

Winning in Service Markets Series: Vol. 12

# Service Quality and Productivity Management

**Jochen Wirtz**



*Winning in Service Markets* is a highly practical book. I love the comprehensive coverage of services marketing and the rigor. Also, it is easy to read and full of interesting, best practice examples. I recommend this book to everyone working in a service organization.

**Jan Swartz**

President, Princess Cruises

*Winning in Service Markets* provides a set of useful frameworks and prescriptions rooted in both practice and research. As such, it represents a refreshing alternative to the prevailing literature available to managers who are looking for insights rooted in sound theory. A must read for any practicing manager in the service economy.

**Leonard A. Schlesinger**

Baker Foundation Professor, Harvard Business School



The relationship between productivity and customer satisfaction is more complex. *Service Quality and Productivity Management* describes that the quality and productivity are twin paths in creating value for both customers and organizations. The relationships between service quality, productivity and profitability will also be examined in detail in this book. This book is the 12th book in the *Winning in Service Markets* series by services marketing expert Jochen Wirtz to cover the key aspects of services marketing and management based on sound academic evidence and knowledge.

**WS Professional**

[www.worldscientific.com](http://www.worldscientific.com)

Y0014 sc

# Winning in Service Markets Series

**Series Editor:** Jochen Wirtz (*National University of Singapore, Singapore*)

---

The Winning in Service Markets Series covers the key aspects of services marketing and management based on sound academic evidence and knowledge. The books in this series is written by services marketing expert Jochen Wirtz, author of globally leading textbook for Services Marketing. Each book in the series covers different themes in the study of services marketing and management, is accessible, practical and presented in an easy-to-read format for busy practitioners and eMBA students.

*Forthcoming\*:*

Building a World Class Service Organization

*by Jochen Wirtz*

*Published:*

Vol. 1 Understanding Service Consumers

*by Jochen Wirtz*

Vol. 2 Positioning Services in Competitive Markets

*by Jochen Wirtz*

Vol. 3 Developing Service Products and Brands

*by Jochen Wirtz*

Vol. 4 Pricing Services and Revenue Management

*by Jochen Wirtz*

Vol. 5 Service Marketing Communications

*by Jochen Wirtz*

Vol. 6 Designing Customer Service Processes

*by Jochen Wirtz*

Vol. 7 Balancing Capacity and Demand in Service Operations

*by Jochen Wirtz*

Vol. 8 Crafting the Service Environment

*by Jochen Wirtz*

Vol. 9 Managing People for Service Advantage

*by Jochen Wirtz*

Vol. 10 Managing Customer Relationships and Building Loyalty

*by Jochen Wirtz*

Vol. 11 Designing Complaint Handling and Service Recovery Strategies

*by Jochen Wirtz*

Vol. 12 Service Quality and Productivity Management

*by Jochen Wirtz*

\*More information on this series can also be found at:

<http://www.worldscientific.com/series/wsms>

**Winning in Service Markets Series: Vol. 12**

# **Service Quality and Productivity Management**

**Jochen Wirtz**



NEW JERSEY • LONDON • SINGAPORE • BEIJING • SHANGHAI • HONG KONG • TAIPEI • CHENNAI • TOKYO

*Published by*

**WS Professional**, an imprint of  
**World Scientific Publishing Co. Pte. Ltd.**

5 Toh Tuck Link, Singapore 596224

*USA office:* 27 Warren Street, Suite 401-402, Hackensack, NJ 07601

*UK office:* 57 Shelton Street, Covent Garden, London WC2H 9HE

For orders of individual copies, course adoptions, and bulk purchases: [sales@wspc.com](mailto:sales@wspc.com)

For orders of individual chapters and customized course packs: [sales@wspc.com](mailto:sales@wspc.com)

For adaptations or translation rights and permissions to reprint; [rights@wspc.com](mailto:rights@wspc.com)

**Winning in Service Markets Series — Vol. 12**  
**SERVICE QUALITY AND PRODUCTIVITY MANAGEMENT**

Copyright © 2018 by Jochen Wirtz

*All rights reserved.*

ISBN 9781944659448 (mobile book)

Desk Editor: Karimah Samsudin

Printed in Singapore

# *Dedication*

To my past and future EMBA and Executive Program participants.

I have been teaching EMBA and Executive Programs for over 20 years. This Winning in Service Markets Series is dedicated to you, the participants from these programs. You brought so much knowledge and experience to the classroom, and this series synthesizes this learning for future EMBA candidates and managers who want to know how to bring their service organizations to the next level.

# Preface

The main objective of this series is to cover the key aspects of services marketing and management, and that is based on sound academic research. Therefore, I used the globally leading text book I co-authored with Professor Christopher Lovelock (Title: *Services Marketing: People, Technology, Strategy*, 8th edition) as a base for this series, and adapted and rewrote it for managers. This is a unique approach.

This series aims to bridge the all-too-frequent gap between cutting edge academic research and theory, and management practice. That is, it provides a strongly managerial perspective, yet is rooted in solid academic research, complemented by memorable frameworks.

In particular, creating and marketing value in today's increasingly service and knowledge-intensive economy requires an understanding of the powerful design and packaging of intangible benefits and products, high-quality service operations and customer information management processes, a pool of motivated and competent front-line employees, building and maintaining a loyal and profitable customer base, and the development and implementation of a coherent service strategy to transform these assets into improved business performance. This series aims to provide the knowledge required to deliver these.

Winning in Service Markets comprises of the following volume:

- Vol 1: Understanding Service Consumers
- Vol 2: Positioning Services in Competitive Markets
- Vol 3: Developing Service Products and Brands
- Vol 4: Pricing Services and Revenue Management
- Vol 5: Service Marketing Communications
- Vol 6: Designing Customer Service Processes
- Vol 7: Balancing Capacity and Demand in Service Operations
- Vol 8: Crafting the Service Environment
- Vol 9: Managing People for Service Advantage
- Vol 10: Managing Customer Relationships and Building Loyalty
- Vol 11: Designing Complaint Handling and Service Recovery Strategies
- Vol 12: Service Quality and Productivity Management
- Vol 13: Building A World-Class Service Organization

# Contents

<b>Dedication</b>	3
<b>Preface</b>	4
<b>Introduction</b>	7
<b>Integrating Service Quality and Productivity Strategies</b>	12
Service Quality, Productivity and Profitability	
<b>What is a service quality?</b>	12
<b>Identifying and correcting service quality problems</b>	13
The gaps model in service design and delivery	
Key ways to close the gaps in service quality	
<b>Measuring service quality</b>	15
<b>Soft and hard service quality measures</b>	18
<b>Learning from customer feedback</b>	19
Key objectives of effective customer feedback systems	
Use a mix of customer feedback collection tools	
Analysis, reporting and dissemination of customer feedback	
<b>Hard measures of service quality</b>	31
<b>Tools to analyze and address service quality problems</b>	35
Root cause analysis: the fishbone diagram	
Pareto analysis	
Blueprinting: a powerful tool for identifying fail points	
<b>Return on quality</b>	39
Assess costs and benefits of quality initiatives	
Determine the optimal level of reliability	
<b>Defining and measuring productivity</b>	44
Defining productivity in a service context	
Measuring productivity	
Service productivity, efficiency and effectiveness	



<b>Improving service productivity</b>	46
Generic productivity improvement strategies	
Customer-driven approaches to improve productivity	
How productivity improvements impact quality and value	
Integration and systematic approaches to improving service quality and productivity	
Total quality management	
ISO 9000 certification	
Malcolm-Baldrige and EFQM approaches	
Which approach should a firm adopt?	
<b>Conclusion</b>	61
<b>Summary</b>	63
<b>Endnotes</b>	68
<b>About the Author</b>	73
<b>Acknowledgments</b>	74

# Introduction

The relationship between productivity and customer satisfaction is more complex. *Service Quality and Productivity Management* describes that the quality and productivity are twin paths in creating value for both customers and organizations. The relationships between service quality, productivity and profitability will also be examined in detail in this book. This book is the 12th book in the Winning in Service Markets series by services marketing expert Jochen Wirtz to cover the key aspects of services marketing and management based on sound academic evidence and knowledge.



VOLUME 12

# Service Quality and Productivity Management

Not everything that counts can be counted, and not everything that can be counted, counts

*Albert Einstein  
Theoretical physicist and Nobel Price winner*

Improve quality and you automatically improve productivity. You capture the market with lower price and better quality. You stay in business and you provide jobs. It's so simple.

*W. Edwards Deming  
Engineer, statistician, professor, and management consultant  
Father of the Total Quality Management movement*

Our mission remains inviolable: Offer the customer the best service we can provide; cut our costs to the bones; and generate a surplus to continue the unending process of renewal.

*Joseph Pillay  
Former Chairman, Singapore Airlines*

## INTEGRATING SERVICE QUALITY AND PRODUCTIVITY STRATEGIES

This volume describes that the quality and productivity are twin paths in creating value for both customers and organizations. The relationships between service quality, productivity and profitability will also be examined in detail (Figure 1).

### Service Quality, Productivity, and Profitability<sup>1</sup>

The individual relationships between service productivity, customer satisfaction (i.e., excellence) and profitability are shown in Figure 2. When examining the individual links, one can see that, everything being equal, higher customer satisfaction should improve the bottom line through higher repeat purchases, share-of-wallet, and referrals. Likewise, everything being equal, higher productivity should lead to higher profitability as costs are reduced.

The relationship between productivity and customer satisfaction is more complex. There is the general notion of a service productivity–customer satisfaction trade-off. However, although the relationships between productivity, service quality and profitability can conflict, there are examples where productivity gains and customer satisfaction are aligned. For example, if a service firm redesigns customer service processes to be leaner, faster, and more convenient by eliminating non-value-adding

**Figure 2:** The service quality–productivity–profit triangle

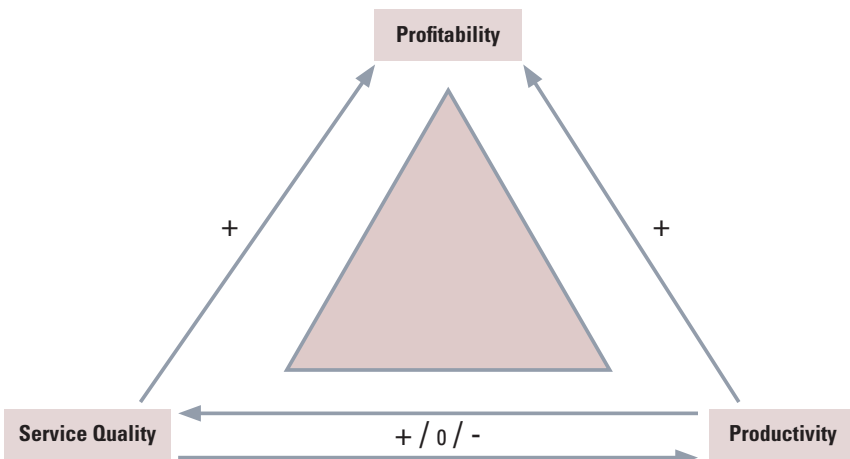
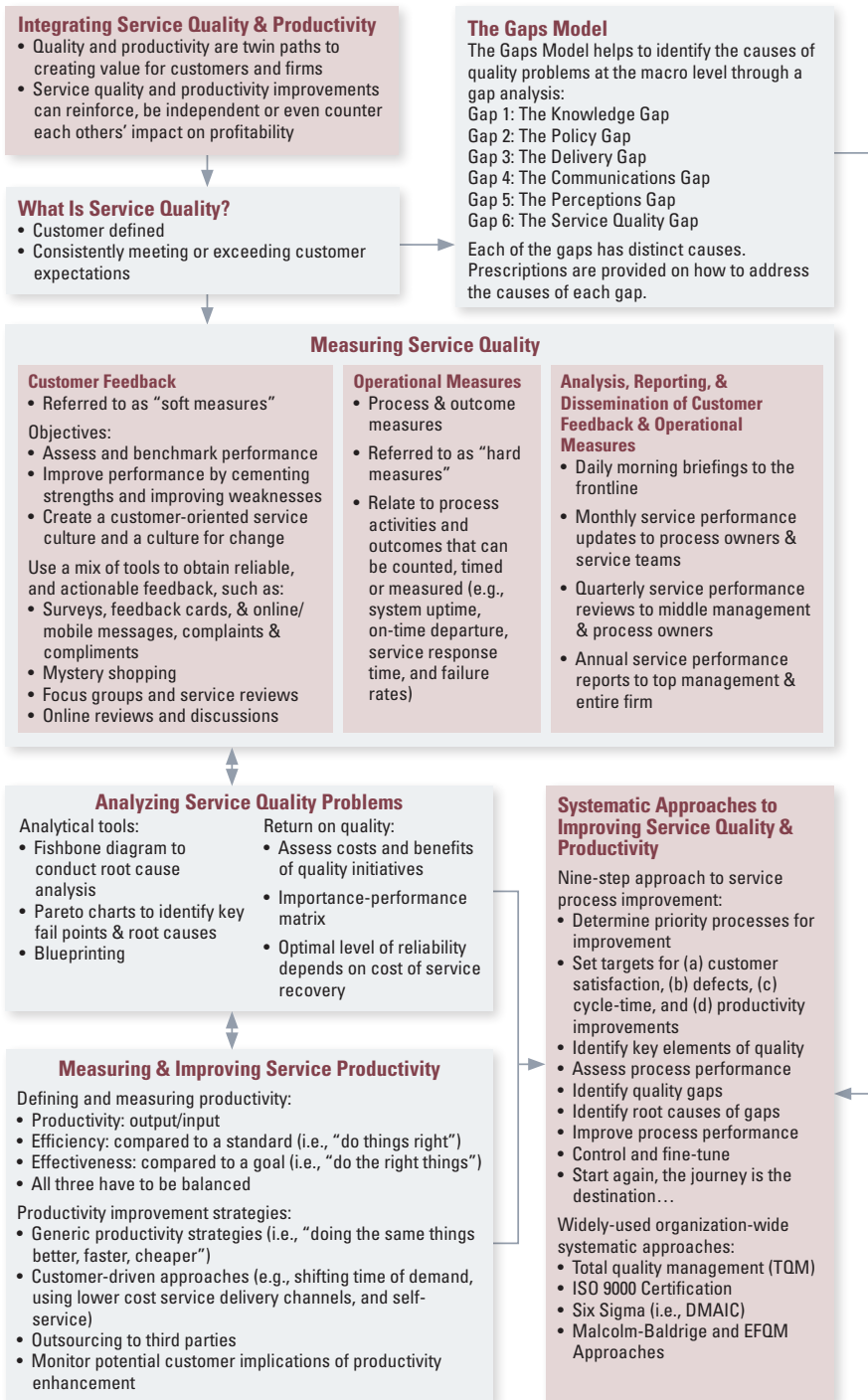


Figure 1: Improving service quality and productivity



work steps, then both productivity and customer satisfaction should improve, and both should have a direct and indirect positive effect on profitability. An example would be serve-it-yourself yogurt stores, which substitute relatively inexpensive and easy-to-use self-serve machines for multiple human contact people. In this case, there is a positive impact on profitability through increased productivity and increased customer satisfaction, resulting in higher customer loyalty.

In contrast, if productivity improvements result in changes in the service experience that customers do not like, customer satisfaction will drop. For example, getting service employees to work faster may make customers feel rushed and unwanted. Likewise, replacing a human agent in a customer contact center with an interactive voice response system to reduce headcount, doubling class sizes to increase the productivity of university professors, and reducing the frequency of trains to increase load factors can all have negative implications for the customer experience. In these cases, there is a trade-off to be expected, whereby in the short term, productivity enhancements have an immediate and direct positive effect on profitability. However, these productivity enhancements lead to lower customer satisfaction which, over the medium to long term, are likely to lead to lower customer loyalty and referrals. This means that these productivity improvements not only have a positive direct effect, but also a negative indirect effect (via customer satisfaction) on profitability.

Likewise, marketing strategies designed to improve customer satisfaction can prove costly and disruptive if the implications for operations and human resources have not been carefully thought through. For example, replacing an interactive voice response system with human agents in a customer contact center and increasing head count, reducing class sizes to improve the learning experience of students, and increasing the frequency of trains to increase passenger convenience will have medium to long-term positive direct effects on profitability via customer loyalty. However, these changes will also have an immediate negative indirect effect on profitability via reduced productivity. The net result on profitability in both cases depends on the relative impact of the direct and indirect effects.

Finally, some quality improvements may not have any implications on productivity (e.g., improving a process in the front office that does not change the cost of providing it) and vice versa (e.g., improving efficiency

of back office operations that do not have implications for customer touch points). In these cases, there is only a single positive effect of productivity improvements on profitability, or of customer satisfaction improvements on profitability.

One can see that the relationship between productivity and customer satisfaction can be positive, neutral, or negative. In broad terms, quality focuses on the benefits created for the customer's side of the equation, and productivity addresses the financial costs incurred by the firm, and if not properly integrated, these two foci can be in conflict. The bottom line is that service quality and productivity-improvement strategies must be considered jointly, not in isolation. Next, the ways to improve service quality will be examined.

