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AIRPORT COOPERATIVE RESEARCH PROGRAM

ACRP REPORT 157

Improving the Airport Customer Experience

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TRANSPORTATION RESEARCH BOARD

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AIRPORT COOPERATIVE RESEARCH PROGRAM

Airports are vital national resources. They serve a key role in transportation of people and goods and in regional, national, and international commerce. They are where the nation's aviation system connects with other modes of transportation and where federal responsibility for managing and regulating air traffic operations intersects with the role of state and local governments that own and operate most airports. Research is necessary to solve common operating problems, to adapt appropriate new technologies from other industries, and to introduce innovations into the airport industry. The Airport Cooperative Research Program (ACRP) serves as one of the principal means by which the airport industry can develop innovative near-term solutions to meet demands placed on it.

The need for ACRP was identified in *TRB Special Report 272: Airport Research Needs: Cooperative Solutions* in 2003, based on a study sponsored by the Federal Aviation Administration (FAA). ACRP carries out applied research on problems that are shared by airport operating agencies and not being adequately addressed by existing federal research programs. ACRP is modeled after the successful National Cooperative Highway Research Program (NCHRP) and Transit Cooperative Research Program (TCRP). ACRP undertakes research and other technical activities in various airport subject areas, including design, construction, legal, maintenance, operations, safety, policy, planning, human resources, and administration. ACRP provides a forum where airport operators can cooperatively address common operational problems.

ACRP was authorized in December 2003 as part of the Vision 100—Century of Aviation Reauthorization Act. The primary participants in the ACRP are (1) an independent governing board, the ACRP Oversight Committee (AOC), appointed by the Secretary of the U.S. Department of Transportation with representation from airport operating agencies, other stakeholders, and relevant industry organizations such as the Airports Council International-North America (ACI-NA), the American Association of Airport Executives (AAAE), the National Association of State Aviation Officials (NASAO), Airlines for America (A4A), and the Airport Consultants Council (ACC) as vital links to the airport community; (2) TRB as program manager and secretariat for the governing board; and (3) the FAA as program sponsor. In October 2005, the FAA executed a contract with the National Academy of Sciences formally initiating the program.

ACRP benefits from the cooperation and participation of airport professionals, air carriers, shippers, state and local government officials, equipment and service suppliers, other airport users, and research organizations. Each of these participants has different interests and responsibilities, and each is an integral part of this cooperative research effort.

Research problem statements for ACRP are solicited periodically but may be submitted to TRB by anyone at any time. It is the responsibility of the AOC to formulate the research program by identifying the highest priority projects and defining funding levels and expected products.

Once selected, each ACRP project is assigned to an expert panel appointed by TRB. Panels include experienced practitioners and research specialists; heavy emphasis is placed on including airport professionals, the intended users of the research products. The panels prepare project statements (requests for proposals), select contractors, and provide technical guidance and counsel throughout the life of the project. The process for developing research problem statements and selecting research agencies has been used by TRB in managing cooperative research programs since 1962. As in other TRB activities, ACRP project panels serve voluntarily without compensation.

Primary emphasis is placed on disseminating ACRP results to the intended users of the research: airport operating agencies, service providers, and academic institutions. ACRP produces a series of research reports for use by airport operators, local agencies, the FAA, and other interested parties; industry associations may arrange for workshops, training aids, field visits, webinars, and other activities to ensure that results are implemented by airport industry practitioners.

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COOPERATIVE RESEARCH PROGRAMS

FOREWORD

By Theresia H. Schatz
Staff Officer
Transportation Research Board

ACRP Report 157: Improving the Airport Customer Experience is a guidebook that documents notable and emerging practices in airport customer service management that increase customer satisfaction, recognizing the different types of customers (e.g., passengers, meeters and greeters, employees) and types and sizes of airports. It also identifies what airports can do to further improve the customer experience. This guidebook will provide airport staff, specifically customer service managers and others with responsibilities for managing and improving the customer experience, with comprehensive resources of management practices and understanding of current trends, information sources on customer service improvements, and practical tools that can be used for implementing a customer service improvement program. The practices, strategies, tools, and techniques described in the guidebook are expected to benefit a number of airport stakeholders, including airport operators, the travelling public, and members of the airport community such as service providers, concessionaires, airlines, government agencies and other airport tenants, elected officials, and airport board members.

The guidebook provides key drivers of customer satisfaction, including the top positive and negative influences for the customer experience; methods to engage airport stakeholders to improve customer satisfaction "from roadway to runway," including the use of innovative technologies; a template to implement a strategy for a customer satisfaction improvement program for a variety of types and sizes of airports, including staffing and budget considerations; and guidance to develop performance indicators to measure customer satisfaction.

Airports strive to continually improve customer service to meet the growing challenges of customer satisfaction. However, the stress of air travel has become a risk to customer satisfaction. Additionally, airports of different types and sizes face different challenges. Where options exist, travelers may avoid airports with a poor customer service reputation. Alternatively, good customer service may have a positive effect on the airport and its community and is part of a trend that has rapidly gained momentum as more and more airports have made improved customer service a priority. While data exist to help airports benchmark their customer service performance, there is no comprehensive guidance available on how to improve the overall experience.

Under ACRP Project 01-26, research was conducted by LeighFisher in association with Butterfly Consulting and Experience Engineering. The information in the guidebook was gathered by identifying airports that have had notable success in improving customer service. Airports to target were determined using several methods: airports mentioned in articles compiled in the literature review, airport ratings of Skytrax and ACI-ASQ surveys, and an email survey to ACI-NA Customer Service Working Group. This resulted in a list of 22 airports for a general survey and 18 for a secondary survey. Separate surveys were also conducted with six leading terminal architects.

CONTENTS

Introduction to the Guidebook

1.1 Introduction

Perceptions of airports are changing, as is the way airport operators view their customers.

Just a few years ago, if passengers were asked what they expect from their visit to the airport, more often than not their response would include long queues, obtrusive security measures, unhelpful staff, dingy restrooms, crowded gate areas, and little to smile about. The experience was often perceived to be more negative than positive.

The good news is that there has been a significant change in how airports view their customers, and that shift in viewpoint is accelerating. Airports are no longer viewing the airlines as their primary customers. Today's airports have become sophisticated and creative in their commitment to customer service excellence, beginning with a shift of emphasizing service to *customers* rather than *passengers.* The shifting focus to customers also takes into account employees and those who are there to meet and greet others.

Indeed, the research described in this guidebook shows that many airports have migrated from a focus on passengers as *customers* to the hospitality perspective of customers as *guests*, implying an even higher level of service and attention to needs and wants.

A basic tenet of customer experience management is that when the customer's experience exceeds the customer's expectations, the customer is pleasantly surprised. Conversely, when the customer's expectations exceed the customer's experiences, the customer is disappointed.

Unfortunately, customers' expectations are a moving target and are influenced by all sorts of real and perceived stimuli. Change is constant—customers change, the industry changes, and regulations change. Technology is an enabler of rapid change. Therefore, to maximize customer satisfaction with the airport experience, airports are improving their performance and innovating across the entire service delivery chain while providing customers with valuable information to help them manage their expectations and provide them with more control of their travel experience.

A guidebook was needed to support airport management as it transitions from providing stereotypical, predictable airport experiences to what is known as the "WOW" experience—especially within the increasingly complex airport environment in which many entities are responsible for the delivery of services but where, ultimately, the airport operator is accountable. Customer satisfaction has become an important goal of most airport operators, regardless of the airport's size or location.

This guidebook (1) provides notable practices to enhance customer service and increase customer satisfaction while recognizing the different types of customers (e.g., passengers, meeters

and greeters, employees) and types and sizes of airports, and (2) identifies what airports can do to further improve the customer experience. This guidebook is written for the airport operator's staff responsible for overseeing customer service delivery (e.g., the customer service manager) but should also be helpful to others in airport management looking to improve customer service in their functional areas.

Much has been said and written about how U.S. airports compare to airports outside of the United States. In early 2014, Vice President Joe Biden compared New York LaGuardia Airport to one that would be found in a "third-world country" (Rawlings 2014). Other commentators glibly and unfavorably compare U.S. airports to well-known international hubs—comparisons that generally leave U.S. airports, (and most other world airports) lacking.

While Seoul Incheon, Singapore Changi, and Munich airports, among others, offer a dazzling and best-in-class array of concessions, cultural offerings, and customer services, they are also pursuing a type of passenger that is unavailable to U.S. airports—the international transit passenger, which produces (by a wide margin) the highest commercial revenue, highest user fees, and highest airline fare revenues for these airports' resident international hub carriers. Each of these non-U.S. international transit airports also has a high proportion of international origin–destination (O&D) and transit passengers, in some cases approaching 100% of total passenger traffic. Their terminals and customer service programs are geared to meet the needs of long-haul international passengers making layovers of several hours while in transit.

The financial incentive to chase these international passengers is huge. Seoul Incheon earns more revenue from its duty-free concession alone than the total annual operating expenses and debt service of Hartsfield-Jackson Atlanta International Airport, with enough left over to fund another large hub airport.

In the United States, the international transit passenger is virtually non-existent. Passengers without U.S. passports or visas cannot connect in the United States, which makes using a U.S. airport as an international-to-international transit point difficult at best. U.S. airports are not designed for international transit passengers, and airline schedules are not planned to accommodate them.

However, these international benchmark airports can serve as exemplary high-water marks for customer service. In reality, a more realistic benchmark for U.S. airports would be leading domestic airports in the United States or leading domestic terminals around the world. Using these standards, a number of U.S. airports compare well, and others are close.

1.2 Purpose of the Guidebook

This guidebook was prepared to provide airport operators, specifically customer service managers and other members of airport staff responsible for managing and improving customer services, with a comprehensive resource on how to improve the overall customer experience. The guidebook summarizes the results of research into the approaches used by leading U.S. and non-U.S. airports with reputations for superior customer service in various aspects of airport operations. The guidebook presents the drivers of customer satisfaction, the methods some airports use to engage their staff and other stakeholders in improving the customer experience, and how customer satisfaction can be measured and monitored, and it lays out a range of techniques and methods that can be used to implement an airport-wide strategy for improving customer satisfaction, including the use of rapidly evolving new technologies. The organization of the guidebook is summarized in Table 1-1.

Table 1-1.   Organization of the guidebook.

