April 26–28, 2007.
8. Karmarkar, U. "Will You Survive the Services Revolution?" *Harvard Business Review*, May–June 2004, pp. 99–107.
9. Metters, R., K. King-Metters, and M. Pullman. *Successful Service Operations Management*. 3rd ed. Mason, OH: Thomson South-Western Publishing, 2008.
10. J. A. Fitzsimmons and M. J. Fitzsimmons, *Service Management: Operations, Strategy, Information Technology*, 6th ed. (New York: Irwin/McGraw-Hill, 2008), p. 22.
11. Francis X. Frei, "Breaking the Trade-Off between Efficiency and Service," *Harvard Business Review* 84, no. 11 (November 2006), pp. 93–101.
12. Richard B. Chase and Sriram Dasu, "Want to Perfect Your Company's Service? Use Behavioral Science," *Harvard Business Review* 72, no. 6 (May–June 2001), pp. 78–84.
13. C. W. L. Hart, "The Power of Unconditional Service Guarantees," *Harvard Business Review* 56, no. 4 (July–August 1988), p. 55.
14. Gordon H. G. McDougall, T. Levesque, and P. VanderPlaat, "Designing the Service Guarantee: Unconditional or Specific?" *The Journal of Service Marketing* 12, no. 4 (1998), pp. 278–93. Copyright © 1998 MCB UP Ltd.
15. R. B. Chase and D. M. Stewart, "Make Your Service Fail-Safe," *Sloan Management Review*, Spring 1994, pp. 35–44.
16. T. Levitt, "Production-Line Approach to Service," *Harvard Business Review* 50, no. 5 (September–October 1972), pp. 41–52.
17. C. H. Lovelock and R. F. Young, "Look to Customers to Increase Productivity," *Harvard Business Review* 57, no. 2 (March–April 1979), pp. 168–78.
18. T. Peters, *Quality!* (Palo Alto, CA: TPC Communications, 1986), pp. 10–12.