### WHAT IS SERVICE QUALITY?

*Quality* can mean different things to people depending on the context.<sup>2</sup> Common perspectives on quality include the manufacturing-based approach. It is primarily concerned with engineering and manufacturing practices and typically means delivery against measurable standards within certain tolerance levels (e.g., tolerance levels for weld seams in car manufacturing). In services, we would say that quality is operations-driven.

**Figure 3:** Service quality can be difficult to manage for the fussy diner.





It focuses on the conformance to internally developed specifications, and they tend to be tightly aligned with productivity and cost-containment goals.

Service researchers argue that the nature of services require a distinctive approach in defining and measuring service quality. The intangible, multifaceted nature of many services makes it harder to evaluate the quality of a service compared to a good. As customers are often involved in service production, a distinction needs to be drawn between the *process* of service delivery (what Christian Grönroos calls functional quality) and the actual *output* (or outcome) of the service (what he calls technical quality).<sup>3</sup> Grönroos and others also suggest that the perceived quality of a service is the result of an evaluation process in which customers compare their perceptions of service delivery and its outcome to what they expect (Figure 3). Therefore, service quality from the user's perspective is defined as a high standard of performance that consistently meets or exceeds customer expectations (see Volume 1 for more details).

## IDENTIFYING AND CORRECTING SERVICE-QUALITY PROBLEMS

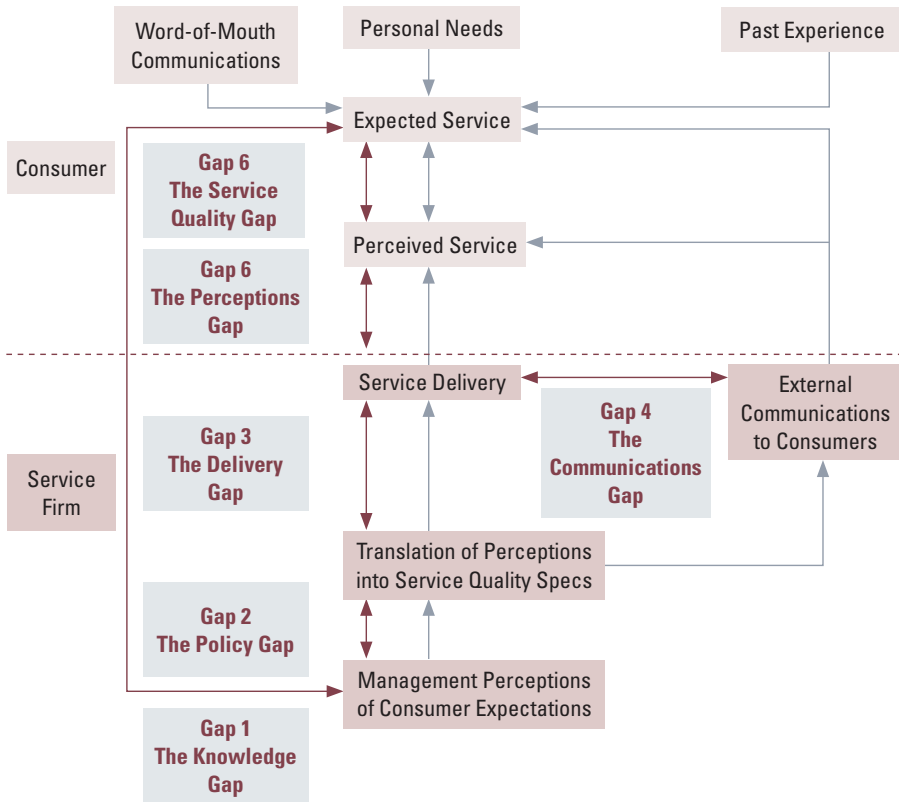
Next, a model that helps to identify and correct service-quality problems at the overall firm level will be explored.

### **The Gaps Model in Service Design and Delivery**

Valarie Zeithaml, A. Parasuraman, and Leonard Berry identified four potential gaps within the service organization that may lead to the fifth and most serious final gap — the difference between what customers expected and what they perceived was delivered.<sup>4</sup> Figure 4 extends and refines their framework to identify a total of six types of gaps that can occur at different points during the design and delivery of a service performance:

- **Gap 1:** The *knowledge gap* is the difference between what senior management believes customers expect and what customers actually need and expect.
- **Gap 2:** The *policy gap* is the difference between management's understanding of customers' expectations and the service standards

Figure 4: The Gaps Model



Source: Adapted from the original five-gaps model developed by Parasuraman, A., Zeithaml, V. A., & Berry, L. L. "A conceptual model of service quality and its implications for future research". *Journal of Marketing* 49, Fall 1985 41–50; Zeithaml, V. A., Bitner, M. J., & Gremler, D. *Services Marketing: Integrating Customer Focus Across the Firm* (p. 46). NY: McGraw Hill/Irwin, 2006. A further gap (Gap 5) was added by Christopher Lovelock (1994), *Product Plus* (p. 112). NY: McGraw Hill.

they set for service delivery. We call it the policy gap because the management has made a policy decision not to deliver what they think customers expect. Reasons for setting standards below customer expectations are typically cost and feasibility considerations.

- **Gap 3:** The *delivery gap* is the difference between specified service standards and service delivery teams' actual performance on these standards.
- **Gap 4:** The *communications gap* is the difference between what the company communicates, and what the customer understands and subsequently experiences. This gap is caused by two sub-gaps.<sup>5</sup> First, the *internal* communication gap is the difference between

what the company's advertising and sales personnel think are the product's features, performance, and service-quality level, and what the company is actually able to deliver. Second, the *external communications gap* (also referred to as the overpromise gap) can be caused by advertising and sales personnel being assessed by the sales they generate. This can lead them to overpromise in order to generate sales.

- **Gap 5:** The *perceptions gap* is the difference between what is actually delivered and what customers feel they have received because they are unable to judge the service quality accurately.
- **Gap 6:** The *service quality gap* is the difference between what customers expect to receive and their perception of the service that is actually delivered.

In this model, Gaps 1, 5, and 6 represent external gaps between the customer and the organization. Gaps 2, 3, and 4 are internal gaps occurring between various functions and departments within the organization.

### **Key Ways to Close the Gaps in Service Quality**

Gaps at any point in the service design and delivery can damage relationships with customers. The service quality gap (Gap 6) is the most critical. Hence, the ultimate goal in improving service quality is to close or narrow this gap as much as possible. To achieve this, service organizations usually need to first work on closing the other five gaps depicted in Figure 4. Improving service quality requires identifying the specific causes of each gap, and then developing strategies to close them.

The strength of the gaps model is that it offers generic insights and solutions that can be applied across industries. Table 1 summarizes the series of generic prescriptions for closing the six quality gaps. These prescriptions are a good starting point to think about how to close specific gaps in an organization, and the details of how to do this at the micro or process level will be discussed later in this volume.

## **MEASURING SERVICE QUALITY**

It is commonly said that “what is not measured is not managed”. Without measurement, managers cannot be sure whether service-quality gaps

**Table 1:** Suggestions for closing service-quality gaps.

<b>Gap 1: The Knowledge Gap</b>
<b>Suggestion: Educate Management About What Customers Expect</b>
<ul style="list-style-type: none"><li>• Implement an effective customer feedback system that includes satisfaction research, complaint and compliment content analysis, customer panels, and online monitoring.</li><li>• Sharpen market research procedures including questionnaire and interview design, sampling, and field implementation, and periodically repeat research studies.</li><li>• Increase interactions between customers and senior management (e.g., programs such as “a day in the field” and senior management taking calls in customer contact centers).</li><li>• Improve upward communications, and facilitate and encourage communication between frontline employees and management.</li></ul>
<b>Gap 2: The Policy Gap</b>
<b>Suggestion: Establish the Right Service Products, Processes and Standards That Are Based on Customer Needs and Expectations</b>
<ul style="list-style-type: none"><li>• Get the products and customer service processes right:<ul style="list-style-type: none"><li>– Use a rigorous, systematic, and customer-centric process for designing and redesigning service products and customer service processes.</li><li>– Standardize repetitive work tasks to ensure consistency and reliability by substituting hard technology for human contact and improving work methods (soft technology).</li></ul></li><li>• Set, communicate, and reinforce measurable customer-oriented service standards for all work units:<ul style="list-style-type: none"><li>– Establish a set of clear service quality goals for each step in the service delivery that are challenging, realistic, and explicitly designed to meet customer expectations.</li><li>– Ensure that employees understand and accept these goals, standards, and priorities.</li></ul></li><li>• Develop tiered service products that meet customer expectations:<ul style="list-style-type: none"><li>– Consider premium, standard, and economy-level products to allow customers to self-segment according to their needs, or</li><li>– Offer customers different levels of service at different prices.</li></ul></li></ul>
<b>Gap 3: The Delivery Gap</b>
<b>Suggestion: Ensure That Performance Meets Standards</b>
<ul style="list-style-type: none"><li>• Ensure that customer service teams are motivated and are able to meet service standards:<ul style="list-style-type: none"><li>– Improve recruitment with a focus on employee–job fit; select employees for the abilities and skills needed to perform their job well.</li><li>– Train employees on the technical and soft skills needed to perform their assigned tasks effectively, including interpersonal skills, especially for dealing with customers under stressful conditions.</li><li>– Clarify employee roles and ensure that employees understand how their jobs contribute to customer satisfaction; teach them about customer expectations, perceptions, and problems.</li><li>– Build cross-functional service teams that can offer customer-centric service delivery and problem resolution, including effective service recovery.</li><li>– Empower managers and employees in the field by pushing decision-making power down the organization.</li><li>– Measure performance, provide regular feedback, and reward customer service team performance as well as individual employees and managers for attaining quality goals.</li></ul></li></ul>

- Install the right technology, equipment, support processes, and capacity:
  - Select the most appropriate technologies and equipment for enhanced performance.
  - Ensure that employees working on internal support jobs provide good service to their own internal customer, the frontline personnel.
  - Balance demand against productive capacity.
- Manage customers for service quality:
  - Educate customers to perform their roles and responsibilities in a service delivery effectively.
- Effectively align intermediaries and third parties involved in service delivery:
  - Align objectives, performance, costs and rewards with intermediaries (e.g., as in outsourced service delivery in customer contact centers or airline check in counters).
  - Monitor and incentivize service quality.

#### **Gap 4: The Communications Gap**

##### **Suggestion: Close the Internal and External Communications Gaps by Ensuring That Communication Promises Are Realistic and Correctly Understood by Customers**

- Ensure that communications content sets realistic customer expectations, and educate managers responsible for sales and marketing communications about operational capabilities:
  - Seek inputs from frontline employees and operations personnel when new communications programs are developed.
  - Let service providers preview advertisements and other communications before customers are exposed to them.
  - Get sales staff to involve operations staff in face-to-face meetings with customers.
  - Develop internal educational and motivational campaigns to strengthen understanding and integration among the marketing, operations, and human resource functions, and to standardize service delivery across different locations.
- Align incentives for sales teams with those of service delivery teams. This will avoid the problem where the sales teams focus exclusively on generating sales (e.g., through overpromising) and neglect customer satisfaction (e.g., through disappointed expectations).
- Be specific with promises and manage customers' understanding of communication content:
  - Pre-test all advertising, brochures, telephone scripts, and website content to see if target audience interprets them as the firm intends (if not, revise and retest). Make sure the advertising content reflects service characteristics most important to customers. Let them know what is and is not possible, and why.
  - Identify and explain, in real time, the reasons for shortcomings in service performance, highlighting those that cannot be controlled by the firm.
  - Document beforehand what tasks and performance guarantees are included in an agreement or contract.

#### **Gap 5: The Perception Gap**

##### **Suggestion: Tangibilize and Communicate the Service Quality Delivered**

- Make service quality tangible and communicate the service quality delivered:
  - Develop service environments and physical evidence cues that are consistent with the level of service provided.
  - For complex and credence services, keep customers informed during service delivery on

what is being done, and give debriefings after the delivery so customers can appreciate the quality of service received.

- After completion of the work, explain what work was performed in relation to a specific billing statement.
- Provide physical evidence (e.g., for repairs, show customers the damaged components that were removed).

### Gap 6: The Service Gap

#### Suggestion: Close Gaps 1 to 5 to Consistently Meet Customer Expectations

- Gap 6 is the accumulated outcome of all the preceding gaps. It will be closed when Gaps 1 to 5 have been addressed.

Source: Adapted and extended from Valarie A. Zeithaml, A. Parasuraman, and Leonard L. Berry, *Delivering Service Quality: Balancing Customer Perceptions and Expectations*. New York: The Free Press, 1990, Chapters 4–7; and Valarie A. Zeithaml, Mary Jo Bitner, and Dwayne D. Gremler (2013), *Services Marketing: Integrating Customer Focus Across the Firm*. 5<sup>th</sup> ed., New York: McGraw-Hill, Chapter 2. The remaining prescriptions were developed by the authors.

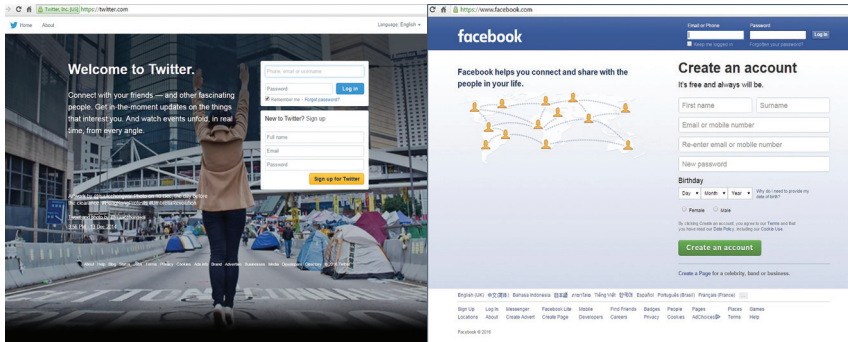
exist, let alone what types of gaps, where they exist, and what potential corrective actions should be taken. Certainly, measurement determines whether goals for improvement are met after changes have been implemented. The next section will discuss how to use measurements to guide our service-quality improvement efforts.

## SOFT AND HARD SERVICE QUALITY MEASURES

Customer-defined standards and measures of service quality can be grouped into two broad categories: “soft” and “hard”. Soft standards and their measures are those that cannot be easily observed and are typically gathered by talking to customers. Soft standards provide direction, guidance and feedback to employees on how to achieve customer satisfaction, and they can be quantified by measuring customer perceptions and beliefs.<sup>6</sup> SERVQUAL (as seen in Volume 1) is an example of a sophisticated soft measurement system. A variety of other customer feedback tools are discussed later in this volume.

Hard standards and measures, in contrast, are typically process activities and outcomes that can be counted, timed or measured. Such measures may include how many orders were filled correctly, the time required to complete a specific task, how many minutes customers had to wait in line at a particular stage in the service delivery, how many trains arrived late, how many bags were lost, the temperature of a particular food

**Figure 5:** Social media such as Facebook and Twitter have been deployed by organizations to gather valuable feedback from customers.



item, how many telephone calls were dropped while customers were on hold, or how many patients made a complete recovery following a specific type of surgery. Standards are often set with reference to the percentage of occasions on which a particular measure is achieved. The challenge for service marketers is to ensure that operational measures of service quality reflect customer needs and wants.

Organizations known for service excellence make use of both soft and hard measures (Figure 5). These organizations are good at listening to both their customers and their customer-contact employees. The larger the organization, the more important it is to create formalized feedback systems using a variety of professionally-designed and implemented customer feedback and research procedures. The next section provides an overview of soft measures on customer feedback, followed by hard measures.

### LEARNING FROM CUSTOMER FEEDBACK<sup>7</sup>

How can companies measure their performance against soft standards of service quality? According to Leonard Berry and A. Parasuraman:

*[C]ompanies need to establish ongoing listening systems using multiple methods among different customer groups. A single service quality study is a snapshot taken at a point in time and from a particular angle. Deeper insight and more informed decision-making come from a continuing series of snapshots taken from various angles*

*and through different lenses, which form the essence of systematic listening.*<sup>8</sup>

This section discusses how customer feedback can be systematically collected, analyzed and disseminated to relevant departments via an institutionalized customer feedback system to achieve customer-driven learning and service improvements.<sup>9</sup>

### **Key Objectives of Effective Customer Feedback Systems**

“It is not the strongest species that survive, nor the most intelligent, but the ones most responsive to change”, stated Charles Darwin. Similarly, many strategists have concluded that in increasingly competitive markets, the best competitive advantage for a firm is to learn and change faster than its competition.<sup>10</sup> This notion is echoed by Jack Welch, former CEO of General Electric, who said when he outlined his strategy for the 21<sup>st</sup> century, “We have only two sources of competitive advantage: first, the ability to learn more about our customers faster than the competition, and second, the ability to turn that learning into action faster than the competition”.

Customer feedback is a key input for becoming and remaining a customer-driven learning organization, and effective customer feedback systems facilitate fast learning. Their objectives typically fall into the following three main categories:

- (1) *Assessment and Benchmarking of Service Quality and Performance.* The objective is to answer the question “How satisfied are our customers?” This objective includes learning about how well a firm performed in comparison to its main competitor(s), in comparison to the previous year (or quarter, or month), whether investments in certain service aspects have paid off in terms of customer satisfaction, and where the firm wants to be the following year. Often, a key objective of comparison against other units (branches, teams, service products, and competitors) is to motivate managers and service staff to improve performance, especially when the results are linked to compensation.