Introduction	Developments and Trends in Customer Service	Implementation
Chapter 1: Introduction to the Guidebook	Chapter 5: Customer Experience Management Approaches and Customer Service Programs at Leading Non-U.S. International Airports	Chapter 11: Improving the Customer Experience – Summary and Implementation
Chapter 2: Evolution of Approaches to Customer Service at Airports	Chapter 6: Airport-Wide Customer Experience Management Approaches at Leading U.S. Airports	Chapter 12: A Template for Implementing a Customer Satisfaction Improvement Program
Chapter 3: Improving the Customer Experience – A Research-Based Primer	Chapter 7: Customer Service Trends in Terminal Design	
Chapter 4: Customer Service Needs and Expectations by Customer Type	Chapter 8: Improving the Customer Experience – Services and Amenities	
	Chapter 9: Improving the Customer Experience – People	
	Chapter 10: Improving the Customer Experience – New and Innovative Technologies	

1.3 Overview of the Guidebook

The guidebook is organized as follows.

Chapter 1 is this Introduction to the Guidebook.

Chapter 2 presents an overview of the evolution of approaches to customer service at airports worldwide, presenting airports on a continuum ranging from meeting regulatory minimums to being profitable customer-centric businesses.

Chapter 3: Improving the Customer Experience—A Research-Based Primer presents background information on customer service management at airports, including strategic approaches; building the airport brand; stakeholder collaboration; airport-wide performance management, including measuring customer satisfaction; and the importance of communications. The chapter also looks at the key drivers of customer satisfaction, the role of service standards, and differentiating the airport from others. Finally, the chapter provides an outline for developing a customer service plan that can be adapted to individual airports.

Chapter 4 presents a basic overview of customer service needs and expectations by customer type. Considering the different needs and expectations of passenger segments is important because each airport must take into account the characteristics of its customers as well as the underlying demographics of its core customer constituencies if it is to design a customer service program that meets the varying needs of its customers.

Chapter 5 presents an overview of customer service at leading world airports, including Amsterdam Schiphol, Munich, Seoul Incheon, Singapore Changi, and Vancouver International airports. Skytrax World Airport Rankings, a global benchmarking survey discussed in Section 3.2.2, rated four of the five as "5-star" airports in 2015 and named Vancouver the best airport in North America for 2015. Detailed summaries of the broad range of customer service enhancements at each airport are included in Appendix A.

Chapter 6 looks at the commonalities as well as the differences in the approaches to airport-wide customer service management identified in the research conducted for this guidebook and

how a number of leading U.S. airports approach the challenge of improving their customer service. The research showed that although many airports have been improving customer service, the top performers tend to use a strategic, airport-wide approach usually driven from the top of the airport operator's organization, which maximizes their results. However, other airports have made strides in improving the airport experience through the implementation of priority customer service programs or major initiatives that often involve technological enablers.

Chapter 7: Customer Service Trends in Terminal Design is based on interviews with leading airport terminal architects to gather their insights on what makes a successful passenger terminal and how their own recent projects are shaping the terminals of the future. New terminal projects and major terminal redevelopments present rare opportunities to make major customer service enhancements that for most airports may otherwise be unaffordable.

Chapter 8: Improving the Customer Experience—Services and Amenities presents an overview of current and emerging customer service offerings, initiatives, and developments that are important to passengers and other visitors to the airport.

Chapter 9: Improving the Customer Experience—People focuses on the importance of staff development and customer service training airport-wide in providing a quality customer experience. This is a challenge at many airports because most customer contact is with the staff of airlines, concessionaires, service and ground transportation providers, the TSA, and others who are not directly under the management of the airport itself.

Chapter 10: Improving the Customer Experience—New and Innovative Technologies presents an overview of how technology is being used to provide critical information, new services, operational efficiencies, and two-way communication tools to passengers while giving passengers unprecedented control over their experience at the airport. The smart phone, in particular, offers great potential to help the passenger customize the airport experience while at the same time reducing the stress associated with airports and travel.

Chapter 11: Improving the Customer Experience—Summary and Implementation discusses notable as well as emerging practices that airports might consider as circumstances allow, such as technological innovations and management tools with the potential to improve the customer experience in the years ahead.

Chapter 12 presents a template for implementing customer satisfaction improvement programs, including the organizational, stakeholder, communications, budget, and staffing considerations that each airport may consider. Organization, the form of airport ownership, the scale of activity of airport, terminal configuration, and cultural and legacy considerations make the challenges different and often unique from one airport to another. This chapter presents checklists that may be used by the customer service manager.

There are two appendices to this guidebook:

Appendix A—Customer Service Offerings of Airports Profiled in Chapter 5, and
Appendix B—Bibliography and Collateral Material List.

1.4 Definitions

Throughout the guidebook, the following definitions are used:

- **Airport customer experience:** The net impression of all of the experiences a customer has in an airport, as judged by customers based on their individual standards, expectations, and perceptions.

- **Airport customer experience management:** A systematic approach to managing the net impression (emotional and rational) produced by the airport experience. It includes the strategies and processes employed by airport management to plan, engineer, implement, and sustain satisfying customer experiences from the customer's perspective across the entire service delivery chain.
- **Airport service delivery chain:** A description of the connection that encompasses all of the organizations and companies doing business at the airport that are interconnected and co-dependent in serving the same airport customer either directly or indirectly. Many entities are responsible for the delivery of services at an airport, but the airport operator is often held accountable regardless of which link in the service delivery chain succeeds or fails. Similar to maintaining safe, secure, and efficient airside operations, outstanding service in terminal and landside operations is best achieved through collaborative partnerships, airport service standards, employee engagement, and open lines of communication.
- **Airport community:** The companies and government agencies that provide services as part of the airport service delivery chain and specialize in the services provided to airport customers; often referred to as the airport's business partners or stakeholders. The airport operator, its stakeholders, and all the employees working within and around the airport, taken as a whole, are important members of the airport community.
- **Best practices/notable practices:** A best practice is a service, amenity, use of technology, product, process, procedure, or technique that is believed to be more effective at delivering a particular outcome than any other service, amenity, use of technology, product, process, procedure, or technique when applied to a particular condition or circumstance. For purposes of this guidebook, best practices are in reality notable practices since no definitive test using absolute measures has been applied to determine which practices are actually the best, and there is only the presumption that they hold some advantage to the significant number of airports currently using them. Notable practices identified in this guidebook offer insight into solutions that may or may not work for a given situation or airport.
- **Customer-centric:** Refers to putting the customer at the center of the design of the experience and implementing processes, procedures, terminal designs, services, amenities, and communications that are engineered from the customer's perspective, thereby delivering greater value and higher satisfaction to the customer, whose perspective is the basis by which the ultimate value of the experience is determined.
- **Customer expectations:** The preconceived unconscious notions, perceptions, emotional needs, and perceptions of value that customers have of anticipated products, services, and experiences.
- **Customer satisfaction:** A measure of how products, services, or experiences supplied by a company meet or surpass customer expectations. The customer's needs, wants, preconceived notions, and perceptions of any anticipated product, service, or experience influence customer expectations. The more the experience exceeds the customer's expectations, the more satisfied or wowed the customer becomes. Conversely, the more an experience falls below the customer's expectations, the more dissatisfied or disappointed the customer is.
- **Customer satisfaction gap:** The difference between the customer's perceived experience and his or her expectation.

Customer satisfaction gap = Customer's perception of performance
                    − Customer expectation of performance

If airports manage performance to achieve consistent service excellence as well as manage customer expectations to be realistic, customer satisfaction is likely to be maximized.
- **Customer touch points:** Customer touch points are each of the interactions that a customer has with an airport. These interactions can be experienced before, during, or after the actual visit to the airport and may be:
  - **Physical.** Physical touch points relate to the aspects of the airport environment that can be experienced through any of the five human senses. The design and architectural treatment of

the terminal space, the furniture and other finishes, airport announcements, and restroom odors are examples of physical touch points.

– **Subliminal.** Subliminal touch points are subconscious. Experiences occur through various levels of consciousness. Airport ambience or atmospherics describe the mood or feelings evoked by the elements of an experience and are an example of a subliminal touch point.

– **Human.** Human touch points are the numerous interpersonal interactions between airport staff and airport customers, whether in person or on the phone.

– **Procedural.** Procedural touch points include interactions between customers and airport systems, policies, and procedures. Automated telephone systems, airport lost and found procedures, and airline baggage fee policies are examples of procedural touch points.

– **Communication related.** Communication touch points include interactions influenced by communications between the airport and the customer. Airport websites, brochures, and responses to customer complaints are examples of communication touch points.

- **Innovation:** An innovation is the process of introducing something new by translating an idea or invention into a good or service that creates value or for which customers will pay. Evolutionary innovations are brought about by many incremental advances in technologies or processes, while revolutionary innovations are often disruptive and new. Many of the notable practices that are identified in this guidebook were innovations that became trends as a result of having been implemented by many airports.

- **Moments of truth:** Moments of truth represent critical opportunities to make a difference in either a positive or negative sense in the customer's impression of an experience. In spite of all efforts to create positive customer experiences, sometimes customer touch points fail (such as through lost luggage, missed flights, or a rude airport employee), and customers become frustrated, agitated, and stressed. These hopefully rare occurrences are referred to as "moments of truth." Superior handling of moments of truth differentiates airports that aspire to be customer service leaders from those that truly are leading edge and requires a response from frontline (also referred to as customer-facing) employees that puts the customer's real and emotional needs first.

- **Service recovery:** The airport's response when customer service breaks down is called service recovery. All frontline staff, supported by the airport's policies and procedures, are the first responders. Effective service recovery can transform irate, stressed, and sometimes aggressive customers into calm, cooperative, and appreciative travelers.

- **Trend:** A trend is the general direction in which something tends to move. It can also be something that is in vogue or in style and that may fall into or out of favor. Many of the notable practices that are identified in the guidebook were innovations that became trends as a result of having been implemented by many airports.

1.5 Methodology and Data Collection

Data to support the findings and suggested practices in this guidebook were collected through a comprehensive literature review and surveys of airport management staff. The research included:

1. **A literature survey.** A survey was conducted of available articles and publications on the subject of customer service, both in general terms and as being considered and implemented at airports. The literature search included general-circulation publications, airport industry publications, and business publications. Documents in the research team's files and libraries were also added to the preliminary search results. ACRP publications were reviewed that could have included information that would be relevant to the guidebook and are referred to in the guidebook as in-depth resources, where appropriate. In addition, searches were conducted using the ACRP search program. Airports Council International (ACI) publications were also

searched for relevance, as were the Skytrax world airport rankings. Appendix B includes the complete bibliography.

2. **Airport management interviews.** Nearly 40 structured telephone surveys with airport management staff were conducted with staff responsible for measuring, monitoring, and managing customer service initiatives at leading airports. The airports selected were based on their rankings in the ACI Airport Service Quality (ASQ) program or in the Skytrax annual surveys of airport users. (The ACI-ASQ program and the Skytrax annual airport rankings are discussed in Section 3.2.2.) Follow-up interviews were conducted with airport staff familiar with areas of specific interest.