Benchmarking does not only have to be with companies from the same industry. For example, Southwest Airlines



benchmarked Formula One pit-stops for speedy turnaround of aircraft; Pizza Hut benchmarked FedEx for on-time package delivery; and Ikea examined the military for excellence in coordination and logistics management.

- (2) *Customer-Driven Learning and Improvements.* Here, the objective is to answer the questions, “What makes our customers happy or unhappy?” and “What are our strengths we want to cement, and what are our weaknesses we need to improve on?” For this, more specific or detailed information on processes and products is required to guide a firm’s service improvement efforts, and to pinpoint which areas have possible high returns for quality investment.
- (3) *Creating a Customer-Oriented Service Culture.* This objective is concerned with bringing the “voice of the customer” into the organization, focusing the organization on customer needs and customer satisfaction, and rallying the entire organization towards a service-quality culture. It also includes fostering a culture of continuous improvement and change.

Of the three objectives just discussed, firms seem to do well on the first point, but often miss great opportunities in the other two. Neil Morgan, Eugene Anderson, and Vikas Mittal concluded in their research on customer satisfaction information usage (CSIU) the following:

*Many of the firms in our sample do not appear to gain significant customer-focused learning benefits from their CS [customer satisfaction] systems, because they are designed to act primarily as a control mechanism [i.e., for assessment and benchmarking]. ... [Firms] may be well served to re-evaluate how they deploy their existing CSIU resources. The majority of CSIU resources...are consumed in CS data collection. This often leads to too few resources being allocated to the analysis, dissemination, and utilization of this information to fully realize the potential payback from the investment in data collection.<sup>11</sup>*

### **Use a Mix of Customer Feedback Collection Tools**

Renee Fleming, soprano and America’s beautiful voice, once said: “We

Table 2: Strengths and weaknesses of key customer feedback collection tools.

Collection Tools	Level of Measurement							
	Firm	Process	Transaction Specific	Actionable	Representative, reliable	Potential for Service Recovery	First-hand Learning	Cost-Effectiveness
Total market survey (including competitors)	●	○	○	○	●	○	○	○
Annual survey on overall satisfaction	●	◐	○	○	●	○	○	○
Transactional survey	●	●	◐	◐	●	○	○	○
Service feedback cards and messages	◐	●	●	◐	◐	●	◐	●
Mystery shopping	○	◐	●	●	○	○	◐	○
Unsolicited feedback (e.g., Complaints)	○	◐	●	●	○	●	◐	●
Focus group discussions	○	◐	●	●	○	◐	●	◐
Service reviews	○	◐	●	●	○	●	●	◐
Online reviews and discussions (e.g., Reviews and social media postings)	○	◐	●	●	○	●	●	●
Legend:	● Meets requirements fully; ◐ moderately; ○ hardly at all							

Adapted from Jochen Wirtz and Monica Tomlin (2000), "Institutionalizing Customer-driven Learning through Fully Integrated Customer Feedback Systems," *Managing Service Quality*, Vol. 10, No. 4, p. 210.

singers are unfortunately not able to hear ourselves sing. You sound entirely different to yourself. We need the ears of others — from outside.” Likewise, firms need to listen to the voice of the customer. Table 2 gives an overview of typically used feedback tools and their ability to meet various requirements. Recognizing that different tools have different strengths and weaknesses, service marketers should select a mix of customer feedback collection tools that jointly deliver the needed information. As Leonard Berry and A. Parasuraman observed, “Combining approaches enables a firm to tap the strengths of each and compensate for weaknesses.”<sup>12</sup>

*Total Market, Annual, and Transactional Surveys.* Total market and annual surveys typically measure satisfaction with all major customer service processes and products.<sup>13</sup> The level of measurement is usually high, with the objective of obtaining a global index or indicator of overall service satisfaction for the entire firm. This could be based on indexed (e.g., using various attribute ratings) and/or weighted data (e.g., weighted by core segments and/or products).

Overall indices such as these tell us how satisfied customers are, but not why they are happy or unhappy. There are limits to the number of questions that can be asked about each individual process or product. For example, a typical retail bank may have 30 to 50 key customer service processes (e.g., from car loan applications and cash deposits at the teller to online banking). Due to the sheer number of processes, many surveys have room for only one or two questions per process (e.g., how satisfied are you with our ATM services?) and cannot address issues in greater detail.

In contrast, transactional surveys, also called intercept surveys, are typically conducted after customers have completed a specific transaction (Figure 6). At this point, if time permits, they may be queried about the process in some depth. In the case of the bank, all key attributes and aspects of ATM services could be included in the survey, including some open-ended questions, such as “liked best”, “liked least”, and “suggested improvements”. Such feedback is more actionable, can tell the firm why customers are happy or unhappy with the service, and usually yields specific insights on how customer satisfaction can be improved.

Many market research agencies offer cost-effective email, SMS, electronic terminals, and app-based transactional survey tools. For example, hotel guests receive an automated email or message with a link

**Figure 6:** Transactional surveys are typically conducted following service delivery.



Photo Credit: Changi Airport Group

to an online survey after checking out. Monthly online reports are then automatically generated for the hotel group at the overall level, for each of the individual hotels in a chain, and even for individual units within each hotel (e.g., front desk, rooms, room service, restaurants, spa, and gym). Such solutions are fully automated and can therefore be provided at lower cost of as little as \$100 per hotel per month in a large chain.

Similarly, point-of-transaction surveys on touchscreen terminals allow the measurement of customer satisfaction on key attributes immediately after a transaction has taken place. Again, the collection, analysis and reporting are fully automated and cost-effective, and the analysis can even be broken down to the individual service employee as they sign out of their service terminals.

All three survey types are representative and reliable when designed properly. Representativeness and reliability are required for:

- (1) Accurate assessments of where the company, a process, branch, team, or individual stands relative to quality goals; it is important to have a representative and reliable sample, to ensure that observed changes in quality scores are not the result of sample biases and/or random errors;

- (2) Evaluations of individual service employees, service-delivery teams, branches, and/or processes, especially when incentive schemes are linked to such measures; the methodology has to be water-tight if staff are to trust and buy into the results, especially when surveys deliver bad news.

The potential for service recovery is important and should, if possible, be designed into feedback collection tools. However, many surveys promise anonymity, making it impossible to identify and respond to dissatisfied respondents. In personal encounters or telephone surveys, interviewers can be instructed to ask customers whether they would like the firm to get back to them on dissatisfying issues.

*Service Feedback Cards, Online, and Mobile Messages.* These powerful and inexpensive tools involve providing customers the opportunity to use feedback cards, online forms, e-mail, text messaging or apps<sup>14</sup> to provide feedback, typically to a central customer feedback unit. For example, a feedback card can be attached to each housing loan approval letter or to each hospital invoice. These cards are a good indicator of process quality and yield specific feedback on what works well and what doesn't. However, customers who are delighted or very dissatisfied are likely to be overrepresented among the respondents, which affects the reliability and representativeness of this tool.

*Mystery Shopping.* Service businesses often use “mystery shoppers” to determine whether frontline staff display desired behaviors (*Service Insights 1*). Banks, retailers, car rental firms and hotels are among the industries actively using mystery shoppers. For example, the central reservation offices of a global hotel chain may appoint a research agency to conduct a large-scale monthly mystery caller survey to assess the skills of individual associates in relation to the phone sales process. Actions such as the correct positioning of the various products, upselling and cross-selling, and closing the deal are measured. The survey also examines the quality of the phone conversation on criteria such as “a warm and friendly greeting” and “establishing rapport with the caller”. Mystery shopping provides highly actionable and in-depth insights for coaching, training, and performance evaluation.

As the number of mystery calls or visits is typically small, no individual survey is reliable or representative. However, if a particular

staff member performs well (or poorly) month after month, managers can infer with reasonable confidence that this person's performance is good (or poor).

## SERVICE INSIGHTS 1

### Customers as Quality Control Inspectors?

Mystery shopping is a good method for checking whether frontline employees display the desired and trained behaviors and follow the specified service procedures, but don't use customer surveys for this. Ron Kaufman, founder of Up Your Service! College, describes a service experience:

"We had a wonderful ride in the hotel car from the airport. The driver was so friendly. He gave us a cold towel and a cool drink. He offered a choice of music, talked about the weather, and made sure we were comfortable with the air conditioning. His smile and good feelings washed over us, and I liked it!"

"At the hotel, I signed the guest registration and gave my credit card. Then the counter staff asked me to complete another form". It read:

### LIMOUSINE SURVEY

To consistently ensure the proper application of our quality standards, we value your feedback on our limousine service:

1. Were you greeted by our airport representative?	YES/NO
2. Were you offered a cold towel?	YES/NO
3. Were you offered cold water?	YES/NO
4. Was a selection of music available?	YES/NO
5. Did the driver ask you about the air conditioning?	YES/NO
6. Was the driver driving at a safe speed?	YES/NO

Room Number: \_\_\_\_\_

Limo Number: \_\_\_\_\_ Date: \_\_\_\_\_

Kaufman continued: “As I read the form, all the good feelings fell away. The driver’s enthusiasm suddenly seemed a charade. His concern for our well-being became just a checklist of actions to follow. His good mood was merely an act to meet the standard, not a connection with his guests. I felt like the hotel’s quality control inspector, and I did not like it. If the hotel wants my opinion, make me an advisor, not an inspector. Ask me: What did you enjoy most about your ride from the airport? (I had told them about their wonderful driver). What else could we do to make your ride even more enjoyable? (I’d have recommended offering the use of a cell phone).”

Source: Copyright © 2009 Ron Kaufman. Used with permission.

*Unsolicited Customer Feedback.* Customer complaints, compliments, and suggestions can be transformed into a stream of information that can be used to help monitor quality, and highlight improvements needed to the service design and delivery. Complaints and compliments are rich sources of detailed feedback on what makes customers unhappy and what delights them.

Like feedback cards, unsolicited feedback is not a reliable measure of overall customer satisfaction, but it is a good source of ideas for improvement. If the objective of collecting feedback is mainly to get ideas on what to improve (rather than for benchmarking and/or assessing staff), reliability and representativeness are not needed, and more qualitative tools such as complaints/compliments or focus groups generally suffice.

Detailed customer complaint and compliment letters, recorded telephone conversations, and direct feedback from employees can also serve as an excellent tool for communicating internally what customers want, and allowing employees and managers at all levels to “listen” to customers first hand. Such learning is much more powerful for shaping the thinking and customer orientation of service staff than using “clinical” statistics and reports. For example, Singapore Airlines prints excerpts from complaint and compliment letters in its monthly employee magazine. Southwest Airlines shows video footage of customers providing feedback to service staff in their training sessions. Seeing actual customers giving

comments about their service (positive and negative) leaves a much deeper and lasting impression on staff than any statistical analysis, and encourages them to further improve.

For complaints, suggestions, and inquiries to be useful as research input, they have to be funneled into a central collection point, logged, categorized, and analyzed.<sup>15</sup> That requires a system for capturing customer feedback where it is made, and then reporting it to a central unit. Some firms use a simple Intranet site to record all feedback received by any staff member. Coordinating such activities is not a simple matter, due to many entry points, including the firm's own frontline employees who may be in contact with customers face-to-face, by telephone, or via mail or email, intermediary organizations acting on behalf of the original supplier, and managers who normally work backstage, but who are contacted by a customer seeking higher authority.

*Focus Group Discussions and Service Reviews.* Both tools give specific insights on potential service improvements and ideas. Typically, focus groups are organized by key customer segments or user groups to drill down on the needs of these users. Service reviews are in-depth, one-on-one interviews that are usually conducted once a year with a firm's most valuable customers. Typically, a senior executive of the firm visits the customer and discusses issues, such as how well the firm performed the previous year and what should be maintained or changed. The senior executive then goes back to the organization and discusses the feedback with his or her account managers, and then both write a letter back to the client detailing how the firm will respond to that customer's service needs and how the account will be managed the following year.

Apart from providing an excellent learning opportunity (especially when the reviews across all customers are compiled and analyzed), service reviews focus on the retention of the most valuable customers and get high marks for service recovery potential.

*Online Reviews and Discussions.* User-generated content and data can increasingly provide rich insights into quality perceptions of a firm and its competitors, and how these comparisons vary over time at an increasingly granular attribute and temporal level.<sup>16</sup> Sentiment analysis of postings and automated text processing often allows real time insights into changes in consumer perceptions.<sup>17</sup> As one study showed, monitoring online sentiments has been shown to be a leading indicator of offline brand



tracking surveys and even stock market prices.<sup>18</sup> Online monitoring tools combined with big data analytics allow real-time sensing of information, location-based and user-generated content will be analyzed increasingly using techniques such as text mining, image processing and classification, social geotagging, human annotations, and geo-mapping.<sup>19</sup>

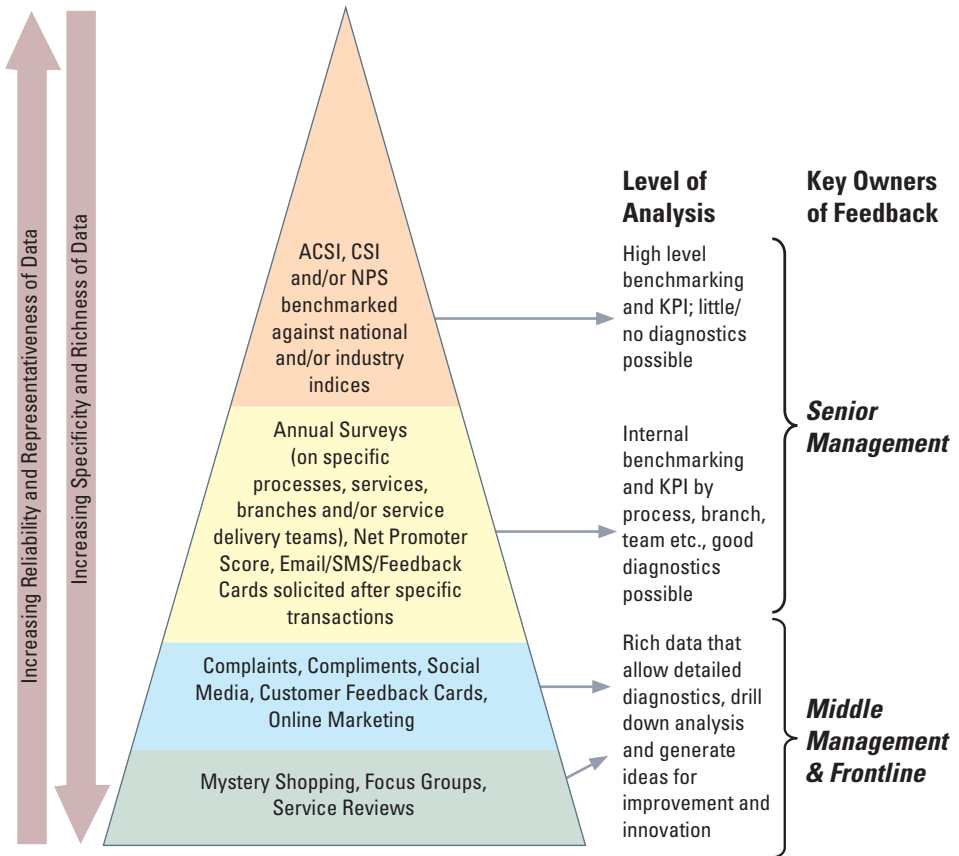
However, such analyses should be seen as augmenting more traditional tools such as surveys and focus groups. Consider the following example. A high quality, high-priced grab-and-go-food business showed high growth (i.e., their customers must have loved what they offer), but online reviews were critical (e.g., “If you have money to spare, you could do worse”, and “The prices are seriously whacked”), and its rating on an important review website was only three out of five stars.

One of the co-owners then attended a meeting with the elite reviewers of this site and, to his surprise, found these reviewers looked nothing like their customers, who tended to be professionals in their 30s and older. These reviewers were mostly in their 20s, had ample spare time to write free reviews, and seemed much less affluent than the firm’s customers. The co-owner learned from his conversations with these reviewers that they were highly price sensitive and were not willing to pay premium prices for premium food, which were factors that undoubtedly colored their reviews. In fact, they liked the food, but they downgraded the business as they felt the price was too high. The management of this firm responded to these findings with increasing investment in traditional focus groups to ensure that they respond to the needs of their core market.<sup>20</sup> Not relying too much on online user-generated content seems especially important if a firm’s core target segments are expected to differ from the people who post their comments online.

### **Analysis, Reporting, and Dissemination of Customer Feedback**

Choosing the relevant feedback tools and collecting customer feedback is meaningless if the company is unable to disseminate the information to the relevant parties to take action. Hence, to drive continuous improvement and learning, a reporting system needs to deliver feedback and its analysis to frontline staff, process owners, branch or department managers, and top management. Figure 7 provides an overview of which information should go to different key stakeholders in the organization. It also illustrates nicely how different tools complement each other: the top-level tools provide the

**Figure 7:** Mapping reporting of tools to levels of management.



**Legend:**

ACSI= American Customer Satisfaction Index;

CSI = Customer Satisfaction Index, typically at the firm-level;

NPS = Net Promoter Score.

benchmarking over time and against competition, and the lower-level tool allows us to identify what ratings go up or down, and generate insights and ideas on how the service can be improved.

The feedback loop to the frontline should be immediate for complaints and compliments, as is practiced in a number of service businesses where complaints, compliments, and suggestions are discussed with staff during a daily morning brief. In addition, three types of service-performance

reports are recommended to provide the necessary information for service management and team learning:

- (1) A monthly Service Performance Update provides process owners with timely feedback on customer comments and operational process performance. Here, the verbatim feedback should be included to the process manager who can in turn discuss them with his or her service-delivery teams.
- (2) A quarterly Service Performance Review provides process owners and branch or department managers with trends in process performance and service quality.
- (3) An annual Service Performance Report gives top management a representative assessment of the status and long-term trends relating to customer satisfaction with the firm's services.

These reports should be short and reader-friendly, focus on key indicators, and provide an easily understood commentary for the people in-charge to act on. In addition to customer feedback, these reports should also contain key operational measures as discussed in the next section.

### **HARD MEASURES OF SERVICE QUALITY**

Hard measures typically refer to operational processes or outcomes, and include data such as uptime, service response times, and failure rates. In a complex service operation, multiple measures of service quality will be recorded at many different points. In low-contact services where customers are not deeply involved in the service-delivery process, many operational measures apply to back-stage activities that have only a second-order effect on customers.

FedEx was one of the first service companies to understand the need for a firm-wide index of service quality that embraced all the key activities that affect customers. By publishing a single, composite index on a frequent basis, senior managers hoped that all FedEx employees would work toward improving quality. The firm recognized the danger of using percentages as targets, because they might lead to complacency. In an organization as large as FedEx, which ships millions of packages a day, even delivering 99.9% of packages on time (which would mean one in

1,000 packages is delivered late), or having 99.999% of flights arrive safely would lead to horrendous problems. Instead, the company decided to approach quality measurement from the baseline of zero failures (*Service Insights 2*). As noted by a senior executive:

*It's only when you examine the types of failures, the number that occur of each type, and the reasons why, that you begin to improve the quality of your service. For us the trick was to express quality failures in absolute numbers. That led us to develop the Service Quality Index or SQI [pronounced "sky"], which takes each of 12 different events that occur every day, takes the numbers of those events and multiplies them by a weight...based on the amount of aggravation caused to customers — as evidenced by their tendency to write to FedEx and complain about them.<sup>21</sup>*

## SERVICE INSIGHTS 2

### **FedEx's Approach to Listening to the Voice of the Customer**

"We believe that service quality must be mathematically measured", declared Frederick W. Smith, Chairman, President, and CEO of FedEx Corporation. The company has a commitment to clear quality goals, and follows them up with continuous measurement of progress against those goals. This practice forms the foundation for its approach to quality.

FedEx initially set two ambitious quality goals: 100% customer satisfaction for every interaction and transaction, and 100% service performance on every package handled. Customer satisfaction was measured by the percentage of on-time deliveries, which referred to the number of packages delivered on time as a percentage of total package volume. However, as things turned out, the percentage of on-time delivery was an internal standard that was not synonymous with customer satisfaction.

As FedEx had systematically cataloged customer complaints, it was able to develop what CEO Smith calls the "Hierarchy of Horrors", which referred to the eight most common complaints by customers: (1) wrong day delivery, (2) right day, late delivery,

(3) pick-up not made (4) lost package, (5) customer misinformed, (6) billing and paperwork mistakes, (7) employee performance failures, and (8) damaged packages. In other words, the design of this “hard” index reflected the findings of extensive “soft” customer research. The “Hierarchy of Horrors” was the foundation on which FedEx built its customer feedback system.

FedEx refined the list of “horrors” and developed its service quality index (SQI), a 12-item measure of satisfaction and service quality from the customers’ viewpoint. The raw numbers of each event are multiplied by a weight that highlights the seriousness of that event for customers (Table 3). The result is a point score for each item. The points are then added up to generate that day’s index. Like a golf score, the lower the index, the better the performance. However, unlike golf, the SQI involves substantial numbers — typically six figures — reflecting the huge numbers of packages shipped daily. The total SQI and all its 12 items are tracked daily, so that a continuous index can be computed.

An annual goal is set for the average daily SQI, based on reducing the occurrence of failures over the previous year’s total. To ensure a continuing focus on each separate component of the SQI, FedEx established 12 Quality Action Teams, one for each component. The teams were charged with understanding and correcting the root causes underlying the observed problems.

In addition to the SQI, which has been modified over time to reflect changes in procedures, services, and customer priorities, FedEx uses a variety of other ways to capture feedback.

*Customer Satisfaction Survey.* This telephone survey is conducted on a quarterly basis with several thousand randomly selected customers, stratified by its key segments. The results are relayed to senior management on a quarterly basis.

*Targeted Customer Satisfaction Survey.* This covers specific customer service processes and is conducted on a semiannual basis with clients who have experienced one of the specific FedEx processes within the last three months.

*FedEx Center Comment Cards.* Comment cards are collected

**Table 3:** Composition of FedEx's Service Quality Index (SQI)

Failure Type	Weighting Factor x No. of Incidents = Daily Points
Late delivery—right day	1
Late delivery—wrong day	5
Tracing requests unanswered	1
Complaints reopened	5
Missing proofs of delivery	1
Invoice adjustments	1
Missed pickups	10
Lost packages	10
Damaged packages	10
Aircraft delays (minutes)	5
Overgoods (packages missing labels)	5
Abandoned calls	1
Total failure points (SQI)	225

from each FedEx storefront business center. The results are tabulated twice a year and relayed to managers in charge of the centers.

*Online Customer Feedback Surveys.* FedEx has commissioned regular studies to get feedback for its online services, such as package tracking, as well as ad hoc studies on new products.

The information from these various customer feedback measures has helped FedEx to maintain a leadership role in its industry, and played an important role in enabling it to receive the prestigious Malcolm-Baldrige National Quality Award.

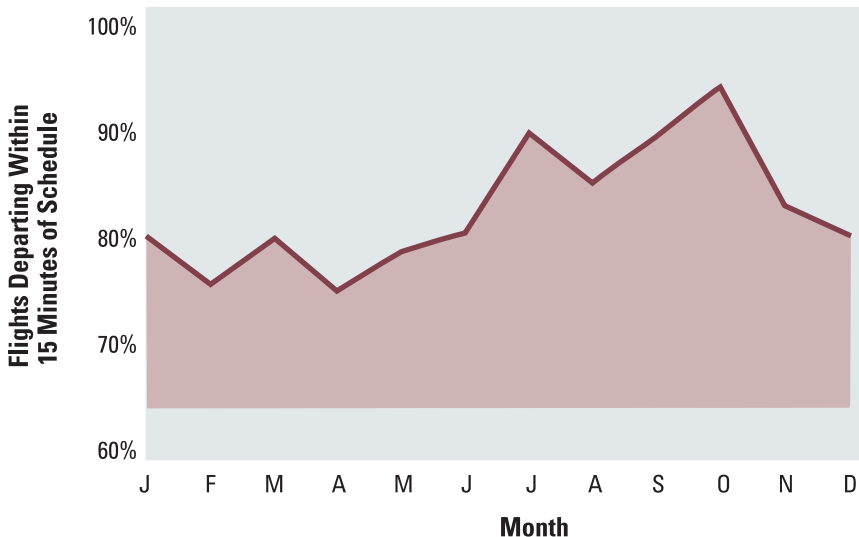
Sources: "Blueprints for Service Quality: The Federal Express Approach," *AMA Management Briefing*, New York: American Management Association, 1991, 51–64; Linda Rosencrance, "BetaSphere Delivers FedEx Some Customer Feedback," *Computerworld*, 14, No. 14, 2000, 36; Madan Birla, *Fedex Delivers: How the World's Leading Shipping Company Keeps Innovating and Outperforming the Competition*, John Wiley, 2005, pp. 91–92; Madan Birla (2013), *FedEx Delivers: How the World's Leading Shipping Company Keeps Innovating and Outperforming the Competition*. Wiley, ISBN-13: 978-0471715795

How is performance on hard measures shown? For this, *control charts* are a simple method of displaying performance over time against specific quality standards. The charts can be used to monitor and communicate individual variables or an overall index. Since they are visual, trends are easily identified. Figure 8 shows an airline's performance on the important hard standard of on-time departures. The trends displayed suggest that this issue needs to be addressed by management, as its performance is erratic and not satisfactory. Of course, control charts are only as good as the data on which they are based.

### TOOLS TO ANALYZE AND ADDRESS SERVICE-QUALITY PROBLEMS

When a problem is caused by controllable, internal forces, there is no excuse for allowing it to recur. After all, maintaining customers' goodwill after a service failure depends on keeping promises made to the effect of "we're taking steps to ensure that it doesn't happen again!" With prevention as a goal, the next section will touch on some tools for determining the root causes of specific service quality problems.

**Figure 8:** Control chart for departure delays showing percentage of flights departing within 15 minutes of schedule.



### **Root Cause Analysis: The Fishbone Diagram**

The cause-and-effect analysis uses a technique first developed by Japanese quality expert, Kaoru Ishikawa. Groups of managers and staff brainstorm all the possible reasons that might cause a specific problem. The reasons are then grouped into one of five groupings — Equipment, Manpower (or People), Material, Procedures, and Other — on a cause-and-effect chart, popularly known as a fishbone diagram due to its shape. This technique has been used initially in manufacturing but is now widely used for services.

To apply this tool better to service organizations, an extended framework that has eight instead of five groupings is used.<sup>22</sup> “People” has been further broken down into “Front-Stage Personnel” and “Backstage Personnel”. This highlights the fact that front-stage service problems are often experienced directly by customers, whereas backstage failures tend to show up more obliquely through a ripple effect.

In addition, “Information” has been separated from “Procedures”, recognizing the fact that many service problems result from information failures. For example, these failures are often because front-stage personnel do not readily have the required information or do not tell customers what to do and when to do it.

“Customers” were added as a further source of root causes. In manufacturing, customers do not really affect the day-to-day operations. However, in a high-contact service, they are involved in front-stage operations. If they do not play their own role correctly, they may reduce service productivity and cause quality problems for themselves and other customers. For instance, an aircraft can be delayed if a passenger tries to board at the last minute with an oversized suitcase, which then has to be loaded into the cargo hold. An example of the extended fishbone is shown in Figure 9, displaying 27 possible reasons for late departures of passenger aircraft.<sup>23</sup>

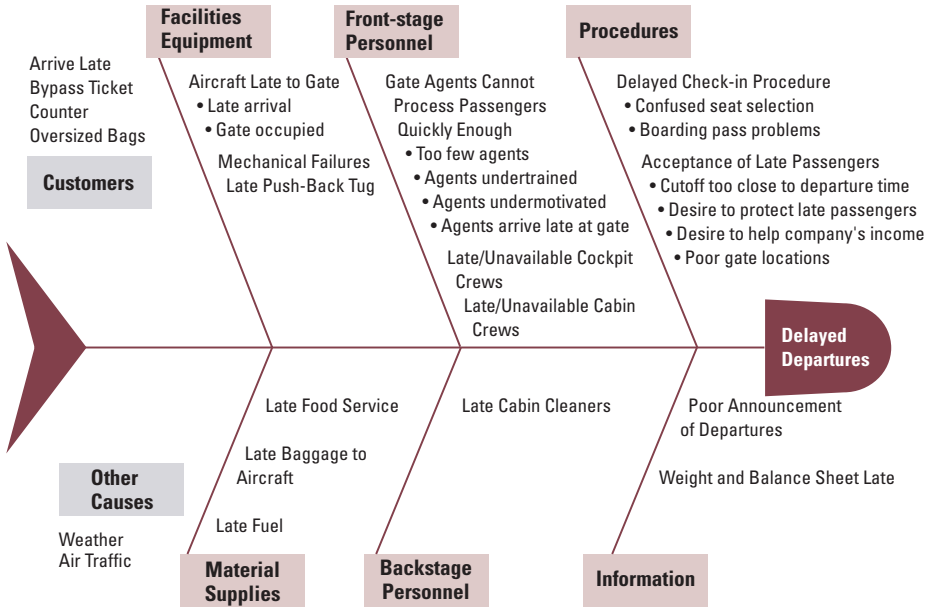
Once all the main potential causes for flight delays have been identified, it is necessary to assess how much impact each cause has on actual delays. This can be established using frequency counts in combination with Pareto analysis, which is discussed next.

### **Pareto Analysis**

Pareto analysis (so named after the Italian economist who first developed it)



**Figure 9:** Cause-and-effect chart for flight departure delays.



identifies the main causes of observed outcomes. It separates the important from the trivial and helps a service firm to focus its improvement efforts on the most important problem areas. This type of analysis underlies the so-called 80/20 rule, because it often reveals that around 80% of the value of one variable (in this instance, the number of service failures) is caused by only 20% of the causal variables (i.e., the number of possible causes as identified by the fishbone diagram). By combining the fishbone diagram and Pareto analysis, we can identify the main causes of service failure.

In the airline example, findings showed that 88% of the company's late departing flights from the airports it served were caused by only four (15%) of all the possible factors (Figure 10). In fact, more than half of the delays were caused by a single factor: acceptance of late passengers (i.e., situations when the staff held a flight for one more passenger who was checking in after the official cutoff time).

On such occasions, the airline made a friend of the passenger who was late — possibly encouraging a repeat of this undesirable behavior on future occasions — but risked alienating all the other passengers who were already onboard, waiting for the aircraft to depart. Other major

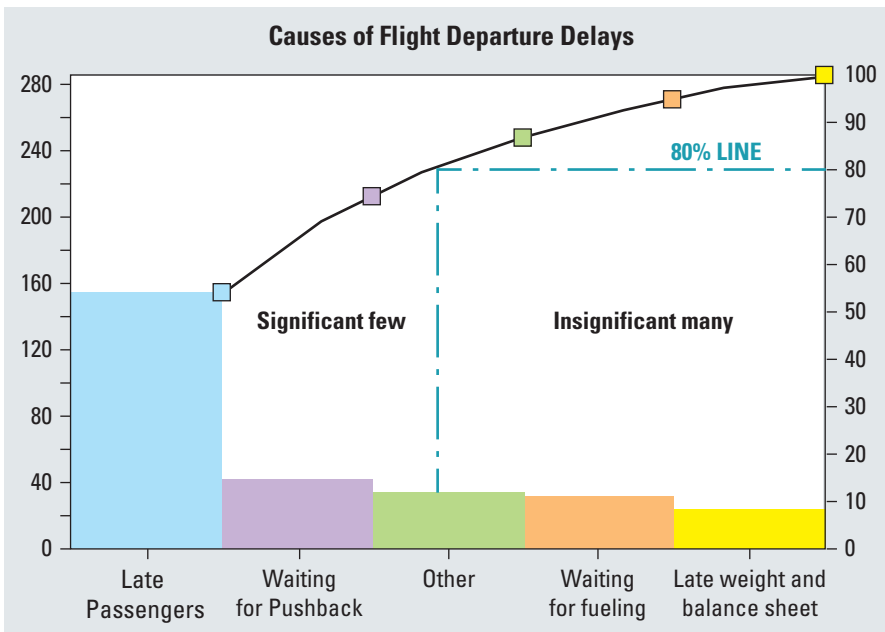
delays included waiting for pushback (a vehicle must arrive to pull the aircraft away from the gate), waiting for fueling, and delays in signing the weight and balance sheet (a safety requirement relating to the distribution of the aircraft’s load that the captain must follow on each flight).

However, further analysis showed significant variations in the reasons from one airport to another (Figure 11). This finding suggests that the individual airport teams should set slightly different priorities for improvements.

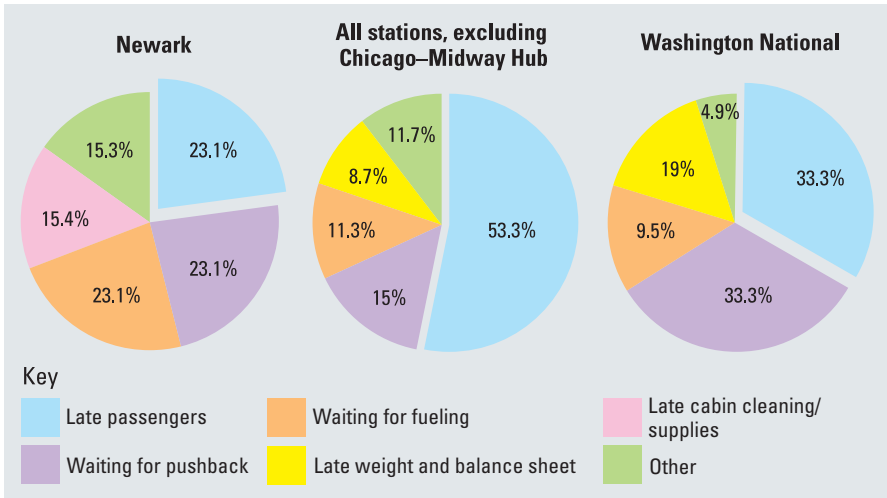
### Blueprinting — A Powerful Tool for Identifying Fail Points

Fishbone diagrams and Pareto analyses tell us the causes and importance of quality problems. Blueprints allow us to drill down further to identify where exactly in a service process the problem was caused. As described in Volume 6, a well-constructed blueprint enables us to visualize the process of service delivery by showing the sequence of front-stage interactions that customers experience as they encounter service providers, facilities,

Figure 10: Pareto analysis of causes of flight departure delays.