3. **Terminal architect interviews.** Interviews were conducted with leading architects who have planned and designed new terminals during the past few years to gain their insights into the physical aspects of terminals, the approaches used to improve customer service in new terminals, and the methodologies and approaches they used to work with airport clients on creating terminal facilities that balanced the needs of all stakeholders, including customers. In many cases, the drivers of an exemplary customer experience often require investment in new terminal facilities that can often only be implemented over the long term.

1.6 Intended Benefits of the Guidebook

This guidebook reflects notable practices in the airport industry, both in the United States and abroad. It is intended that the guidebook will provide a number of benefits:

1. That it will help airport customer service managers understand the differences among airports and their diverse customers and how these differences affect their customers' needs and levels of satisfaction as well as key drivers of customer satisfaction.

2. That it will help airport customer service managers understand what is meant by customer service, customer experience, customer satisfaction, customer expectations, and customer experience management.

3. That it will help airport customer service managers understand the strategic importance of managing the airport's customer service programs, as well as understand the different strategic approaches that airports use to achieve results.

4. That it will provide airport customer service managers with tools and techniques for managing and collaborating with the many stakeholders and business partners that collectively shape the customer experience at an airport, including collaborating with federal agencies, where airport managers seldom have significant direct control.

5. That it will provide airport customer service managers meaningful benchmarks for understanding the range of customer service at peer airports that might be considered for improving the customer experience, and will provide a template for evaluating and implementing customer service improvements at their respective airports.

CHAPTER 2

Evolution of Approaches to Customer Service at Airports

2.1 Historical Overview

To understand customer service management at airports today, it is helpful to look at how it has evolved over time.

The past several decades have seen considerable change, including disruption in the world's economy as well as sudden and evolutionary changes in both the airline industry and the airport industry.

2.1.1 Airline Deregulation—1978

Airline deregulation allowed free entry into airports and routes formerly subject to regulation, resulting in explosive growth in air service and price competition among carriers, which had been unknown under regulation. Formerly, airlines applied for the right to operate in a route, and the Civil Aeronautics Board (CAB) considered the level of competition on the route, the service network of the airline, fares, and the cost structure and then determined whether the public interest would be served by allowing the new service.

The regulated model offered little incentive for airlines to control costs and airfares. The CAB approved changes in airfares based on costs to operate over a given route. Airline unions were able to negotiate favorable wage rates and work rules for their members, with the airlines knowing that these cost increases, which eventually would be adopted by carriers nationwide, would eventually be passed on in the form of higher fares.

Under regulation, air travel was expensive, particularly for leisure travelers. Most consumers were unable to afford air travel, or it was a luxury reserved for special occasions or emergency needs.

After deregulation, intense airfare competition allowed millions of passengers to enjoy air travel, many for the first time. Although constrained by lack of aircraft and airport capacity in the early years following deregulation in 1978, airlines soon expanded, as shown in Figure 2-1. Airports had to respond to new entrant carriers and exploding demand for new air service by expanding terminals and adding concourses, parking facilities, roadways, and airfields.

The effect on terminals was significant. Airport master plans developed in the 1960s and 1970s were soon obsolete. Terminals needed to expand—quickly. Long-term leases signed with certain airlines were constraints on rapid expansion as incumbent airlines were not necessarily supportive of expansion that would allow for increased competition. Agreements that allowed for certain airlines to develop unit terminals also became constraints in light of traffic growth and new entrant carriers.

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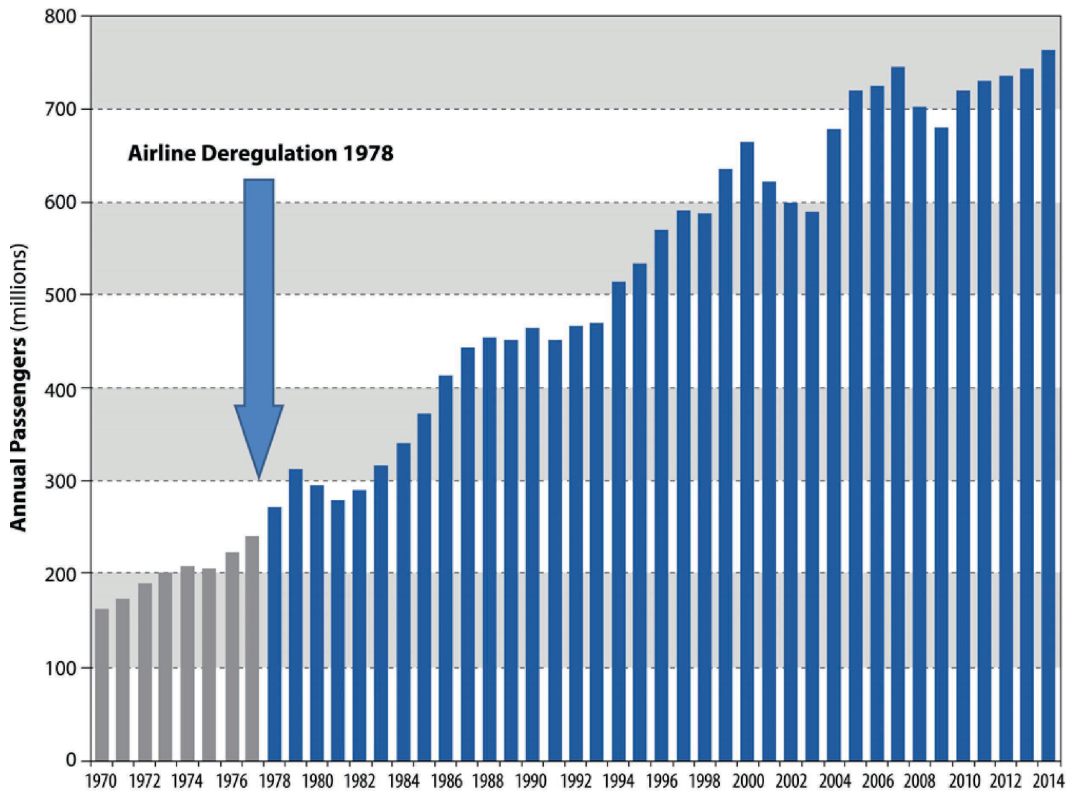
Figure 2-1.   *Growth of annual U.S. airline passengers, 1970–2014.*

2.1.2 Open Skies

As deregulation was reshaping domestic aviation, the U.S. government began pursuing a policy called "open skies" that replaced many bilateral aviation agreements that restricted landing rights with more liberal agreements that allowed service beyond traditional international gateways. In the 1990s, the United States signed open skies agreements with many European countries that gave U.S. airlines more destinations in Europe and gave European carriers access to cities across the United States.

This international form of deregulation created new routes to more cities and removed regulators' control over international airfares, stimulating demand for outbound and inbound international travel. Instead of one or two carriers (traditionally Pan American or TWA) acting as de facto U.S. flag carriers, other major domestic carriers were authorized to serve international routes. Deregulation, coupled with open skies, led to the bankruptcies and absorption of Pan American and TWA into other airlines but also resulted in more efficient domestic to international route systems as the major airlines looked to plug international destinations into their hub-and-spoke systems.

The result of these major trends changed the airline and passenger mix at airports across the United States. Cities and airports gained new air service and saw traffic double in the space of just 20 years.

Figure 2-1 shows the growth in annual passengers since 1970.

2.1.3 Hub-and-Spoke Development

Deregulation also brought about the development and refinement of the hub-and-spoke system, where passengers arrive on flights from throughout an airline's route network to the

airline's hub airport and then board other flights to continue to their destinations. Hub-and-spoke systems can be highly efficient and offer real economies of scale. As these systems developed, hub airports such as those in Atlanta, Chicago, Denver, Phoenix, and Dallas/Fort Worth all rapidly expanded to accommodate the demand as the hub carriers raced to gain market share. During this period, the emphasis was on building airline-efficient facilities to accommodate large numbers of passengers; the passengers' airport experience was a secondary concern.

2.1.4 Low-Cost Carriers

In the early 1990s, the advent of low-cost carriers providing point-to-point service challenged the dominance of the hub or legacy carriers. Low-cost carriers added further price competition and opened up new cities at lower fares, resulting in rapid growth of passengers. The "Southwest Effect," where Southwest Airlines would enter a market with low fares that would be matched by the incumbent carriers, created sudden growth and, in some cases, a shift of passengers from major hubs to secondary airports.

2.1.5 Competition Between Airports

Some airports, often secondary airports in large markets, chose to compete on price, offering low-cost carriers access to their airports and the larger market at low costs. This strategy was not necessarily a guarantee of success; larger airports with unused capacity could handle additional air service at a low marginal cost (provided that their airline rate-making methodology was flexible).

This also led to increased competition among airports. Chicago Midway Airport, virtually dormant after once serving as the world's busiest airport, saw a second life as a hub for Southwest Airlines. Smaller secondary airports became busier, changing the dynamics in markets such as San Francisco, which saw increased competition from Oakland and San Jose airports, or New York, where Newark airport became a base of operations for a new low-fare airline, PeoplExpress. In 1992, Pittsburgh International Airport opened its groundbreaking AirMall initiative for its new terminal in order to make the new airport more attractive as a connecting hub for US Airways.

The development of the hub-and-spoke system also created competition among connecting hubs. Passengers making a transcontinental trip now had their choice of several airlines and connecting hubs. A passenger making a trip from Tampa to Los Angeles could connect at Atlanta, Charlotte, Chicago O'Hare, Dallas/Fort Worth, Denver, Phoenix Sky Harbor, Salt Lake City, or Washington Dulles, among others. Passengers could now consider the advantages and disadvantages of the connecting airport when making their purchasing decisions. Airports became more focused on the passenger experience as they competed for connecting passengers.

In addition to direct competition, there is indirect competition between airports that is more subjective. Local decision makers, politicians, business leaders, media, and other influencers compare their local airport with airports they visit in their travels, especially competing airports. This relative comparison shapes local perceptions of the airport and is a factor in airport planning and management. The ability of airports to respond to or anticipate these comparisons varies due to factors such as airport ownership and the strength of the local market.

2.1.6 Increased Emphasis on Security After September 11, 2001

The attacks of September 11, 2001 (9/11) produced a national security response without precedent. Passenger screening at airports, introduced originally in response to a series of hijackings in the 1960s, became the priority. The security screening function was transferred from airlines, which had contracted the service to specialty security companies, to the federal government.

The increased emphasis on security meant long passenger screening lines and a need for expansion of checkpoints in terminals, often displacing other functions, as well as the need for additional airport staff to assist with queue management. The need to screen passenger baggage required installation of large machines, often in terminal ticketing areas because there was no room to accommodate them in baggage handling areas. In many cases, passengers had to carry their own luggage to the screening machines after check-in. The resulting long security queues, additional baggage handling, and terminal congestion made for an unpleasant and stressful customer experience. On the other hand, the increase in passenger dwell times and inability to bring certain liquids and foods through security screening checkpoints (SSCPs) further increased demand for concessions and services, at least in the post-security areas of terminals.