**Figure 11:** Analysis of causes of flight departure delays by station.



and equipment, together with supporting backstage activities, which are hidden from the customers and are not part of their service experience.

Blueprints can be used to identify the potential fail points where failures are most likely to occur, and they help us to understand how failures at one point (such as the incorrect entry of an appointment date) may have a ripple effect on the later stages of the process (i.e., the customer arrives at the doctor’s office and is told the doctor is unavailable). By adding frequency counts to the fail points in a blueprint, managers can identify the specific types of failures that occur most frequently, and thus need urgent attention. Knowing what and where things can go wrong is an important first step in preventing service-quality problems.

One desirable solution is to design fail points out of the system (see Volume 6 for *poka-yokes* technique). In the case of failures that cannot easily be designed out of a process or are not easily prevented (such as problems related to weather or public infrastructure), solutions may revolve around development of contingency plans and service recovery guidelines (see Volume 11 on how to design service recovery policies and procedures).

## RETURN ON QUALITY

After understanding how to drill down to specific quality problems,

and using what is learnt from Volume 6 on how to design and redesign improved service processes, the picture is still incomplete without understanding the financial implications related to quality improvements. Many firms pay a lot of attention on improving service quality; however, quite a few of them have been disappointed by the results. Even firms recognized for service quality efforts have sometimes run into financial difficulties. This is partly because they spent too lavishly on quality improvements that customers do not value or even recognize. In other instances, such results show poor or incomplete execution of the quality program itself.

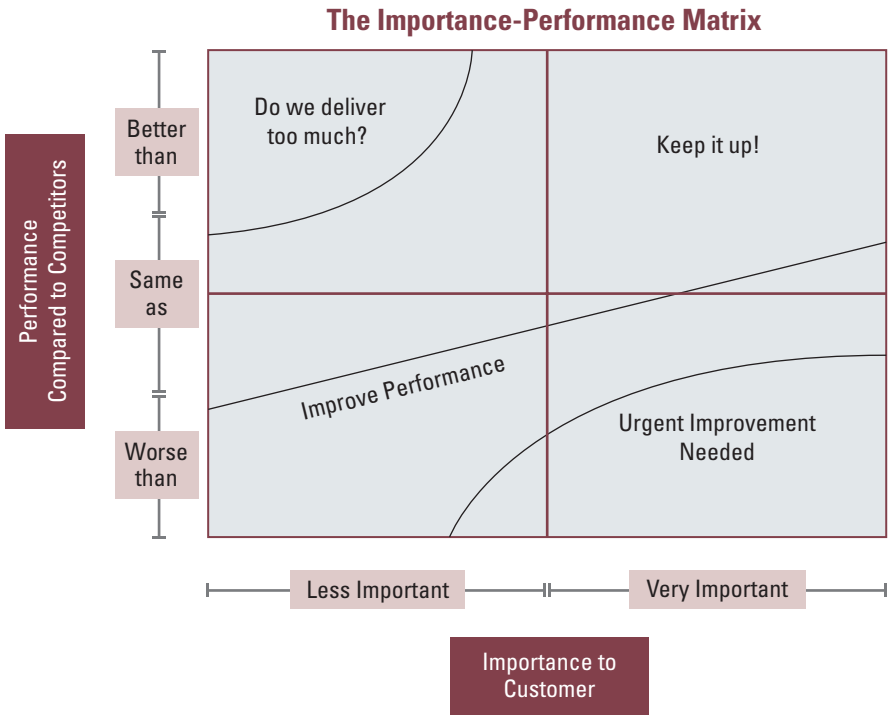
### **Assess Costs and Benefits of Quality Initiatives**

A return on quality (ROQ) approach assesses the costs and benefits of quality initiatives. This is based on the assumptions that (1) quality is an investment, (2) quality efforts must make sense financially, (3) it is possible to spend too much on quality, and (4) not all quality expenditures are equally justified.<sup>24</sup> Hence, expenditures on quality improvement must be related to anticipated increases in profitability. An important implication of the ROQ perspective is that quality improvement efforts may benefit from being coordinated with productivity improvement programs.

To determine the feasibility of new quality improvement efforts, they must be carefully costed in advance and then related to anticipated customer response. Will the program enable the firm to attract more customers (e.g., through word-of-mouth of current customers), increase share-of-wallet and reduce defections? If so, how much additional net income will be generated?

With good documentation, it is sometimes possible for a firm that operates in a number of locations to examine past experience and judge the strength of a relationship between specific service-quality improvements and revenues (*Service Insights* 3). Methods that can help to identify the improvements with the greatest impact on customer satisfaction and purchase behaviors include the importance-performance matrix (see Figure 12), multiple regression analyses that establish the attributes with the highest impact on overall satisfaction, and a new method called Marginal Utility Analysis (MUA) which uses direct questioning of customers on their improvement priorities (e.g., “if you could make an improvement...which four would be your top priorities”).<sup>25</sup>

**Figure 12:** The importance-performance matrix compares a firm’s service performance against competition and customer needs.



**SERVICE INSIGHTS 3**

**Quality of Facilities and Room Revenues at Holiday Inn**

To find out the relationship between product quality and financial performance in a hotel context, Sheryl Kimes analyzed three years of quality and operational performance data from 1,135 franchised Holiday Inn hotels in the US and Canada.

Indicators of product quality came from the franchisor’s quality assurance reports. These reports were based on unannounced, semi-annual inspections by trained quality auditors who were rotated among different regions, and inspected and rated different

quality dimensions of each hotel. Sheryl Kimes used 12 of these quality dimensions in her study: two relating to the guest rooms (bedroom and bathroom) and 10 relating to commercial areas (e.g., exterior, lobby, public restrooms, dining facilities, lounge facilities, corridors, meeting area, recreation area, kitchen, and back of house). Each quality dimension usually included 10 to 12 individual items that could be passed or failed. The inspector noted the number of defects for each dimension and the total number for the entire hotel.

Holiday Inn Worldwide also provided data on the revenue per available room (RevPAR) at each hotel. To adjust for differences in local conditions, Kimes analyzed sales and revenue statistics obtained from thousands of US and Canadian hotels, and reported in the monthly Smith Travel Accommodation Reports (a widely used service in the travel industry). This data enabled Kimes to calculate the RevPAR for the immediate midscale competitors of each Holiday Inn hotel. The results were then used to make the RevPARs comparable across all Holiday Inns in the sample.

For the purpose of the research, if a hotel had failed at least one item in an area, it was considered “defective” in that area. The findings showed that as the number of defects in a hotel increased, the RevPAR decreased. Quality dimensions that showed quite a strong impact on RevPAR were the exterior, the guest room, and the guest bathroom. Even a single defect resulted in a statistically significant reduction in RevPAR. However, the combination of defects in all three areas showed an even larger effect on RevPAR over time. Kimes calculated that the average annual revenue impact on a defective hotel was a revenue loss of \$204,400 compared to a non-defective hotel.

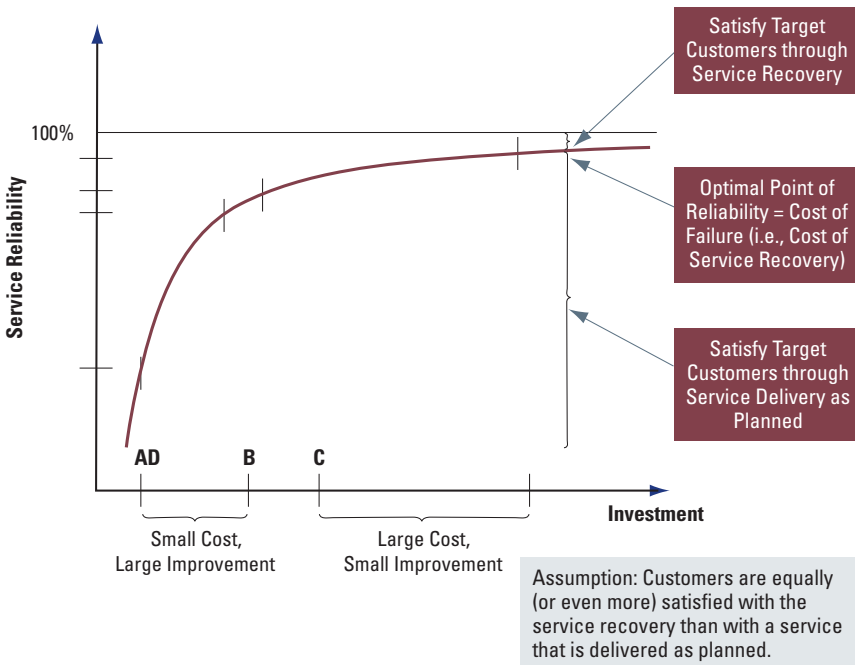
Using a Return on Quality (ROQ) perspective, the results showed that the main focus of increased expenditures on housekeeping and preventive maintenance should be the hotel exterior, the guest rooms, and bathrooms.

### Determine the Optimal Level of Reliability

How far should we go in improving service reliability? A company with poor service quality can often achieve big jumps in reliability with relatively modest investments in improvements. As illustrated in Figure 13, initial investments in reducing service failure often bring dramatic results. At some point however, diminishing returns set in as further improvements require increasing the initial levels of investment, and can even become prohibitively expensive. What level of reliability should be targeted then?

Typically, the cost of service recovery is lower than the cost of an unhappy customer. This suggests that service firms should increase reliability up to the point that the incremental improvement equals the cost of service recovery (which is the actual cost of failure). Although this strategy results in a service that is less than 100% failure-free, the firm can still aim to satisfy 100% of its target customers by ensuring that either they receive the service as planned or, if a failure occurs, they obtain a satisfying service recovery.

**Figure 13:** When does improving service reliability become uneconomical?



## **DEFINING AND MEASURING PRODUCTIVITY**

Historically, services have lagged behind manufacturing in productivity growth, but research by the McKinsey Global Institute shows that five of the seven largest contributors to labor productivity growth in the US since 2000 have been service industries, including retail and wholesale trade, finance and insurance, administrative support, and scientific and technical services.<sup>26</sup> Clearly, advances in technology enable dramatic improvements in productivity. The introduction of this volume highlighted the importance of looking at quality and productivity improvement strategies together rather than in isolation. A firm needs to ensure that it can deliver quality experiences more efficiently to improve its long-term profitability. The next section discusses what productivity is and how it can be measured.

### **Defining Productivity in a Service Context**

Simply defined, productivity measures the amount of output produced relative to the amount of input used. Hence, improvements in productivity are reflected by an increase in the ratio of outputs to inputs. An improvement in this ratio might be achieved by cutting the resources required to create a given volume of output, and/or by increasing the output obtained from a given level of inputs.

What is meant by “input” in a service context? Input varies according to the nature of the business. It may include labor, materials, energy, and capital (consisting of land, buildings, equipment, information systems, and financial assets). The intangible nature of service performances makes it more difficult to measure the productivity of service industries than that of manufacturing. The problem is especially acute for information-based services.

### **Measuring Productivity**

Measuring productivity is difficult in services when the output is frequently difficult to define. In a people-processing service such as a hospital, we can look at the number of patients treated in the course of a year, and the hospital’s “census” or average bed occupancy. However, how do we take into account the different types of medical activities performed, such as the removal of cancerous tumors, treatment of diabetes, or setting of



broken bones? What about the differences between patients? How do we judge the inevitable difference in outcomes? Some patients get better, some develop complications, and sadly, some even die. Relatively few standardized medical procedures offer highly predictable outcomes.

The measurement task is perhaps simpler in possession-processing services, since many quasi-manufacturing are performing routine tasks with easily measurable inputs and outputs. Examples include garages that change a car's oil and rotate its tires, or fast food restaurants that offer limited and simple menus. However, the task gets more complicated when the garage mechanic has to find and repair a water leak, or when we are dealing with a French restaurant known for its varied and exceptional cuisine. What about information-based services? How should we define the output of an investment bank or a consulting firm?

Independent of these more detailed considerations, i.e., labor productivity (e.g., revenue per employee, value-added per employee, and number of customers served per employee) and asset productivity (e.g., return on assets) are the frequently used measures to capture productivity at a high level.

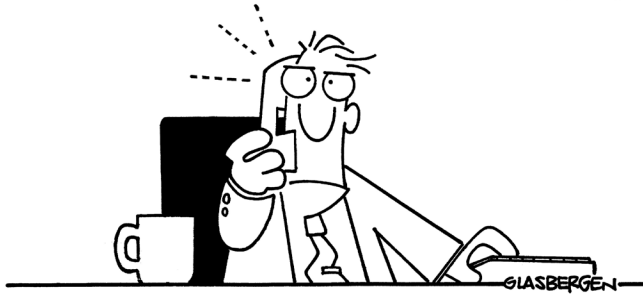
### **Service Productivity, Efficiency, and Effectiveness**

When looking at the issue of productivity, there is a need to distinguish among productivity, efficiency and effectiveness.<sup>27</sup> Productivity refers to the output one can get from a certain amount of inputs (e.g., labor and asset productivity). Efficiency involves comparison to a standard which is usually time-based. It is a measure of how well you do things. For example, how long does it take for an employee to perform a particular task compared to industry average or some other standard? The faster the task can be completed, the higher the efficiency. Effectiveness can be defined as the degree to which an organization meets its goals and desired outcomes, which would typically include customer satisfaction. Peter Drucker expressed it succinctly: "Efficiency is doing the thing right. Effectiveness is doing the right thing".

Classical techniques of productivity and efficiency measurement focus on outputs and benchmarking, rather than outcomes. This means that productivity and efficiency are stressed, but effectiveness is neglected. In freight transport for instance, a ton-mile of output for freight that is delivered late is treated the same for productivity purposes as a similar

**Figure 14:** Productivity for the firm may result in customer frustration when they cannot easily talk to service personnel.

Copyright 2003 by Randy Glasbergen.  
www.glasbergen.com



**“If you’re losing patience with our endless automated system and need to run outside and scream, press 44. If you’re feeling better now and wish to continue, press 45...”**

shipment delivered on time. Similarly, suppose a hairdresser usually serves three customers per hour. However, she can increase her output to one every 15 minutes by reducing conversation with the customer and by rushing her customers. Even if the haircut itself is just as good, the delivery process may be perceived as functionally inferior, leading customers to rate the overall service experience less positively (Figure 14). In this example, productivity and efficiency have been achieved, but not effectiveness.

In the long run, organizations that are more effective in consistently delivering outcomes desired by customers should be able to command higher prices for their output, and build a loyal and profitable customer base. Therefore, there is a need to place emphasis on effectiveness and outcomes (including quality and value generated for customers) in addition to productivity and efficiency.<sup>28</sup>

## **IMPROVING SERVICE PRODUCTIVITY**

Intense competition in many service sectors pushes firms to continually seek ways to improve their productivity.<sup>29</sup> This section discusses various sources of and possible approaches to productivity gains.

### **Generic Productivity Improvement Strategies**

Traditionally, operations managers have been in charge of improving service productivity and their focus can be summed up as achieving the same output “better, faster and cheaper”. This approach typically centers on actions such as:

- Careful cost control at every step in the process. Many senior managers subscribe to the saying, “Costs are like fingernails: You have to cut them constantly”.
- Reduce the waste of materials and labor.
- Train and motivate employees to do things faster, better, and more efficiently. As a result, employees should work more productively (note that faster is not necessarily better if it leads to mistakes or unsatisfactory work that has to be redone).
- Broaden the variety of tasks that a service worker can perform (which may require revised labor agreements) so as to eliminate bottlenecks and wasteful downtime, by allowing managers to deploy workers wherever they are needed most.
- Improve capacity utilization through better matching of supply and demand, and/or match productive capacity to average levels of demand rather than at peak levels, so that workers and equipment are not underemployed for extended periods.
- Use machines, equipment, technology, and data that enable employees to work faster and/or to a higher level of quality.
- Install expert systems that allow paraprofessionals to take on work previously performed by more experienced individuals earning higher salaries.
- Redesign customer service processes to be more productive and effective (e.g., through Lean Six Sigma).
- Replace service employees with automated machines and customer-operated self-service technologies (SSTs).
- Tier service levels to allocate resources better to more important customers.
- Outsource non-core activities that can be provided more cost-effectively by third parties.

Although improving productivity can be approached incrementally, major gains often require redesigning customer service processes. For example, it is time for service process redesign when customers face unbearably long waits, as often experienced in healthcare. Service process redesign is discussed in depth in Volume 6.