2.1.7 Pressure to Reduce Costs

The airline industry went through a difficult period in the early 1990s. Rising fuel costs, competition from low-cost carriers, economic recession, increased security costs, and reduced demand forced airlines to consider ways of reducing costs. Although airport fees and charges are a small percentage of airline costs compared with fuel, labor, and equipment, it is still an area that airlines believed could be reduced. Airlines also made investments in technologies and efficiencies that allowed for reduction of personnel costs and staffing levels in terminals. To accommodate the airline concerns, airports focused on ways to reduce their own operating costs, increase non-aeronautical revenue from concessions and services, or both.

This brought about an emphasis on expanding non-aeronautical revenue sources and a resultant heightened commercial awareness by airport management. Airports looked at other business models and overseas airports, particularly in Europe and Asia, for inspiration on how to expand their non-aeronautical revenues. The more successful of these airports had understood the key link between commercial success and outstanding customer service. Happy customers spent more time and money in the airport, produced more revenue, and opened up opportunities for additional commercial services.

2.2 Customer Experience Management Continuum Worldwide

Figure 2-2 presents a conceptual model of the continuum of airport customer experience management. At one end of the continuum are airports that meet the FAA or other relevant regulatory requirements for airports. They tend to focus on important basic functions and local infrastructure necessary for movement of aircraft and passengers. Their primary customers are airlines, and they respond to the essential needs of daily air service, with a focus on operations, maintenance, and facilities. Today, these airports are predominantly in developing countries.

On the other end of the spectrum are leading-edge airports that manage the total customer experience. These airports are highly regarded in their communities and are often a source of civic pride. Their management takes a more comprehensive approach, with a focus on all aspects of the operation, including building the airport brand. They collaborate with their business partners and set standards for themselves and others. Customer service is incorporated into all aspects of planning, including airport master plans, capital plans, and the airport's customer service plan. They are more likely to have a strategic business plan, and that plan incorporates customer experience management throughout. These airports are strategically directed and customer-centric, setting goals based on a vision for the airport rather than taking direction from airlines or external entities. Some examples of non-U.S. airports at this end of the continuum are discussed in Chapter 5, with detailed descriptions of their customer services included in Appendix A. Some U.S. airports at this end of

Characteristics Include:
- Regulatory Compliance Driven
- Pax Are Airline Customers
- Process Driven, Hierarchical, In-focused
- Airport Operator Typically Not Accountable for Service Levels at Airport
- Limited Relationship and Little Collaboration with Business Partners/Stakeholders
- Airside Discipline Typically Not Extended to Landside
- Focused on Operations, Maintenance, and Facilities

Characteristics Include:
- Airport Source of National/Local Pride
- Customer Centric
- Strategic Approach to Customer Service
- Service Excellence
- Collaboration with Business Partners and Stakeholders
- Airport Operator Accepts Accountability for Service and Directs Minimum Service Standards Across the Airport
- Strategic Plan, Master Plan, Capital Plan Integrated with Customer Service Philosophy
- Innovative
- Entrepreneurial
- Invest in People
- Focused on Total Customer Experience
- Sense of Place
- Positive Ambience
- Revenue Driven
- May Be Government Subsidized

Regulatory Compliance — **Elemental Services** — **Run-of-the-Mill Services** — **Progressive Burgeoning Experiences** — **Leading Edge Total Experience**

Customer Experience Management Continuum of Airports Worldwide

© Butterfly Consulting. Note: Pax = passengers.

Figure 2-2. Airport customer experience management continuum.

the continuum are outlined in Chapter 6 and discussed throughout this guidebook. In between are the vast majority of airports that are in various stages of customer-centricity and use some of the same tools as leading-edge airports, but often their approach is neither strategically driven nor interconnected, although it is well intentioned.

2.2.1 Airport Ownership

U.S. airport operators are, with very few exceptions, public entities that own and manage the airports. Airports are operated as departments of cities, counties, or states. They are operated as special-purpose authorities with governing boards independent or semi-independent of the airport's owners, such as those in Orlando, Raleigh-Durham, and Tampa, and by multipurpose port authorities, such as those in Boston, Oakland, New York, and Seattle.

Based on the independent ratings of U.S. airports by organizations such as ACI (through the ASQ program) and the Skytrax ratings, high-performing airports can be operated by city departments (Indianapolis/ASQ; San Francisco/Skytrax), by special-purpose airport authorities (Tampa/ASQ), or by multipurpose port authorities (Jacksonville/ASQ). No major U.S. airport is privately owned. However, U.S. airports have a high degree of private-sector participation, with essential functions such as concessions, parking operations, janitorial, systems maintenance, cargo building development, and perimeter security often (but not always) outsourced to private companies. Development of new terminals and other facilities is heavily outsourced as well, with program managers, architects and engineers, and construction contractors all contracted for, sometimes as design/build teams.

2.2.2 Maslow's Hierarchy Applied to the Airport Customer Experience

Figure 2-3 illustrates the typical airport service delivery chain for arriving and departing passengers. The service delivery chain connects the major functional areas that the typical passenger
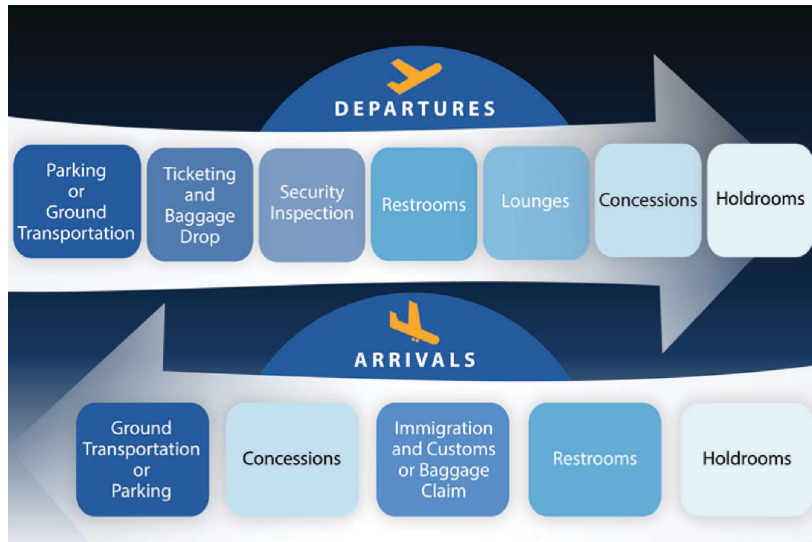
Figure 2-3.   Airport service delivery chain.

experiences when using an airport as either an outbound, departing passenger or an inbound, arriving passenger.

A way of understanding the relative importance of different aspects of the airport service delivery chain throughout the airport experience is to apply Maslow's Hierarchy of Needs as a conceptual model (see Figure 2-4). Abraham H. Maslow developed a model of human behavior that suggested that human actions are motivated by and oriented toward the achievement of goals. The model is usually presented as a pyramid with five levels, with the most basic physiological needs—air, food, and water—at the lowest level and self-fulfillment at the top of the
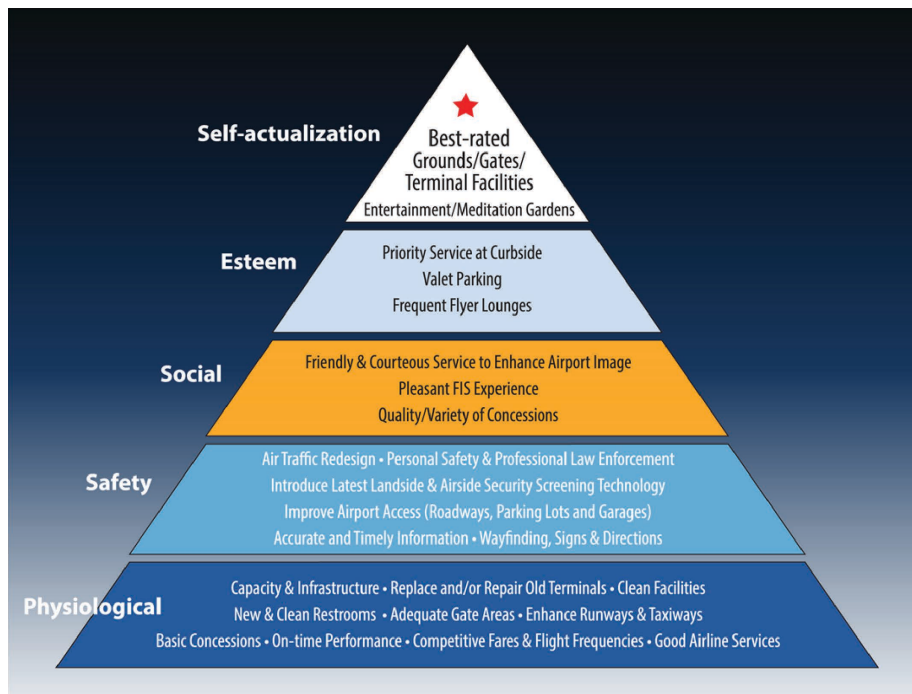
© Butterfly Consulting. Note: FIS = Federal Inspection Services.

Figure 2-4.   Maslow's hierarchy applied to airports.

pyramid. The low-level needs are often taken for granted but during emergencies become paramount. As the lower-level needs are satisfied, the individual is motivated to grow and satisfy higher-order needs. The same is true with the airport experience and the different links in the service delivery chain—airports must focus on getting the basics right before customers are motivated to partake of higher-order services and amenities, let alone speak highly of them.

2.2.3 Getting the Basics Right—Primarily the Physical/Process Aspects of the Airport Experience

Air travel can be stressful, frustrating, and time-consuming. Customers may spend a considerable amount of time at the airport, especially in the terminal.

Passenger processing and satisfying customer needs, wants, and expectations dominate the passenger's time. Departing passengers may arrive at the airport several hours before their scheduled departure times and may spend more time than anticipated in the terminal depending on a variety of factors, including flight delays, cancellations, weather conditions, and peak travel times.

Passengers spend much of their time in the terminal going through processing at check-in; baggage drop-off and pickup; security screening checkpoints; immigration and customs; waiting (in queues, at the gate, at baggage claim); finding their way (walking considerable distances, transiting between gates or terminals, moving from the entrance of airport to the departure gate and vice versa); satisfying basic needs, wants, and expectations (getting food and beverages to eat at the airport or take on the airplane, using a restroom, refilling water bottles, recharging electrical devices, shopping); and seeking assistance from airport staff.

For the departing or connecting passenger, the number-one priority is locating his or her departure gate. Satisfying needs and wants, basic or otherwise, usually occurs after locating the gate, when the passenger has a high enough confidence level that the flight will not be missed and a low enough level of stress to begin to fulfill basic needs and explore shopping and other discretionary options.