### **Customer-Driven Approaches to Improve Productivity**

In situations where customers are deeply involved in the service production process, operations managers should also examine how customer inputs can be made more productive. Marketing managers should be thinking about what marketing strategies should be used to influence customers to behave in more productive ways. Some of these strategies include:

- *Change the timing of customer demand.* By encouraging customers to use a service outside of peak periods and offering them incentives to do so, managers can make better use of their productive assets and provide better service. The issues related to managing demand in capacity-constrained service businesses are discussed in detail in Volume 7; revenue management strategies are explored in Volume 4.
- *Encourage use of lower cost service-delivery channels and self-service.* Shifting transactions to more cost-effective service-delivery channels such as the Internet, through apps or self-service machines, improves productivity. It also helps in demand management by reducing the pressure on employees and certain types of physical facilities at peak hours. Many technological innovations are designed to get customers to perform tasks previously undertaken by service employees (Figure 15). The issues related to customers playing a more active role as co-producers of the service are discussed in detail in the context of service-process design in Volume 6.
- *Ask customers to use third parties.* In some instances, managers may be able to improve service productivity by delegating one or more service support functions to third parties. Specialist intermediaries may enjoy economies of scale, allowing them to perform the task more cheaply than the core service provider. This allows the service provider to focus on quality and productivity in its own area of expertise. An example of an intermediary is a travel agency.

**Figure 15:** Self-service pumps with credit card readers have increased gas station productivity.



### **How Productivity Improvements Impact Quality and Value**

Managers would do well to examine productivity enhancements from the broader perspective of the business processes used to transform resource inputs into the outcomes desired by customers — especially for processes that are not only cross-departmental and sometimes geographic boundaries, but also link the backstage and front-stage areas of the service operation. Hence, as firms make productivity improvements, they need to examine the impact on the customer experience. See also the discussion on the service quality-productivity-profitability triangle at the beginning of this volume.

*Front-Stage Efforts to Improve Productivity.* In high-contact services, many productivity improvements are quite visible. Some changes simply require acceptance by customers, while others require customers to adopt new patterns of behavior in their dealings with the organization. If substantial changes are proposed, then it makes sense to conduct market research first to determine how customers may respond. Failure to consider the effects on customers may result in a loss of business and cancel out anticipated productivity gains. Refer to Volume 6 on how

to manage and overcome customers' reluctance to change in service processes.

*How Backstage Changes May Impact Customers.* The marketing implications of backstage changes depend on whether they affect or are noticed by customers. If airline mechanics develop a procedure for servicing jet engines more quickly without incurring increased wage rates or material costs, the airline has obtained a productivity improvement that has no impact on the customer's service experience.

Other backstage changes however, may have ripple effects that extend to the front-stage and affect customers. Marketers should be aware of proposed backstage changes, not only to identify such ripples but also to pre-empt customers. For instance, at the bank, the decision to install new computers and printer peripherals may be due to plans to improve internal quality controls and reduce the cost of preparing monthly statements. However, this new equipment may change the appearance of bank statements and the time of the month when they are posted. If customers are likely to notice such changes, an explanation may be warranted. If the new statements are easier to read and understand, the change may be worth promoting as a service improvement.

*A Caution on Cost Reduction Strategies.* In the absence of new technology, most attempts to improve service productivity tend to center on efforts to eliminate waste and reduce labor costs. Cutbacks in front-stage staffing can mean that the remaining employees have to work harder and faster, or that there are insufficient personnel to serve customers promptly at busy times. Although employees may be able to work faster for a brief period of time, few can maintain a rapid pace for extended periods. They become exhausted, make mistakes, and treat customers in a cursory manner. Workers who are trying to do two or three things at once — for example, serving a customer face-to-face while simultaneously answering the telephone and sorting papers — may do a poor job of each task. Excessive pressure breeds discontent and frustration, especially among customer contact personnel who are caught in between trying to meet customer needs and attempting to achieve management's productivity goals.

A better way is to search for service process redesign opportunities that lead to drastic improvements in productivity and at the same time increase service quality. Biometrics is set to become a new technology that may allow for both (*Service Insights 4*).

## **SERVICE INSIGHTS 4**

### **Biometrics — The Next Frontier in Driving Productivity and Service Quality?**

Intense competitive pressures and razor-thin margins in many service industries do not allow firms the luxury of increasing costs to improve quality. Rather, the trick is to constantly seek ways to simultaneously achieve great improvements in service quality and efficiency at the same time. In the past, Internet and service apps have allowed many firms to do just that, and redefined industries including financial services, music distribution, and travel agencies. Biometrics may be the next major technology driving further service and productivity improvements in the service sector.

Biometrics is the authentication or identification of individuals based on a physical characteristic or trait. Physical characteristics include fingerprints, facial recognition, hand geometry, and the structure of the iris, and traits include signature formation, keystroke patterns, and voice recognition. Biometrics, as something you are, is more convenient and more secure than something you know (passwords or pieces of personal information) or something you have (card keys, smart cards or tokens). There is no risk of forgetting, losing, copying, loaning, or getting your biometrics stolen (Figure 16).

Applications of biometrics range from controlling access to service facilities (used by Disney World to provide access to season pass holders), voice recognition at call centers (used by the Home Shopping Network and Charles Schwab to enable fast and hassle-free client authentication), self-service access to safe-deposit vaults at banks (used by the Bank of Hawaii and First Tennessee Bank), cashing in checks at supermarkets (used by Kroger, Food 4 Less, and BI-LO), and even in schools (for library book issue and for debiting of catering accounts based on the child's finger-scan). The use of biometrics will become more prevalent.

Biometrics clearly have exciting applications. They are generally more secure, but if handled wrongly, the potential damage could also be far more serious. Even biometrics can be cloned. For example,

fingerprints can be replicated (or “spoofed”) from something a person has touched. Resetting a compromised password is merely a hassle, but what will happen if someone stole the digital version of your fingerprint or your retina? Perhaps, biometrics will be supplemented by additional safety features for the highest risk applications. Future service innovation will show where biometrics can add the highest value to service organizations and their customers.

**Figure 16:** Customers cannot forget or lose their biometrics!



Sources: Jochen Wirtz and Loizos Heracleous, “Biometrics Meets Services”, *Harvard Business Review*, February 2005, 48–49; Loizos Heracleous and Jochen Wirtz, “Biometrics — The Next Frontier in Service Excellence, Productivity and Security in the Service Sector”, *Managing Service Quality*, 16, No. 1, 2006; *The Economist*, “Internet Security: Kill or Cure”, September 7, 2013, p. 52.

## Integration and Systematic Approaches to Improving Service Quality and Productivity

A number of tools and concepts on how to improve service quality and productivity have been discussed in depth. Table 4 integrated the key tools discussed into a generic nine-step framework to use to structure your approach to improve the quality and productivity of a single customer service process. Such projects are typically conducted by experienced in-house teams or external consultants. However, the continual improvement of a process (as described in step 9) should typically be the responsibility of the process owner.

There are also systematic approaches that help service firms to achieve an organization-wide culture of becoming customer, service quality and productivity focused. In fact, much of the thinking, tools and concepts introduced in this volume originate from these approaches, which include the Total Quality Management (TQM), ISO 9000, Six Sigma, and the Malcolm-Baldrige and European Foundation for Quality Management (EFQM) approaches. The following sections will briefly



**Table 4:** An Integrated Nine-Step Approach to Customer Service Process Improvement

Step	Objectives	Potential Tools to Apply
1	Determine priority processes for improvement and redesign	<ul style="list-style-type: none"> <li>• Frequency count of process occurrence and number of complaints per process to identify priority processes</li> <li>• Use prioritization matrix (ease of implementation vs. potential business impact) to identify “low hanging fruits” with which to start a service improvement initiative</li> </ul>
2	For the shortlisted processes, set targets for (1) customer satisfaction, (2) defects, (3) cycle-time, and (4) productivity improvements	<ul style="list-style-type: none"> <li>• Benchmarking internally, against competition, best in class and world-class to determine targets for all four priorities</li> <li>• Decide the target level of performance (e.g., do you aim to be the best in your industry, or just catch up with industry average on those four priorities?)</li> <li>• Use a project charter to formalize the objectives of this customer service process redesign project</li> </ul>
3	Identify key elements of quality in priority service processes and determine customer needs and expectations	<ul style="list-style-type: none"> <li>• Use blueprinting to identify all touchpoints of a customer journey and the line of visibility to understand the customer view of a process</li> <li>• For each touch point, determine what quality means in the customer’s eyes (e.g., use the five dimensions of service quality (see Volume 1) to cover all important dimensions, review customer feedback, content analysis of compliments and complaints to understand drivers of customer delight and disgust, conduct focus groups)</li> </ul>
4	Assess process performance	<ul style="list-style-type: none"> <li>• Review hard, operational process measures (e.g., cycle times, customer waiting times, one-time resolution, etc.)</li> <li>• Measure customer perceptions of process performance (e.g., process-specific customer satisfaction surveys)</li> <li>• Interview frontline employees to obtain their view of what works and what does not, and what needs urgent improvement</li> </ul>
5	Identify performance shortfalls and quality gaps	<ul style="list-style-type: none"> <li>• Map customer needs and wants of the process against process performance measures to determine important performance and quality gaps.</li> <li>• Identify the main performance gaps, e.g., map frequency counts of service failures (and/or complaints) on service blueprints to understand where exactly service processes fail</li> </ul>

Step	Objectives	Potential Tools to Apply
6	Identify root causes of quality gaps	<ul style="list-style-type: none"> <li>• Use the Gaps Model to capture all possible sources of gaps in customer's service quality perceptions</li> <li>• Use TQM tools to drill down on specific gaps, e.g., use Pareto charts to understand which fail points to focus on, use Fishbone diagrams to identify the exact causes of key fail points, and again use Pareto charts to identify the main root causes to be designed out of the processes</li> </ul>
7	Improve process performance	<ul style="list-style-type: none"> <li>• Use prescriptions from the Gaps Model to close each of the six gaps (see Table 1)</li> <li>• Use customer service design and redesign tools (see Volume 6, including design fail points of the system through use of poka-yokes)</li> <li>• Plan service recovery for fail points that cannot be designed out of the system (i.e., make it proactive, preplanned, trained and empowered, see Volume 11)</li> </ul>
8	Control and continuously fine-tune and further improve the process	<ul style="list-style-type: none"> <li>• After redesign, monitor the performance of the redesigned process using operational measures and customer feedback</li> <li>• Make it a routine process at the new, high level of performance</li> <li>• Ask the process owner to fine-tune the process through incremental improvements (e.g., use Kaizen or other tools to get the process team to monitor and continually improve the process it is responsible for)</li> </ul>
9	Start over, the journey is the destination...	<ul style="list-style-type: none"> <li>• Create a culture of customer-centricity, process improvement, and change by continuously working and redesigning customer service processes; become a customer-driven learning organization</li> </ul>

discuss each of these approaches and relate them to the service quality and productivity context.

### Total Quality Management

Total Quality Management (TQM) was originally developed in Japan. It is probably the most widely known approach to continuous improvement in manufacturing, and more recently, in service firms. TQM can help organizations to attain service excellence, increase productivity, and

be a continued source of value creation through innovative process improvements.<sup>30</sup>

Some concepts and tools of TQM can be applied directly to services. As discussed in this volume, TQM tools such as control charts, Pareto analysis, blueprints, and fishbone diagrams are used by service firms with great results for monitoring service quality and determining the root causes of specific problems.

Twelve critical dimensions for successful implementation of TQM in a service context have been identified: (1) top management commitment and visionary leadership; (2) human resource management; (3) technical system, including service process design and process management; (4) information and analysis system; (5) benchmarking; (6) continuous improvement; (7) customer focus; (8) employee satisfaction; (9) union intervention and employee relations; (10) social responsibility; (11) servicescapes; and (12) service culture.<sup>31</sup>

### **ISO 9000 Certification<sup>32</sup>**

There are 162 countries that are members of ISO (the International Organization for Standardization based in Geneva, Switzerland), which promote standardization and quality to facilitate international trade. ISO 9000 is all about quality management and it comprises requirements, definitions, guidelines, and related standards to provide an independent assessment and certification of a firm's quality management system. The official ISO 9000 definition of quality is: "The totality of features and characteristics of a product or service that bear on its ability to satisfy a stated or implied need. Simply stated, quality is about meeting or exceeding your customer's needs and requirements".

The ISO 9000 comprises a family of sub-standards family addressing various aspects of quality management. These standards provide guidance and tools for organizations who want to ensure their products and services consistently meet customers' requirements, and that quality is consistently improved.

To ensure quality, ISO 9000 uses many TQM tools and internalizes their use in participating firms and makes use of W. Edwards Deming's PDCA Cycle (i.e., Plan-Do-Act-Check Cycle).

Service firms generally adopted ISO 9000 standards later than manufacturing firms. Major service sectors that have adopted ISO 9000

certification include wholesale and retail firms, IT service providers, healthcare providers, consultancy firms, and educational institutions. By adopting the ISO 9000 standards, service firms can ensure that their services conform to customer expectations and achieve improvements in productivity.

### **Six Sigma**

The Six Sigma approach was originally developed by Motorola to improve product quality and reduce warranty claims, and was soon adopted by other manufacturing firms to reduce defects in a variety of areas.

Subsequently, service firms embraced various Six Sigma strategies to reduce defects, reduce cycle times, and improve productivity.<sup>33</sup> As early as 1990, GE Capital applied Six Sigma methodology to reduce the backroom costs of selling consumer loans, credit card insurance, and payment protection. Its former president and COO Denis Nayden said:

*Although Six Sigma was originally designed for manufacturing, it can be applied to transactional services. One obvious example is in making sure the millions of credit card and other bills GE sends to customers are correct, which drives down our costs of making adjustments. One of our biggest costs in the financial business is winning new customers. If we treat them well, they will stay with us, reducing our customer-origination costs.<sup>34</sup>*

Statistically, Six Sigma means achieving a quality level of only 3.4 defects per million opportunities (DPMO). To understand how stringent this target is, consider mail deliveries. If a mail service delivers with 99% accuracy, it misses 3,000 items out of 300,000 deliveries. However, if it achieves a Six Sigma performance level, only one item out of this total will go astray.

Over time, Six Sigma has evolved from a defect reduction approach to an overall business improvement approach. As defined by Pande, Neuman and Cavanagh:

*Six Sigma is a comprehensive and flexible system for achieving, sustaining and maximizing business success. Six Sigma is uniquely driven by close understanding of customer needs, disciplined use of*

*facts, data and statistical analysis, and diligent attention to managing, improving, and reinventing business processes.*<sup>35</sup>

Process improvement and process design/redesign are two strategies that form the cornerstone of the Six Sigma approach. Process improvement strategies aim to identify and eliminate the root causes of service-delivery problems, thereby improving service quality. Process design/redesign strategies act as a supplementary strategy to improvement strategy. If a root cause cannot be identified or effectively eliminated within the existing processes, either new processes are *designed* or existing process are *redesigned* to fully or partially address the problem.

The most popular Six Sigma improvement tool for analyzing and improving business processes is the DMAIC model, shown in Table 5. DMAIC stands for:

- **Define** the opportunities (including the problem, scope, and goals).
- **Measure** the current performance along key steps/inputs.
- **Analyze** to identify root causes.
- **Improve** the process and its performance.
- **Control** the process to sustain a higher level of performance.

### **Malcolm-Baldrige and EFQM Approaches**

The Malcolm-Baldrige National Quality Award (MBNQA) was developed by the National Institute of Standards and Technology (NIST) with the goal of promoting best practices in quality management, and recognizing and publicizing quality achievements among US firms. Countries other than the US have similar quality awards, of which the most widely used is probably the European Foundation for Quality Management (EFQM) approach.<sup>36</sup>

While the framework is generic and does not distinguish between manufacturing and service organizations, the award has a specific service category, and the model can be used to create a culture of ongoing service improvements. Major services firms that have won the award include PricewaterhouseCoopers, Ritz-Carlton, FedEx, University of Wisconsin, Xerox Business Services, Boeing Aerospace Support, Caterpillar Financial Services Corp, and AT&T. Research has confirmed that employing this framework can improve organizational performance.<sup>37</sup>

**Table 5:** Applying the DMAIC Model to Process Improvement and Redesign

	Process Improvement	Process Design/Redesign
Define	<ul style="list-style-type: none"> <li>Identify the problem</li> <li>Define requirements</li> <li>Set goals</li> </ul>	<ul style="list-style-type: none"> <li>Identify specific or broad problems</li> <li>Define goal/change vision</li> <li>Clarify scope and customer requirements</li> </ul>
Measure	<ul style="list-style-type: none"> <li>Validate problem/process</li> <li>Refine problem/goal</li> <li>Measure key steps/inputs</li> </ul>	<ul style="list-style-type: none"> <li>Measure performance to requirements</li> <li>Gather process efficiency data</li> </ul>
Analyze	<ul style="list-style-type: none"> <li>Develop causal hypothesis</li> <li>Identify root causes</li> <li>Validate hypothesis</li> </ul>	<ul style="list-style-type: none"> <li>Identify best practices</li> <li>Assess process design</li> <li>Refine requirements</li> </ul>
Improve	<ul style="list-style-type: none"> <li>Develop ideas to measure root causes</li> <li>Test solutions</li> <li>Measure results</li> </ul>	<ul style="list-style-type: none"> <li>Design new process</li> <li>Implements new process, structures, and systems</li> </ul>
Control	<ul style="list-style-type: none"> <li>Establish measures to maintain performance</li> <li>Correct problems as needed</li> </ul>	<ul style="list-style-type: none"> <li>Establish measures and reviews to maintain performance</li> <li>Correct problems as needed</li> </ul>

Source: Republished with permission of McGraw-Hill Companies from *The Six SIGMA Way: How GE, Motorola, and Other Top Companies Are Honing Their Performance* by Peter S. Pande, Roland R. Cavanagh, Robert P. Neuman, Copyright 2000; permission conveyed through Copyright Clearance Center, Inc.

The Malcolm-Baldrige Model assesses firms on seven areas:

- (1) Leadership commitment to a service-quality culture.
- (2) Planning priorities for improvements, including service standards, performance targets, and measurement of customer satisfaction, defects, cycle-time, and productivity.
- (3) Information and analysis that will aid the organization to collect, measure, analyze, and report strategic and operational indicators.
- (4) Human resources management that enables the firm to deliver service excellence, ranging from hiring the right people to development, involvement, empowerment, and motivation.
- (5) Process management, including monitoring, continuous improvement, and process redesign.
- (6) Customer and market focus that allows the firm to determine customer requirements and expectations.
- (7) Business results.<sup>38</sup>

### **Which Approach Should a Firm Adopt?**

As there are various approaches to systematically improving a service firm's service quality and productivity, the question of which approach should be adopted arises — TQM, ISO 9000, the Malcolm-Baldrige Model, or Six Sigma? It is better to see these approaches as complementary and building on another, and not as mutually exclusive. TQM can be applied at differing levels of complexity, and basic tools such as flowcharting, frequency charts, and fishbone diagrams probably should be adopted by any type of service firm. Six Sigma and ISO 9000 seem to suit the next level of commitment and complexity, and focus on process improvements and compliance to performance standards, followed by the Malcolm-Baldrige Model or the European Foundation for Quality Management (EFQM) approaches that offer comprehensive frameworks for organizational excellence. The complementarity of approaches can be seen in a study on educational institutions in *Service Insights 5*.

#### **SERVICE INSIGHTS 5**

##### **TQM and ISO-Certification in Educational Institutions**

Higher educational institutions are increasingly competing for talented students and have started to accept that they have to be more customer-centric in their approach to increase student satisfaction. What is the meaning of service quality in a higher educational institution? A TQM model has been proposed with the following five variables that measure different dimensions of service quality in an institution of higher learning, and they suggest that these variables will increase student satisfaction:

- *Commitment of Top Management:* Top management has to “walk the talk” and make sure that what is preached in terms of educational excellence and service quality is really being practiced.
- *Course Delivery:* While institutions of higher learning hire people with expert knowledge, there is a need for such expert knowledge to be transmitted expertly, with passion.

- *Campus Facilities*: Attention needs to be focused on having excellent infrastructure and facilities for student learning as well as for their extracurricular activities. These facilities also have to be properly maintained.
- *Courtesy*: This is a positive attitude toward students that will create a friendly learning environment.
- *Customer Feedback and Improvement*: Continuous feedback from students can lead to improvements.

The researchers studied TQM in a mix of ISO-certified and non-ISO certified institutions, and found that ISO 9001:2000 certified institutions were adopting TQM faster and offered a better quality education than non-ISO certified institutions.

Their findings showed that while all five variables together did predict student satisfaction, two variables in particular were more important in affecting student satisfaction. The variables were top management commitment and campus facilities. Top management needs to be committed to quality assurance in making sure the other variables are in place to improve the student experience.

Source: P. B. Sakthivel, G. Rajendran, and R. Raju, "TQM Implementation and Students' Satisfaction of Academic Performance", *The TQM Magazine*, 17, No. 6, 2005, pp. 573–589.

**Figure 17:** Higher learning increasingly focus on service quality.





Any one of the approaches can be a useful framework for understanding customer needs, analyzing processes, and improving service quality and productivity. Firms can choose a particular program, depending on their own needs and desired level of sophistication. Each program has its own strengths, and firms can use more than one program to add on to the other. For example, the ISO 9000 program can be used for standardizing the procedures and process documentation, and the Six Sigma and Malcolm-Baldrige programs can then be used to improve processes and focus on performance improvement across the organization.

A key success factor of any of these programs depends on how well the particular quality improvement program is part of the overall business strategy. Service champions make best practices in service-quality management a core part of their organizational culture.<sup>39</sup> The National Institute of Standards and Technology (NIST), which organizes the Malcolm-Baldrige Award program has an index called the “Baldrige Index” of Malcolm-Baldrige Award winners. It was observed that winners always outperformed the S&P 500 index.<sup>40</sup>

Ironically however, the two-time winner of the award and Six Sigma pioneer, Motorola, had suffered financially and lost market share, partly due to the firm’s failure to keep up with new technology. Also, firms which implement one of these programs due to peer pressure or just as a marketing tool are less likely to succeed than firms which view these programs as important development tools.<sup>41</sup> Clearly, success cannot be taken for granted. Commitment, implementation and constant improvement that follow changing markets, technologies, and environments are keys for sustained success.

## CONCLUSION

Enhancing service quality and improving service productivity are often two sides of the same coin, offering powerful potential to improve value for both customers and the firm. It is a key challenge for any service business to deliver service quality and satisfaction to its customers in ways that are cost-effective for the firm. Strategies to improve service quality and productivity should reinforce rather than counteract each other. In

a world of continuous innovation and competitive markets, only few businesses can afford to spend more money (i.e., allow lower productivity) for better quality. Therefore, the game is to seek improvements that offer a quantum leap in service quality and productivity at the same time.

## SUMMARY

### 1. Productivity and Customer Satisfaction

Quality and productivity are twin paths for creating value for customers and the firm. However, the relationship between productivity and customer satisfaction (and the net effects on profitability) can be positive, neutral, or negative, and therefore needs to be managed carefully.

### 2. Service Quality

There are different definitions of service quality. In this book, the customer-focused definition of service quality as consistently meeting or exceeding customer expectations is used.

### 3. The GAPS Model

The GAPS Model is an important tool used to diagnose and address service quality problems at a macro level. There are six gaps that can be the cause of quality shortfalls:

- Gap 1 — the knowledge gap
- Gap 2 — the policy gap
- Gap 3 — the delivery gap
- Gap 4 — the communications gap
- Gap 5 — the perceptions gap
- Gap 6 — the service quality gap. It is the most important gap.

In order to close Gap 6, the other five gaps have to be closed first.

There is a series of potential causes for each of the gaps and generic prescriptions for addressing the causes are provided, thereby closing the gaps. These prescriptions take a holistic organization perspective.

### 4. Soft and Hard Measures

There are both soft and hard measures of service quality. Soft measures are usually based on perceptions of and feedback from customers and employees. Hard measures relate to processes and their outcomes.

### 5. Customer Feedback System

Feedback from customers (i.e., mostly soft measures) should be

systematically collected via a customer feedback system (CFS). The key objectives of a CFS include:

Assessment and benchmarking of service quality and performance.

Customer-driven learning and improvement.

Creating a customer-oriented service culture, and a culture for change.

## **6. Collecting Customer Feedback**

Firms can use a variety of tools to collect customer feedback, including:

- total market surveys
- annual surveys on overall satisfaction
- transactional surveys
- service feedback cards, and other transaction-specific feedback tools such as text-messaging, emails, and social media
- mystery shopping
- unsolicited customer feedback (e.g., compliments and complaints)
- focus group discussions
- service reviews
- online and social media monitoring

A reporting system is needed to channel feedback and its analysis to the relevant parties to take action.

## **7. Hard Measures**

Hard measures relate to operational processes and outcomes, and can be counted, timed, or observed. Control charts are a simple method of displaying performance on hard measures over time against specific quality standards.

## **8. Analyzing and Addressing Service Quality Problems**

The key tools to analyze and address important service quality problems are:

- Fishbone diagrams, to identify the causes of quality problems
- Pareto analysis, to assess the frequency of quality problems and identify the most common causes

- Blueprinting, to exactly determine the location of fail points in a customer service process and then help to redesign the process

## **9. Financial Implications of Service Quality Improvements**

There are financial implications of service quality improvements. A return on quality (ROQ) approach assesses the costs and benefits of specific quality initiatives. Firms should increase service reliability up to the point that the incremental improvement equals the cost of service recovery (which is the actual cost of failure). When a service failure occurs, customers receive a satisfying service recovery.

## **10. Productivity**

Productivity measures the amount of output produced relative to the amount of inputs used. An improvement in this ratio can be achieved by cutting the resources required to create a given volume of output, and/or by increasing the output obtained from a given level of inputs. Key inputs vary according to the industry and can include labor, materials, energy, and assets.

## **11. Productivity, Efficiency, and Effectiveness**

It is important to differentiate these three concepts:

- Productivity involves the amount of outputs based on a given level of inputs (e.g., input/output ratio).
- Efficiency is usually time-based and compared to a standard such as industry average (e.g., speed of delivery).
- Effectiveness refers to the degree a goal, such as customer satisfaction, is met. Productivity and efficiency cannot be separated from effectiveness. Firms that strive to be more productive, efficient, and effective in consistently delivering customer satisfaction will be more successful.

## **12. Improving Productivity**

Generic methods to improve productivity include:

- Cost control
- Reduce waste of materials and labor

- Train employees to work more productively
- Broaden the job scope of employees to reduce bottlenecks and downtime
- Improve capacity utilization
- Provide employees with equipment and information that enables them to work faster and better
- Install expert systems so that paraprofessionals can do the work previously done by higher-paid experts
- Replace service employees by automated machines and customer-operated SSTs
- Tier service levels to allocate resources better to more important customers.
- Outsource non-core activities that can be provided more cost-effectively by third parties

Customer-driven methods to improve productivity include:

- Change the timing of customer demand to better match capacity to demand.
- Encourage the use of lower-cost service delivery channels and replacing labor with machines and SSTs.
- Get customers to use more cost-effective third parties for parts of the service delivery.

### **13. Effects of Productivity Improvements**

When improvements are made to productivity, firms need to bear in mind that both front-stage and backstage improvements can have an impact on service quality and the customer experience.

### **14. Improving Customer Service Processes**

A nine-step approach can be used to improve customer service processes. It includes:

- Determine priority processes for improvement (e.g., through a frequency count of process occurrence and number of complaints; use prioritization matrix).

- Set targets for customer satisfaction, defects, cycle-time and productivity improvements (e.g., through benchmarking and a project charter).
- Identify key elements of quality (e.g., through blue printing to identify touch points, and then use the five dimensions of quality together with customer and employee feedback to understand what quality means in the eyes of the customer).
- Assess process performance (e.g., through hard operational measures and soft customer feedback measures).
- Identify performance shortfalls and quality gaps (e.g., map customer needs and wants against process performance; map frequency count of service failures on service blueprints to understand where exactly service processes fail).
- Identify root causes of gaps (e.g., use the Gaps Model to capture all possible sources of gaps, and use TQM tools such as the Fishbone diagram, Pareto charts and service blueprints to drill down on specific gaps).
- Improve process performance (e.g., use the prescriptions of the Gaps Model for closing the quality shortfalls; use customer service process redesign tools as discussed in Volume 6, and plan for service recovery as covered in Volume 11).
- Control and fine-tune (i.e., monitor the performance of the redesigned process and fine-tune it further).
- Start over, the journey is the destination...

### **15. Tools to Measure and Improve Service Quality and Productivity**

TQM, ISO 9000, Six Sigma, and Malcolm-Baldrige and European Foundation for Quality Management (EFQM) approaches are systematic and complementary approaches to managing and improving service quality and productivity. They integrate many of the tools discussed in this volume.

## ENDNOTES

- 1 This section was adapted from Jochen Wirtz and Valarie Zeithaml (2015), “Cost-Effective Service Excellence: Developing a Conceptual Framework”, in: *Always Ahead in Marketing: Offensiv, Digital, Strategisch*, by Bartsch, Silke and Blümelhuber, Christian (eds.), Wiesbaden: Gabler Verlag, Germany, pp. 547–557.
- 2 For an integrative framework of quality that captures how firms and customers produce quality, see: Peter N. Golder, Debanjan Mitra, and Christine Moorman (2012), “What is Quality? An Integrative Framework of Processes and States”, *Journal of Marketing*, Vol. 76, No. 4, pp. 1–12.
- 3 Christian Grönroos, *Service Management and Marketing*. 3<sup>rd</sup> ed., (Chichester, NY: Wiley, 2007).
- 4 A. Parasuraman, Valarie A. Zeithaml, and Leonard L. Berry, “A Conceptual Model of Service Quality and Its Implications for Future Research,” *Journal of Marketing*, 49, Fall 1985, pp. 41–50; Valarie A. Zeithaml, Leonard L. Berry, and A. Parasuraman, “Communication and Control Processes in the Delivery of Services,” *Journal of Marketing*, 52, April 1988, pp. 36–58.
- 5 The sub-gaps in this model are based on the 7-gaps model by Christopher Lovelock (1994), *Product Plus: How Product + Service = Competitive Advantage*. New York: McGraw-Hill, p. 112.
- 6 Valarie A. Zeithaml, Mary Jo Bitner, and Dwayne D. Gremler (2013), *Services Marketing: Integrating Customer Focus Across the Firm*. 5<sup>th</sup> ed., New York: McGraw-Hill, p. 261.
- 7 This section is based partially on Jochen Wirtz and Monica Tomlin, “Institutionalizing Customer-driven Learning Through Fully Integrated Customer Feedback Systems,” *Managing Service Quality*, 10, No. 4, (2000): 205–215.  
 Additional reading on service quality measurement can be found in Ching-Chow Yang, “Establishment and Applications of the Integrated Model of Service Quality Measurement,” *Managing Service Quality*, 13, No. 4, (2003): 310–324.
- 8 Leonard L. Berry and A. Parasuraman, “Listening to the Customer — The Concept of a Service Quality Information System,” *Sloan Management Review*, 38, Spring 1997, pp. 65–76.
- 9 Customer listening practices have been shown to affect service performance, growth and profitability, see: William J. Glynn, Sean de Búrca, Teresa Brannick, Brian Fynes, and Sean Ennis, “Listening Practices and Performance in Service Organizations,” *International Journal of Service Industry Management*, 14, (No. 3, 2003), pp. 310–330.



- 10 Baker W. E., and Sinkula J. M., “The Synergistic Effect of Market Orientation and Learning Orientation on Organizational Performance”, *Journal of the Academy of Marketing Science*, 27, No. 4 (1999): 411–427.
- 11 Neil A. Morgan, Eugene W. Anderson, and Vikas Mittal, “Understanding Firms’ Customer Satisfaction information Usage,” *Journal of Marketing*, 69, July 2005, pp. 131–151.
- 12 Leonard L. Berry and A. Parasuraman provide an excellent overview of all key research approaches discussed in this section plus a number of other tools in their paper, “Listening to the Customer — The Concept of a Service Quality Information System,” *Sloan Management Review*, 38, Spring 1997: 65–76.
- 13 For a discussion on suitable satisfaction measures, see Jochen Wirtz and Lee Meng Chung, “An Examination of the Quality and Context-Specific Applicability of Commonly Used Customer Satisfaction Measures,” *Journal of Service Research*, 5, May 2003: 345–355.
- 14 Mobile apps have been developed that can track customers’ experiences in real time, supply instant information and are highly cost-effective, see: Emma K. Macdonald, Hugh N. Wilson, and Umut Konuş (2012), *Harvard Business Review*, Vol. 90, No. 9, pp. 90, pp. 102–108.
- 15 Robert Johnston and Sandy Mehra, “Best-Practice Complaint Management,” *Academy of Management Executive*, 16, No. 4 (2002): 145–154.
- 16 Seshadri Tirunillai and Gerard J. Tellis (2014), “Mining Marketing Meaning from Online Chatter: Strategic Brand Analysis of Big Data Using Latent Dirichlet Allocation”, *Journal of Marketing Science*, Vol. 51, No. 4, pp. 463–479.
- 17 Advanced analytical tools allow analysis and visualization of online posted reviews; see Thomas Y. Lee and Eric T. Bradlow (2011), “Automated Marketing Research Using Online Customer Reviews”, *Journal of Marketing Research*, Vol. 48, No. 5, pp. 881–894.

The technology for analyzing unstructured textual data (provided to the firm as customer feedback, or if posted online) is advancing rapidly. For a recent study exploring the use for customer feedback mapping on service blue prints, see: Francisco Villarroel Ordenes, Babis Theodoulidis, Jamie Burton, Thorsten Gruber, and Mohamed Zaki (2014), “Analyzing Customer Experience Feedback Using Text Mining: A Linguistics-Based Approach”, *Journal of Service Research*, Vol. 17, No. 3, pp. 278–295.
- 18 Note, however, that there are differences across online media. For example, sentiments expressed in blogs tend to be more positive than those posted in other media such as forums, see: David A. Schweidel and Wendy W. Moe (2014), “Listening In on Social Media: A Joint Model of Sentiment and Venue Format Choice”, *Journal of Marketing Research*, Vol. 51, No. 4, pp. 387–402.