Figure 2-4 is an adaptation of Maslow's hierarchy applied to airports, with the most basic physiological airport needs such as cleanliness and washrooms at the base of the pyramid. Customers demand and expect that basic needs at the airport will be routinely fulfilled. However, basic needs rise to the forefront when not met. ACI has reported that, based on conducting their ASQ survey over many years, all of the top-rated airports have consistently received high customer ratings for these basic services.

2.2.4 "WOW"—Primarily Emotional Aspects of the Experience

Beyond physiological needs, other airport processes and service offerings meet customer needs for safety (security screening, law enforcement, wayfinding, signage), social considerations (friendly and courteous service, concessions offering variety and quality), esteem (priority services such as lounges and valet parking), and self-actualization (top-rated terminal facilities, landscaping, gardens, entertainment, art programs, yoga rooms, and other amenities that enhance the experience).

A "WOW" customer experience can be described as an experience that surprises or delights the customer. Opportunities to WOW the customer can be found at every level of the Maslow's hierarchy. WOW experiences at every level:

- Exceed the customers' expectations, and
- Leverage the emotional components of each experience.

The world's top-rated airports meet the full range of customer needs and do so with a broad and deep range of programs, services, and amenities that often exceed expectations. They also understand that if they are not getting the basics right, efforts expended on services, products, and amenities at the highest level of Maslow's hierarchy will not reap rewards or benefits commensurate with the efforts and investments made. In fact, they may have a negative and detrimental effect. For example, a meditation garden will not compensate for a dirty terminal and unclean restrooms and may lead passengers to wonder why the money was not spent on maintaining clean facilities instead.

The world's top-rated airports get the basics right and focus on creating WOW experiences by:

- Building an airport-wide brand in collaboration with their business partners and stakeholders, starting at the top of the airport company;
- Engaging, energizing, and educating airport staff;
- Maintaining a positive ambience throughout the airport;
- Ensuring uniqueness and sense of place to differentiate the airport from others;
- Innovating constantly;
- Leveraging technology;
- Introducing leading-edge facilities, processes, programs, services, amenities, and product offerings; and
- Understanding the importance of how customers feel (e.g., special, valued, assured, cared for, surprised, delighted, entertained) as well as the importance of the airport's ambience.

Figure 2-5 shows an example of how an ordinary restroom can create a WOW experience by getting the basics right first, then focusing on ambience, unique sense of place, constant innovation, surprise, delight, people, and creating a fun, enjoyable experience.

Highly rated airports understand their customers as well as their customers' perceptions and what they need, want, and expect from the travel experience. They are leading-edge airports that

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Figure 2-5.   Moving from ordinary to WOW.

are breaking new ground focusing on both the tangible and intangible aspects of their customers' experience (what their customers think and how they feel) across all customer touch points. Their efforts are paying off, figuratively and literally.

2.3 Controlling the Uncontrollable—Improving Airport Customer Experience Through Others

The shared nature of service delivery in the airport environment requires the airport operator to take a leadership role in establishing effective partnerships and ensuring the buy-in, commitment, and collaboration of the entire airport community to the airport's brand and customer service standards. Many parties are responsible for the end-to-end delivery of services at an airport, but typically the customers, the stakeholders, the public, and the media hold the airport accountable.

Passengers go through various processes as they journey between the curb and their gates and back again. A range of public and private service providers such as airlines, U.S. Customs and Border Protection (CBP), and the TSA provide these processes. Many of these processes, along with the resource allocation decisions supporting them, are not under the control of the airport operator; however, they significantly affect the customer's overall experience and perception of the airport. In addition, third-party service contractors and concessionaires provide important services, products, and amenities that also affect customer experiences and perceptions, such as providers of custodial services, wheelchair assistance, food, beverages, and retail. Therefore, airport operators must build strong relationships through collaboration and buy-in and, over time, enter into binding agreements (through leases, permits, agreements, contracts, service-level agreements) with business partners, stakeholders, and other service providers in the airport community to:

1. Support the airport's customer service brand, comply with the airport's customer service standards, and participate in the airport's customer service and performance management programs; and
2. Strive to provide pleasing customer experiences on a consistent basis that are aligned with the airport's customer service brand as the customer moves through the important links in the airport service delivery chain.

Key stakeholders and business partners in the airport's service delivery chain are discussed in the following subsections.

2.3.1 Airline Relationships

Airlines in the United States are generally responsible for a number of passenger processes, including:

- Check-in,
- Baggage drop,
- Operation of the transfer desk,
- Boarding and deplaning,
- Wheelchair assistance, and
- Providing customer service agents.

Airlines continue to deploy different business strategies to increase efficiency, leverage technology, increase revenues and market share, and maintain profitability in an increasingly competitive environment. Some airlines are more focused on customer service than others and are often rated

as better by passengers. Airline strategies may often have an impact on the customer's airport experience and the customer's perception of the airport. These strategies include:

- Reducing capacity on certain flight schedules and increasing load factors on remaining flights;
- Imposing fees for services and amenities such as baggage, snacks, and meals, which influence customer behavior regarding carry-on bags;
- Using self-service technology to provide customers with more flexibility and to reduce costs;
- Substituting new technologies to expedite and enhance the airline check-in function and boarding process, which may result in fewer personnel being available to assist passengers in the terminal; and
- Contracting with third-party contractors such as ground handlers to provide wheelchair assistance, check-in, and gate agents, as well as janitorial companies to clean gate areas or restrooms. Sometimes these contracts do not provide for adequate staffing or adherence to customer service standards. Passengers often believe these services are provided by the airport operator.

Today, airport operators are working collaboratively with airlines to put in place win–win strategies that:

- Support airlines as they look to successfully deliver on their vision for their customers, and
- Obtain airline buy-in and support of the airport's brand, service standards, and performance management program that will enhance the airport experience for the airline's passengers.

2.3.2 Federal Agencies

- **Customs and Border Protection.** The international arrival process requires passengers to undergo federal inspection procedures that are often perceived as intimidating and confrontational for passengers, especially visitors to the United States. This is often due to the authoritative and rigorous nature of the process and the presence of uniformed government officials who are required to ask questions and identify the passenger's purpose of travel. The staffing levels of CBP officers have a direct impact on the number of stations that are available to process passengers and the total number of passengers that can be processed per hour. Inadequate staffing or poor workforce planning at peak travel times can lead to congestion, long queues, and excessive delays for passengers and those who come to meet and greet them. Combined with sterile, unwelcoming Federal Inspection Services (FIS) facilities with poor ambience, this process leads to poor first impressions of the airport, the region, and the country for customers coming to visit the United States or U.S. residents returning home.
- **Transportation Security Administration.** Air travel was irrevocably changed by the events of 9/11. Today, all departing passengers arrive at the airport prepared to undergo the security screening process mandated by federal law and carried out by the TSA. At some airports that have opted-out of using TSA officers to staff their security checkpoints, the TSA oversees the certified third-party security contractor selected by the airport. From the customer's perspective, the difference in service provider is often not noticed.

Similar to CBP procedures, the security checkpoints and TSA officers are sometimes perceived as intimidating, inhospitable, and personally intrusive. The facilities at the checkpoint and the accommodations for passengers to collect their belongings and recompose themselves are often perceived as uncomfortable and potentially embarrassing, particularly in older terminals that have had to be retrofitted for today's longer checkpoints.

As a result, the security checkpoints and the federal inspection procedures are the points where passengers report the highest level of stress. In response to this, federal agencies have

become more passenger-sensitive and are focusing on providing a safe and secure environment that is more professional and hospitable and less intimidating.

Technology is also being leveraged to facilitate these processes and thereby enhance the customer experience. Introduced technologies include Global Entry, TSA PreCheck, automated passport control (APC) kiosks, and the Mobile Passport app. Airports have also worked in collaboration with the relevant federal agencies to improve the airport's facilities, furnishings, signage, and the ambience at the checkpoints and in the FIS area. The airports that are best-rated are introducing these enhancements in alignment with their airport brands as well as their airports' design standards. Some recent improvements in airport security checkpoint enhancements are discussed in Chapters 7 and 8.

2.3.3 Local Agencies

Airport police, whether provided by local police agencies or by the airport operator, are assigned to perform law enforcement functions at airports and may have a considerable impact on the airport customer experience. They can provide a calming presence in the airport when they elevate the customers' feelings of being safe and secure. Customers often expect them to serve as customer service ambassadors for the airport; however, some police departments do not see this as their role.

In addition, at some airports the police oversee the airport's traffic officers, who have a significant impact on the customers who drive to the airport to drop off or pick up passengers, as well as on the ground transportation providers. Managing airport curbsides can be a significant challenge and can induce tension on the part of the customers and traffic officers. The curbside is the customers' first and last impression of the airport for those who are picked up or dropped off at the airport; therefore, airport operators and the police will try to provide a more hospitable and orderly experience that keeps customers safe and delighted by:

- Adopting airport protocols and service standards aligned with the airport brand;
- Redesigning and re-signing curbsides as well as pickup and drop-off locations in ways that are sensitive to customer needs, perceptions, and expectations while making the curbsides operate more effectively; and
- Applying airport rules and enforcing regulations in a uniform and consistent manner.

2.3.4 Other Business Partners and Stakeholders

There are myriad companies that do business at the airport and provide products or services to airport customers and affect the customer experience:

- **Ground transportation companies** provide transportation services for people to, from, and around the airport. These companies can be either publicly or privately owned and provide services such as:
  - Mass transit, including trains, light rail, and buses;
  - Shuttles and shared rides;
  - Courtesy vehicles operated by hotels/motels and off-airport parking businesses;
  - Taxis and limousines;
  - Rental cars;
  - Intra-airport transportation such as parking/courtesy shuttle buses, terminal-to-terminal on-airport buses, and people movers; and
  - Transportation network companies like Uber and Lyft that connect drivers and passengers using smart-phone apps.

- **Service contractors** provide important airport services that directly or indirectly affect the airport customers and are either under contract to the airport operator or some other entity doing business at the airport. Contract services may include:
  - **Ground handling companies,** which typically provide services required by aircraft while at the gate. Passenger handling services inside the terminal, such as check-in, boarding, and wheelchair and lounge operation may also be provided.
  - **Parking management contractors** are typically under contract to the airport operator to manage and operate the parking facilities, primarily by providing parking cashiers, shuttle bus drivers, and supervisors. Depending on the nature of the agreement, parking lot operators may sometimes also be responsible for construction, management, operations, revenue control systems, and maintenance. (In some cases, parking may be self-operated by the airport or operated as a concession.)
  - **Concessionaires** are companies that have been granted the privilege to carry out a commercial operation at the airport, often with certain minimum operating requirements. In return, the concessionaire pays rent and/or concession fees. Major in-terminal concessions include food and beverage, retail, duty free, and advertising. Concessions have gained a higher profile over the years and have become important contributors to enjoyable customer experiences as well as to the financial and operational success of many well-rated airports.

Improving the Customer Experience—A Research-Based Primer

This chapter presents a primer on customer service and how to improve the customer experience at airports. It is intended to provide the airport customer service manager with an understanding of the basics of customer service and the components of a customer service improvement plan.

3.1 The Strategic, Holistic Approach

Excellent customer service occurs when an airport's ability to exceed its customers' needs and expectations consistently matches its customers' perception that their needs and expectations have been met. Thus, customer satisfaction is the outcome of the customer's experience as compared to his or her expectations.

Customer experience management includes the strategies and actions taken to influence the customer experience. Customer service is an important component of customer experience management.

Although there are many parties engaged in providing the airport experience, from the customer's point of view the airport experience is a continuum. Customers often do not know, or care, who is responsible for each link in the airport service delivery chain. Customers hope for the airport experience to be a seamless, hassle-free, and even enjoyable journey from the roadway to runway, regardless of who is responsible for delivering the service.

Creating uniformly excellent customer experiences in the airport environment is challenging because, as described in the previous chapter, there are many entities responsible for the customer experience. Although any one of these entities may be responsible for a failure in service delivery, the airport's customers and the media commonly hold the airport operator accountable.

Recognizing this reality, more and more U.S. airports today are driving customer-centricity:

- At the executive level of the airport organization and integrating it with how their airports are strategically and holistically managed;
- Through the airport's facility designs, operational and maintenance protocols, services offerings, amenities, and use of technology;
- Through airport staff and their approach to serving customers; and
- In their interactions with business partners and stakeholders in a complex and interdependent service environment where buy-in and collaboration are critically important.

Over the past 15 years, there has been a significant change in how airport managers view their customers. Today, many leading airport operators have become sophisticated and creative in their commitment to customer service excellence. Their definition of the customer has become more expansive. They have come to understand that if airport management takes a strategic and holistic approach to customer service and adopts an airport-wide customer service brand, customer

satisfaction with the airport experience can be significantly improved, and non-aeronautical revenues can be increased in a direct relationship with customer satisfaction.

Improving customer satisfaction has become an important goal of most airport operators, regardless of the airport's size or location, because:

- **A positive experience reflects favorably on the entire community, not just the airport.** An airport that provides a positive customer experience is viewed favorably by the traveling public, by the community it serves, and by the airline industry. It can be a source of community pride, facilitate business expansion, and garner public support that may be useful when major development decisions are required at some future date.
- **A positive experience can assist in attracting additional airline service.** An airport providing high levels of customer service is better positioned to attract or maintain air service since customers will migrate from a poor service environment to a high-quality service environment. Of the 25 largest metropolitan areas in the United States, 12 are served by more than one commercial airport, offering passengers a choice of which airport to use. Many U.S. airports, particularly in the East and Midwest, also have a high proportion of short-haul traffic, and passengers have the choice of using the automobile or rail or bus services as alternatives to air travel.
- **A positive environment leads to higher revenues and concession fees.** Airports have a strong financial incentive to attract passengers. Each additional passenger provides a combination of incremental passenger facility charge revenue, parking revenue, rental car concession fees, and concession revenues, while requiring only a small incremental operating cost. Studies by consumer research firm J.D. Power and the ACI-ASQ program indicate that passengers using an airport that has well-regarded customer service are also likely to have higher concession spend rates and higher concession and non-airline revenues. Similarly, operators of major international terminals, where retail revenues provide a large share of non-aeronautical revenues, have long understood that a passenger with more time and less stress will have a propensity to spend more in airport shops. Faster passenger processing times leave the customer with more time for shopping or dining.
- **The customer experiences service as a continuum, not a stand-alone event.** Leading customer-centric airports consistently offer across-the-board high levels of customer service. If a passenger has a bad experience from, say, using an unclean restroom, encountering rude airport staff, or enduring long queues at a security checkpoint, that bad experience can color the passenger's entire perception of the airport and change attitudes and behavior for the rest of the visit.

Simply stated, excellent customer service and enhanced customer satisfaction are good business strategies. The interdependent nature of the airport's service delivery chain dictates that a strategic, holistic approach be taken. Adopting this approach positions the airport to deliver quality services on a consistent airport-wide basis.

The strategic, holistic approach usually includes the airport operator's top management establishing a customer-driven vision for the airport in collaboration with the airport community and leveraging the relationship between airport vision, the airport brand, and the airport's customer service delivery strategy. Some airports call their airport brand their customer service charter. Figure 3-1 summarizes the approach to service excellence used by the world's top-rated airports.

A first step in creating a customer-centric airport is to define the airport's customer service brand that will shape its service delivery strategy.

3.1.1 Creating the Airport-Wide Brand

A brand is the essence or promise of what will be consistently delivered or experienced from a company, product, or service. The brand is usually associated with a set of perceptions and

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Figure 3-1.   The best airports' approach to service excellence.

images that exist in the minds of customers and is reflected in the thoughts and feelings that arise when customers think about a particular service, product, place, or person. These associations are a result of previous experiences. These previous experiences are how the customer perceives the brand offering both factually and emotionally.

Logos, tag lines, or stylized fonts are not the brand; they are merely representations of the brand. Logos may trigger what the brand represents in the customers' minds, which is the sum of their personal experiences, emotional connections, and perceptions of the brand over time. When the experiences and perceptions are positive, the logo becomes an effective symbol of the brand.

Every airport has a brand, just as individuals have a personal brand—namely, the esteem in which they are held when people think about their names. All airports have a brand in their customers' minds, even if the airport does not consciously or explicitly promote its brand or even accept the concept of a brand to define itself.

What distinguishes an airport brand from most other recognized brands is that the customers' experiences with an airport are made up of the individual contributions of multiple business partners and stakeholders, each of which has its own brand.

Airport brands are either ad hoc or strategic.

- Ad hoc brands are formed over time by the many associations customers have made with an airport. These associations shape the customers' expectations and perceptions of the services, products, and encounters that they expect at the airport and become the airport's de facto promise. Actual customer experiences, reports in traditional and social media, and hearsay all contribute to these associations, in good ways and bad.
- Strategic brands are strategically defined, communicated, and managed by the airport operator in collaboration with the airport's business partners and stakeholders. They are similar to the brand

of any other successful business enterprise and represent the airport's conscious and implicit promise to its customers.

Airports that are repeatedly recognized as the world's best are conscious of the power of a well-defined and well-managed brand and work collaboratively with their stakeholders and airport communities to explicitly uphold their customer service promise.

An airport brand is a vital strategic tool for differentiating customer experiences, improving customer satisfaction, and, ultimately, delivering financial returns. It embodies the airport's service delivery strategy, which some airports communicate as their customer service charter or commitment. Figure 3-2 shows Gatwick airport's "passenger commitments" issued in conjunction with its airline operations committee. Figure 3-3 shows some airport logos that reflect a strategic brand that has been defined, managed, and communicated by the airport.

An airport's brand definition should encapsulate what the airport stands for, how it differs from other airports, and what it promises to deliver to those who interact with or use its services. It is most effective when it is customer-centric (i.e., shaped by understanding customers' wants, needs, expectations, and priorities and by determining their satisfaction levels with, and perceptions of, the airport and the services provided). The brand definition provides the framework for outlining a strategic customer service delivery strategy that guides business decisions.

A traditional hierarchical organization is often depicted as a pyramid and as focused on achieving internal goals and reporting to upper management, senior management, and supervisors.

Courtesy of Gatwick Airport Limited.

Figure 3-2.   Gatwick Airport customer service charter.

Figure 3-3.   Airport logos—representations of the airports' brands.

A customer-centric organization supports the frontline staff, who are critical in pleasing the customers.

While world-leading airports have long understood the importance of their brands in the competitive global marketplace, most other airports are just now coming to understand the role and importance of brand building. Once having adopted an airport-wide brand, airports are better positioned to implement standards consistent with the airport brand, including:

- Terminal design, including ambience and sense of place,
- Service and amenities offerings,
- Performance management,
- Communications strategy across all communications channels,
- Leveraging information technology,
- Operations and maintenance protocols,
- Policies and procedures,
- Employee engagement and education programs, and
- Reward and recognition programs.

It is in this way that airports can deliver quality services on a consistent basis and keep the promises implicit in the airport brand. Figure 3-4 depicts the change in brand strategy that Cincinnati/Northern Kentucky International Airport (CVG) implemented to redefine the customer experience.

3.1.2 The Airport-Wide Customer Service Plan

Significantly improving and sustaining excellent customer services from the roadway to the runway is a serious undertaking. The challenge increases geometrically with the age of the facilities;

Change in Branding Strategy

Overall Equity

Where Your Trip Gets Off To A Fast Start

Brand Character

World-class professionalism with Midwestern charm.

Building Blocks

Points of Difference:

Faster airport services than other Midwest airports.

- Faster to the airport./Faster thru the airport/ Faster home.

Points of Parity:
- Airport services that business travelers need
- Free WiFi, Info Screens, Recharging Stations, Business Lounges, Quiet Areas, Mobile Connectivity, etc.
- Direct flights to dozens of key business destinations.
- Competitive fares to key business destinations.

Design theme: Vibrant River City Mosaic

CVG

Courtesy of Cincinnati/Northern Kentucky International Airport.

Figure 3-4.   Cincinnati/Northern Kentucky International Airport's branding strategy.

the size of the airport; the number of terminals, airlines, business partners, and stakeholders; and the size of the airport staff, to name just a few factors.

Developing and implementing an airport-wide customer service plan is critical to guide the airport operator as it seeks to enhance the airport's customer service culture. The customer service plan is an important tool that will assist the airport customer service manager in implementing specific and targeted customer service enhancement programs in the challenging, interdependent service delivery world of airports.