- 19 Roland T. Rust and Ming-Hui Huang (2014), “The Service Revolution and the Transformation of Marketing Science”, *Marketing Science*, Vol. 33, No. 2, pp. 206–221; Anindya Ghose, Panagiotis G. Ipeirotis P.G., and Beibei Li (2012), “Designing Marketing Ranking Systems for Hotels on Travel Search Engines by Mining User-Generated and Crowdsourced Content”, *Marketing Science*, Vol. 31, No. 3, pp. 493–520.
- 20 Duncan Simester (2011), “When You Shouldn’t Listen to Your Critics”, *Harvard Business Review*, Vol. 89, No. 6, p. 42.
- 21 Comments by Thomas R. Oliver, then senior vice president, sales and customer service, Federal Express; reported in Christopher H. Lovelock, *Federal Express: Quality Improvement Program, Lausanne: International Institute for Management Development*, (1990).
- 22 Christopher Lovelock, *Product Plus: How Product + Service = Competitive Advantage* (New York: McGraw-Hill, 1994), p. 218.
- 23 These categories and the research data that follow have been adapted from information in D. Daryl Wyckoff, “New Tools for Achieving Service Quality,” *Cornell Hotel and Restaurant Administration Quarterly*, (August–September 2001), pp. 25–38.
- 24 Roland T. Rust, Anthony J. Zahonik, and Timothy L. Keiningham, “Return on Quality (ROQ): Making Service Quality Financially Accountable,” *Journal of Marketing*, 59 (April 1995): 58–70; and Roland T. Rust, Christine Moorman, and Peter R. Dickson, “Getting Return on Quality: Revenue Expansion, Cost Reduction, or Both?” *Journal of Marketing*, 66 (October 2002), pp. 7–24.
- 25 Marginal utility analysis was found to outperform analyses based on importance-performance and regression analyses, see: Donald R. Bacon (2012), “Understanding Priorities for Service Attribute Improvement”, *Journal of Service Research*, Vol. 15, No. 2, pp. 199–214.
- 26 Martin Neil Baily, Diana Farrell, and Jaana Remes (2006), “Where US Productivity is Growing.” *The McKinsey Quarterly*, No. 2, pp. 10–12.  
For EU data, see: Kristian Uppenberg and Hubert Strauss (2010), *Innovation and Productivity Growth in the EU Services Sector*. European Investment Bank, the publication is available at: [http://www.eib.org/attachments/efs/efs\\_innovation\\_and\\_productivity\\_en.pdf](http://www.eib.org/attachments/efs/efs_innovation_and_productivity_en.pdf).
- 27 Kenneth J. Klassen, Randolph M. Russell, and James J. Chrisman, “Efficiency and Productivity Measures for High Contact Services,” *The Service Industries Journal*, 18 (October 1998): 1–18; James L. Heskett, *Managing in the Service Economy*, (New York: The Free Press, 1986).  
For a review and discussion on service productivity, see: Christian Grönroos and Katri Ojasalo (2004), “Service Productivity: Towards a Conceptualization of the Transformation of Inputs into Economic Results in Services”, *Journal of Business Research*, Vol. 57, No. 4, pp. 414–423.

- 28 Rust and Huang examined the trade-off between using labor to provide service (which generally increases service quality and effectiveness) and using automation and technology (which increases productivity). Depending on the competitive positioning of a firm, different levels of optimal productivity emerge, see: Roland T. Rust and Ming-Hui Huang (2012), "Optimizing Service Productivity", *Journal of Marketing*, Vol. 76, No. 2, pp. 47–66.
- 29 For a more in-depth discussion on service productivity, refer to Cynthia Karen Swank, "The Lean Service Machine," *Harvard Business Review*, 81, No. 10, 2003, pp. 123–129.
- 30 C. Mele and M. Colurcio, "The Evolving Path of TQM: Towards Business Excellence and Stakeholder Value," *International Journal of Quality and Reliability Management*, 23, No. 5, 2006, pp. 464–489; C. Mele, "The Synergic Relationship Between TQM and Marketing in Creating Customer Value," *Managing Service Quality*, 17, No. 3, 2007, pp. 240–258.
- 31 G. S. Sureshchandar, Chandrasekharan Rajendran, and R. N. Anantharaman, "A Holistic Model for Total Service Quality," *International Journal of Service Industry Management*, 12, No. 4, 2001, pp. 378–412.
- 32 See the official website of (International Organization for Standardization (ISO) for detailed information on ISO: <http://www.iso.org>.  
The ISO 9000 family of standards is described at: [http://www.iso.org/iso/home/standards/management-standards/iso\\_9000.htm](http://www.iso.org/iso/home/standards/management-standards/iso_9000.htm) and an introduction is provided in the publication: ISO Central Secretariat (2009), *Selection and Use of the ISO 9000 Family of Standards*. ISO, ISBN: 978-92-67-10494-2; (this book can be downloaded for free from the ISO 9000 website).
- 33 Jim Biolos, "Six Sigma Meets the Service Economy," *Harvard Business Review*, 80, November 2002, pp. 3–5.
- 34 Mikel Harry and Richard Schroeder, *Six Sigma — The Breakthrough Management Strategy Revolutionizing the World's Top Corporations*, New York: Currency, 2000, p. 232.
- 35 Peter S. Pande, Robert P. Neuman, and Ronald R. Cavanagh, *The Six Sigma Way: How GE, Motorola, and Other Top Companies Are Honing their Performance*, New York: McGraw-Hill, 2000.
- 36 The official website for the Malcolm Baldrige Award is <http://www.nist.gov/baldrige>.  
The official website for the European Foundation for Quality Management (EFQM) it is <http://www.efqm.org>, and an overview of the EFQM model is provided at [http://www.efqm.org/sites/default/files/overview\\_efqm\\_2013\\_v1.1.pdf](http://www.efqm.org/sites/default/files/overview_efqm_2013_v1.1.pdf).
- 37 Susan Meyer Goldstein and Sharon B. Schweikhart, "Empirical Support for the Baldrige Award Framework in U.S. Hospitals," *Health Care Management Review*, 27, No. 1, 2002, pp. 62–75.

- 38 Allan Shirks, William B. Weeks, and Annie Stein, "Baldrige-Based Quality Awards: Veterans Health Administration's 3-Year Experience," *Quality Management in Health Care*, 10, No. 3, 2002, pp. 47–54; National Institute of Standards and Technology, "Baldrige FAQs," [http://www.nist.gov/baldrige/about/baldrige\\_faqs.cfm](http://www.nist.gov/baldrige/about/baldrige_faqs.cfm), accessed 1 September 2015.
- 39 Cathy A. Enz and Judy A. Siguaw, "Best Practices in Service Quality," *Cornell Hotel and Restaurant Administration Quarterly*, (October 2000): 20–29.
- 40 Eight NIST Stock Investment Study, (USA: Gaithersburg, National Institute of Standards and Technology, March 2002).
- 41 Gavin Dick, Kevin Gallimore and Jane C. Brown, "ISO 9000 and Quality Emphasis: An Empirical study of Front-Room and Back Room Dominated Service Industries," *International Journal of Service Industry Management*, 12, No. 2 (2001): 114–136; and Adrian Hughes and David N. Halsall, "Comparison of the 14 Deadly Diseases and the Business Excellence Model," *Total Quality Management*, 13, No. 2 (2002): 255–263.

## ABOUT THE AUTHOR



**Jochen Wirtz** is Professor of Marketing and Vice Dean, Graduate Studies, at the National University of Singapore (NUS), and an international fellow of the Service Research Center at Karlstad University, Sweden. Furthermore, he is the founding director of the dual degree UCLA–NUS Executive MBA Program (ranked globally #6 in the Financial Times 2016 EMBA rankings) and international fellow of the Service

Research Center at Karlstad University, Sweden, and Academic Scholar at the Cornell Institute for Healthy Futures (CIHF) at Cornell University, USA. Dr. Wirtz holds a PhD in services marketing from the London Business School and has worked in the field of services for over 25 years.

Professor Wirtz's research focuses on service marketing and has been published in over 200 academic articles, book chapters and industry reports. He is an author or co-author of more than 10 books, including *Services Marketing — People, Technology, Strategy* (8th edition) (World Scientific, 2016), co-authored with Professor Lovelock, which has become one of the world's leading services marketing text book that has been translated and adapted for more than 26 countries and regions, and with sales of some 800,000 copies.

In recognition of his excellence in teaching and research, Professor Wirtz has received more than 40 awards, including the prestigious Academy of Marketing Science (AMS) 2012 Outstanding Marketing Teacher Award (the highest recognition of teaching excellence of AMS globally), and the top university-level Outstanding Educator Award at NUS. He was also the winner of the inaugural Outstanding Service Researcher Award 2010, and the Best Practical Implications Award 2009, both by Emerald Group Publications.

Professor Wirtz was a banker and took the banking exam at Chamber of Commerce and Industry in Munich. He has since been an active management consultant, working with international consulting firms including Accenture, Arthur D. Little and KPMG, and major service firms in the areas of strategy, business development and customer feedback systems. He has also been involved in several start-ups including in Accellion ([www.accellion.com](http://www.accellion.com)), Angeloop (<https://angeloop.co>), TranscribeMe ([www.transcribeme.com](http://www.transcribeme.com)), and Up! Your Service ([www.upyourservice.com](http://www.upyourservice.com)).

Originally from Germany, Professor Wirtz spent seven years in London before moving to Asia. Today, he shuttles between Asia, the US and Europe. For further information, see [www.JochenWirtz.com](http://www.JochenWirtz.com).

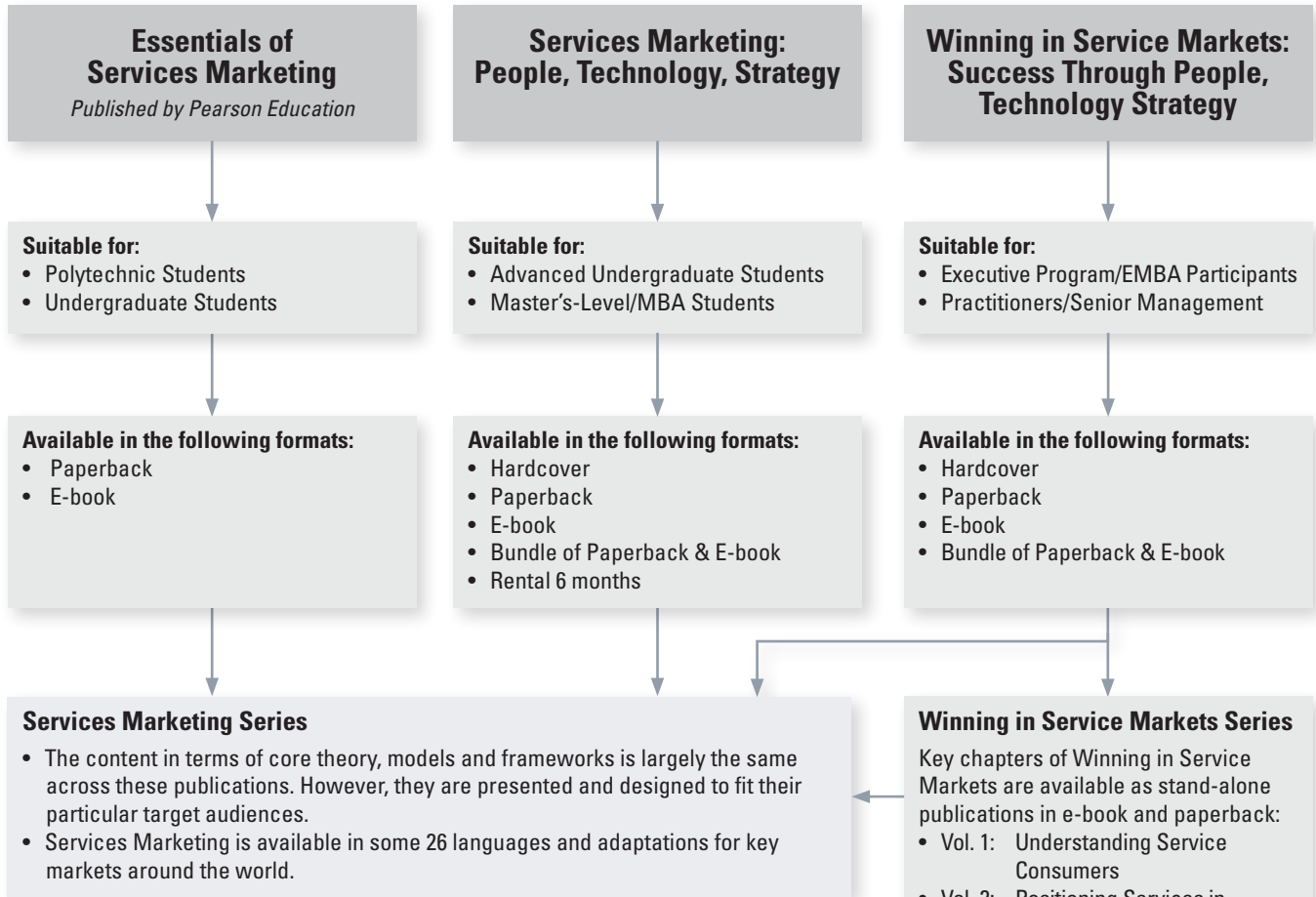
## ACKNOWLEDGMENTS

First, I would like to thank my mentor, friend and co-author Professor Christopher Lovelock. Since first meeting in 1992, he has become a dear friend who has had significant influence on my thinking and development. We have worked together on a variety of projects, including cases, articles, conference papers, and several books. *Winning in Service Markets* is, in fact, derived from our best-selling textbook, *Services Marketing: People, Technology, Strategy*, 8th edition. I am eternally grateful to Christopher for his friendship and support.

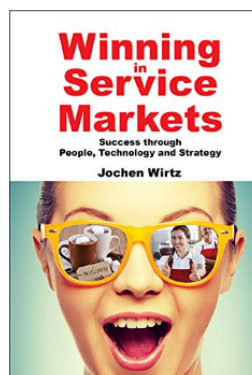
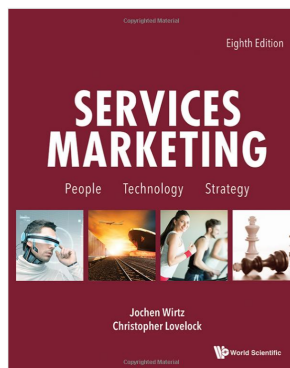
Although it's impossible to mention everyone who has contributed in some way to this book through their research, their contributions and discussions at the many academic conferences where we have met, as collaborators on various research projects, and as friends who have always been ready to discuss, criticize, and provide feedback and suggestions. I particularly want to express my appreciation to the following: Tor Andreassen, Norwegian School of Management; John Bateson of Cass Business School; Leonard Berry of Texas A&M University; David Bowen of Thunderbird Graduate School of Management; Richard Chase of the University of Southern California; Jayanta Chatterjee of Indian Institute of Technology at Kanpur, India; James Heskett, Earl Sasser and Leonard Schlesinger, all of Harvard Business School; Bo Edvardsson of University of Karlstad; Pierre Eiglier of Université d'Aix-Marseille III; Michael Ehret of Nottingham Trent University; Raymond Fisk of the Texas State University; Christian Grönroos of the Swedish School of Economics in Finland; Miguel Angelo Hemzo, Universidade de São Paulo, Brazil; Irene Ng of University of Warwick; Jay Kandampully of Ohio State University; Ron Kaufman of UP! Your Service; Sheryl Kimes of Cornell University; Tim Keiningham of Rockbridge Associate; Jos Lemmink of Maastricht University; Xiongwen Lu of Fudan University, China; Paul Maglio of University of California, Merced, USA; Anna Mattila of Pennsylvania State University; Ulrich Orth of Kiel University; Chiara Orsingher of University of Bologna; A. "Parsu" Parasuraman of University of Miami; Paul Patterson of the University of New South Wales, Australia; Anat Rafaeli of Technion-Israeli Institute of Technology, Roland Rust of the University of Maryland; Benjamin Schneider formerly of the University of Maryland; Jim Spohrer of IBM; Javier Reynoso of Tec de Monterrey, Mexico; Christopher Tang of UCLA; Rodoula Tsiotsou of University of Macedonia; and Valarie Zeithaml of the University of North Carolina.

Finally, I'd like to thank you, the reader of this book, for your interest in this exciting and fast-evolving field of services management and marketing. If you have any feedback, please contact me via [www. JochenWirtz.com](http://www.JochenWirtz.com). I'd love to hear from you!

## Services Marketing is available for various audiences:



Click book covers for links to Amazon:



### Contact

- For orders of individual copies, course adoptions, bulk purchases: [sales@wspc.com](mailto:sales@wspc.com)
- For orders for individual chapters, customized course packs: [sales@wspc.com](mailto:sales@wspc.com)
- For adaptations or translation rights, permissions to reprint: [rights@wspc.com](mailto:rights@wspc.com)
- For further information see: [www.JochenWirtz.com](http://www.JochenWirtz.com)
- For questions regarding contents: Jochen Wirtz, [jochen@nus.edu.sg](mailto:jochen@nus.edu.sg).

## Professor Jochen Wirtz

*Click below to follow his research & publications*





*Videos accompanying this  
publication are available.  
Subscribe to:*