The components of the airport customer service plan typically include:

1. Customer service vision and brand statement;
2. Customer service strategic objectives;
3. Collaborative approach to foster buy-in and collaboration:
   A. Within the airport operator organization;
   B. Within the airport community, including stakeholders and business partners;
   C. Among employees;
4. Understanding of the customer:
   A. Customer demographics;
   B. Customer needs, wants, and expectations;
   C. Customer feedback through tools such as complaints, social media, comments, and airport staff;
5. Market research to determine the key drivers of customer satisfaction:
   A. Customer satisfaction surveys;
   B. Airport employee surveys;

  C. Business partners/stakeholders surveys;

  D. Focus groups;

  E. Benchmarking;

 6. Adopting service and design standards:

  A. Service policies and protocols;

  B. Guidelines for service delivery, for airport employee knowledge, attitude, and appearance, and for airport ambience, cleanliness, sense of place, wayfinding, construction, and so forth;

 7. Establishing customer service programs to address drivers of customer satisfaction and customer priorities;

 8. Cost/benefit analyses of alternative customer service standards and programs;

 9. Performance management plan:

  A. Performance management tools such as surveys, inspections, mystery shops, and complaint tracking;

  B. Key performance indicators and tracking changes;

  C. Baseline measures;

  D. Realistic targets;

  E. Scorecards/dashboards;

  F. Action plans with business partners, stakeholders, or internal airport operator department;

  G. Incentive and awards programs;

 10. Education, engagement, and energizing of airport employees:

  A. Customer service training programs;

  B. Reward and recognition programs;

  C. Airport employee orientation programs;

  D. Needed equipment, uniforms, systems, and so forth;

 11. Implementation plan(s):

  A. Tasks;

  B. Timeline and milestones;

  C. Accountability;

  D. Funding levels and sources;

  E. Pilot program or a phased approach;

 12. Communications plan:

  A. Channels of communication (e.g., social media);

  B. For internal airport operator organization;

  C. For business partners and stakeholders;

  D. For airport employees;

  E. For the community;

  F. For elected officials and airport governing board;

  G. For the media;

  H. For the public; and

 13. The customer relationship management approach.

  Figure 3-5 shows a representation of Austin-Bergstrom International Airport's 5-year strategy, which is an important component of the airport's strategic passenger experience plan. Jacksonville International Airport's customer service business plan (see excerpt in Figure 3-6) provides an example of how the components of an airport's customer service plan may be organized.

  Developing a customer service plan increases the likelihood of delighted customers. The customer service plan may be driven by executive management [such as the chief executive officer (CEO) or a chief customer experience officer] or managed at the senior/middle-management

Five-year Strategy

CUSTOMER AND COMMUNITY VALUE				OPERATIONAL EXCELLENCE	
GOAL 1	**GOAL 2**	**GOAL 3**	**GOAL 4**	**GOAL 5**	**GOAL 6**
ENHANCE CUSTOMER EXPERIENCE	BUILD THE BEST TEAM	STRENGTHEN PARTNERSHIPS AND RELATIONSHIPS	CONNECT OUR COMMUNITY TO THE WORLD	ENSURE EFFICIENT AND RELIABLE OPERATIONS	PLAN, DESIGN, & BUILD CAPITAL PROJECTS TO MEET CENTRAL TEXAS AREA GROWTH & DEMAND
OBJECTIVES				OBJECTIVES	
»Collaborate with business partners to ensure quality services »Ensure that passenger experience is consistent with our brand attributes of local, fast ,friendly and clean. »Leverage use of technology to enhance customer facilitation	»Attract, recruit, develop and retain a diverse, highly skilled and motivated workforce	»Maximize relationships with business partners, government agencies, legislative contingents and other community-based organizations.	»Expand external stakeholder support for connecting Central Texas »Expand air services to new destinations and enhance services to current destinations »Secure non-stop transpacific air service by 2020.	»Ensure operational preparedness »Promote a culture of security, safety and risk awareness »Improve business processes »Leverage new technology to ensure efficient operation	» Ensure the development and implementation of the five-year CIP plan to meet the future Central Texas growth . »Increase the number of Disadvantaged Business Enterprise (DBE) firms and subcontractors.

ECONOMIC SUSTAINABILITY			ENVIRONMENTAL STEWARDSHIP
GOAL 7	**GOAL 8**	**GOAL 9**	**GOAL 10**
INCREASE AND DIVERSIFY NON-AIRLINE REVENUE	MAINTAIN AND ENHANCE OUR COMPETITIVE COST STRUCTURE	STRENGHTEN ABIA'S FINANCIAL POSITION	Minimize our environmental impact on Central Texas.
OBJECTIVES			OBJECTIVE
»Enhance Parking Revenue. »Improve Concessions Revenue per enplaned passenger. »Enhance Advertising Revenue. »Promote Commercial and land development.	»Maintain competitive airline cost per passenger.	»Adopt the financial plan. »Increase bond ratings by 2020.	» Continue improving environmental management program » Reduce waste generation and enhance recycling » Reduce energy usage » Reduce emissions and carbon footprint » Continue to promote ABIA environmental program and accomplishments

Courtesy of Austin-Bergstrom International Airport.

Figure 3-5.   Austin-Bergstrom International Airport's five-year strategy.

level, such as by an airport customer service manager. Without a plan, the results may be seren-dipitous at best. (See Chapter 6: Airport-Wide Customer Experience Management Approaches at Leading U.S. Airports and Chapter 12: A Template for Implementing a Customer Satisfaction Improvement Program.)

3.1.3 Buy-in and Collaboration of Stakeholders

As previously noted, customers perceive the travel experience as a continuum and judge an airport's performance on the collective yet interdependent performance of all of the airport business partners and stakeholders. Figure 3-7 illustrates a customer-centric airport.

One technique that some leading airports successfully use to nurture buy-in and collaboration is the use of an **airport customer service council**, which can provide a regular forum for participants to identify, develop, and implement creative approaches to improve airport service delivery, espe-cially those approaches that cut across organizational or functional lines. Membership would typi-cally include the airport operator, airlines, terminal operators, service contractors, concessionaires, and governmental agencies, including security, customs, and immigration.

Airport customer service councils foster an environment of cooperation and accountability, facilitate the implementation of customer service improvement programs, and provide for the exchange of best practices among the members of the airport community. Working together, council participants can:

- Align with the airport brand or customer service charter;
- Develop a shared agenda;

Courtesy of Jacksonville International Airport.

Figure 3-6.   Jacksonville International Airport's customer service business plan table of contents.

- Adopt service standards;
- Solve issues facing the airport community;
- Implement airport-wide customer service training programs aligned with the airport brand;
- Manage, reward, and benchmark performance using tools such as scorecards and action planning;
- Design, implement, and support airport-wide reward and recognition programs;
- Develop cooperative marketing and communications programs; and
- Implement programs to elevate customer satisfaction, increase employee engagement, and increase net revenues.

Working together through forums such as a customer service council, the airport community can act as if service delivery is seamlessly provided by one airport rather than by multiple service providers who, working individually and independently, provide no readily identifiable experience at all. McCarran International Airport's McCarran At Your Service (MAYS) program demonstrates the commitment and the core values shared by the McCarran family, which includes the department of aviation, concessionaires, tenants, and federal partners who collaborated to create the MAYS program. The mission is to deliver a customer experience that makes visitors want to return with their family and friends. As part of the program, a MAYS committee was developed with representation from the McCarran family to guide and maintain MAYS. A department of
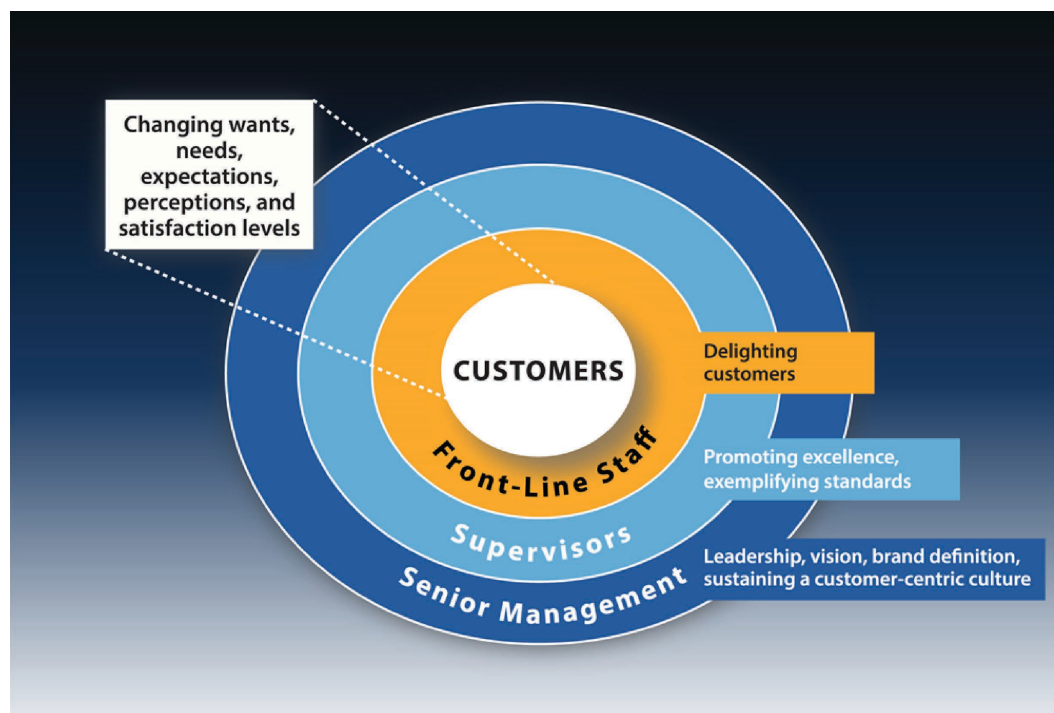
© Butterfly Consulting.

Figure 3-7.   Customer-centric organization.

aviation internal hospitality team assists in carrying out the goals and objectives of the program. The MAYS core values include collaboration, commitment, safety and security, hospitality, and innovation. Figure 3-8 provides more information regarding this collaborative program that contributes to the airport's success with its customers. McCarran International Airport is categorized as a Customer Service Culture airport in Chapter 6; however, its successful approach to obtaining the buy-in and collaboration of its airport community is a notable practice that is applicable to all well-rated airports.

Another technique used by leading airports to foster collaboration and buy-in is to ensure that customer service is a standing item on the agenda of existing airport forums such as:

- Station managers' meetings;
- Regular meetings with airlines, security, concessionaires, employees, and other important members of the airport community;
- Airport Operations Committee (AOC);
- Security committee;
- Baggage committee;
- Operational planning meetings, such as table-top exercises designed to plan, simulate, and agree on the responsibilities and operational preparedness of key airport stakeholders in the event of irregular operations; and
- Hot washes, which are forums to discuss timely operational reviews of recent service failures to prevent a reoccurrence or improve the airport's response.

At customer-centric airports, customer service is perceived as an airport priority, second only to safety and security. As a result, it is woven into the fabric of how the airport does business.
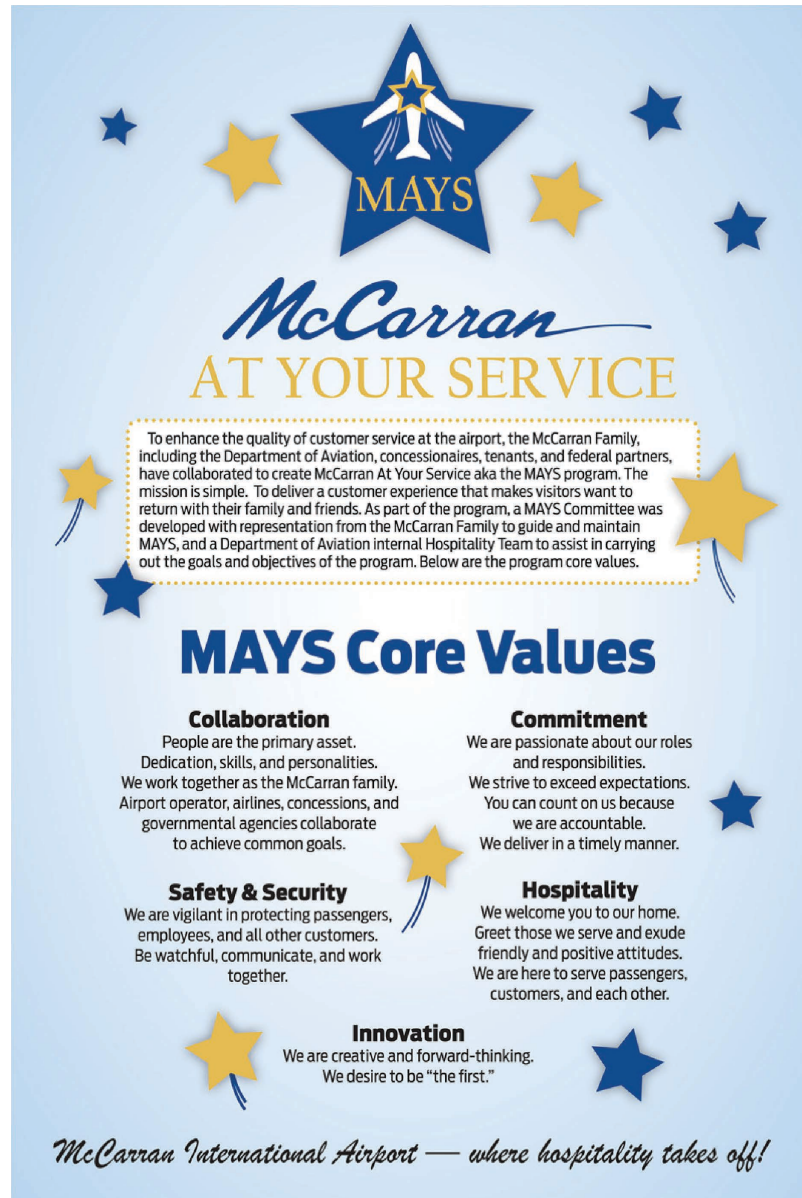
Courtesy of McCarran International Airport.

Figure 3-8.   The MAYS program.

3.2 Key Drivers of Customer Satisfaction

Airport management everywhere understands that their airports must first and foremost be safe and secure. To enhance and sustain the customers' experience, it is also critical for airport management to understand and embrace what drives customer satisfaction and customer perception at their airports. Figure 3-9 summarizes what customers typically need, want, and expect from the airport experience.

Key drivers of airport customer satisfaction, also known as customer priorities, are those aspects of the airport experience that most influence customer satisfaction. Customer-centric airports use this information to:

- Improve performance in areas that are perceived as providing the most value to customers,
- Manage realistic customer expectations in areas that drive customer satisfaction, and
- Promote service delivery where customers perceive airport performance as strong.

© Butterfly Consulting.

Figure 3-9.　What customers need/want/expect from airports.

When benchmarking, some drivers of customer satisfaction will be different or vary in importance among airports in the benchmark group. Market research is key to internalizing and acting on this information in a way that is meaningful and of value to an airport's customers. Market research provides the critical intelligence needed to map out a strategic direction, a unique airport brand, and the actions that are considered of value by an airport's customers, while ensuring that the airport stays on track in its approach. Vision and brand represent airport management's perspective of how the airport should serve and be perceived by the customer, but knowing the key drivers of customer satisfaction, both generally and of each service, amenity, or program specifically, will be the difference between a well-rated airport and one that is viewed as the stereotypical vanilla airport.

3.2.1 Customer Feedback Mechanisms

While industry studies and trends provide a wealth of information about the needs, wants, and expectations of airport customers generally, local customer feedback mechanisms help airport management determine the needs, wants, and expectations of the customers who use their airport and help them better understand the customers' key drivers of satisfaction. Customer feedback mechanisms most commonly used by airports include:

- Surveys,
- Focus groups,
- Social media,
- Comment cards,
- Website-based feedback,
- Emails,
- Airport call centers, and
- Airport employees who listen to and interact with customers every day.

Each of these mechanisms uses a different methodology for understanding the airport's customers. The feedback obtained from each more often than not complements the information

provided by other airport customer feedback mechanisms. When combined with other research such as industry trends and industry surveys, they provide a more complete picture of the airport's current and future customers.

3.2.2 Customer Satisfaction Surveys

Surveys are the most widely used mechanism to collect information regarding customer satisfaction. Customer satisfaction surveys determine the degree of satisfaction or dissatisfaction that customers have had with the airport's products and services and with their experiences at the airport. Surveys generally use a variety of survey methodologies to collect information and data and use rating scales to measure customers' perceptions of the airport experience. The most commonly used scale is one of 1 through 5, where 1 is highly dissatisfied and 5 is highly satisfied. Scales of 1 through 7 or 1 through 10 are not uncommon and provide more granularity. Rating scales allow airport management to track changes in customer satisfaction over time and track the impact of new or enhanced services or programs.

There are several different approaches to conducting customer satisfaction surveys:

- Some surveys that aim to be representative and reliable require that the random sample of respondents mirror the airport's passenger demographic and traffic by time of day, day of week, reason for travel, airline used, and so forth, while others encourage respondents to self-elect to complete the survey. The sheer size of a sample does not guarantee its ability to accurately represent a target population such as passengers in an airport. A survey sample's ability to represent a population has to do with the sampling frame—that is, the list from which the sample is selected. In the case of an airport satisfaction survey, the sampling frame is the passengers in the airport at a specific moment. When some parts of the target population are not included in the sampled population, the airport is faced with selection bias, which prevents it from claiming that the sample is representative of the target population.
- Intercept surveys are performed face-to-face with customers as they travel through the airport. These surveys can also be self-administered. If the selection is randomized, this sample will be representative of the entire population (i.e., passengers). A representative sample will be an unbiased indication of what the population is like. It will allow for statistical inference and, therefore, benchmarking.
- Some surveys are conducted online, but this may cause some problems with regard to representability. Indeed, if the respondents are self-elected and the sample is not representative of the population, statistical inference will not be possible.
- Random surveys use a sample of respondents that mirrors the airport's passenger demographics and traffic by time of day, day of week, reason for travel, airline used, and so forth.
- Third-party surveys allow airport management to benchmark with other airports because the same survey is performed in the same way for each represented or subscribing airport.

Some airports use customized, localized proprietary surveys to gauge the satisfaction levels of their passengers, usually by passenger segment, or a subset that cuts across market segment, such as parking or concession users.

There are two principal third-party surveys used globally by airports to assess the satisfaction levels of their passengers.

- **ACI-ASQ.** ASQ is a global benchmarking program that measures passenger satisfaction as passengers travel through the airport. ASQ research takes place in airports that serve more than half the world's 6.7 billion passengers. Passengers are surveyed while they are in the airport, which ensures better and more reliable passenger memories of the experience evaluated. Passengers are selected at random using a sampling plan that is designed by ACI to closely

model the airport's passenger traffic. ASQ is also mean-tested and standardized. In 2015, over 310 subscribing airports from 80 countries took part in the program. Approximately 550,000 passengers are interviewed annually, and the questionnaire is available in 40 languages. ASQ satisfaction surveys provide data indicating passenger demographics; how passengers perceive and rate the airport's services as they travel from curbside to gate; how the airport compares to others around the world by traffic type, size, regions, and so forth; which aspects of the airport experience are drivers of customer satisfaction for each participating airport; and how passengers' perceptions and priorities are changing over time. The annual global ASQ awards recognize the best participating airports based on the top three mean scores on overall satisfaction from the ASQ passenger satisfaction survey.

- **Skytrax World Airport Survey.** Skytrax is a global benchmarking survey that is fielded online. Respondents elect to make their own, personal choices regarding which airports to provide feedback on. The Skytrax World Airport Survey provides the core voting data for the annual World Airport Awards, also called the Skytrax Passenger Choice Awards. The 2015 World Airport Awards were based on more than 13 million survey questionnaires completed by airline customers representing 112 different nationalities during the survey period of May 2014 through January 2015. The survey covered 550 airports worldwide and evaluated travelers' experiences across different airport services and products as well as key performance indicators for check-in, arrivals, transfers, shopping, security and immigration, and departure at the gate. Skytrax recognition awards are based on categorization of airports by annual passenger levels, world region, and other categorization, including terminal facility and quality of airport staff.

Table 3-1 presents a listing of U.S. airports that have received recognition from the ACI-ASQ program and Skytrax.

Although all sources of customer feedback should be considered, it is important to understand the methodology used by each customer feedback mechanism to determine its reliability before decisions affecting an airport's customers are made and major investments are expended. For a more complete discussion of different customer satisfaction surveys used by airports, see *ACRP Synthesis 48: How Airports Measure Customer Service Performance.*

3.2.3 The Ten Most Important Items Mentioned by Passengers in the ASQ Survey—A High-Level View of Airport Passengers

As discussed in Section 2.2.3–Getting the Basics Right, customers demand and expect that basic needs at the airport (e.g., clean facilities, availability of clean restrooms, adequate gate areas, and basic concessions) will be routinely fulfilled. If they are not, basic needs rise to the forefront and become the key drivers of customer (dis)satisfaction at that airport. Once basic needs are well met, customer satisfaction is more likely driven by experiences that appeal to the customer's higher-order needs and wants (i.e., those in Maslow's self-actualization and esteem categories, including innovative, educational, and relaxing activities; services and amenities; unique shopping and dining opportunities; special events; entertainment; and fun). If the performance of basic services disappoints customers sometime in the future, they again become key drivers of customer satisfaction.

Studies of airport customer satisfaction have shown that airport cleanliness, the cleanliness and availability of restrooms, the courtesy of employees, ambience, ease of wayfinding, process efficiency, queuing, sense of place, feeling safe, and customs and immigrations inspections for international passengers are among the top drivers of customer satisfaction at airports worldwide. This list will vary by airport depending on its size, location, passenger demographic, and airport type (e.g., international versus domestic). Table 3-2 presents the 10 most important

Table 3-1.   Airports receiving recognition through ACI-ASQ (2013–2015) and Skytrax (2015).

Airport	Recognition	Hub Size	Airport	Recognition	Hub Size
Atlanta Hartsfield-Jackson International	*Skytrax* North America *Skytrax* 50 million+	Large	John F. Kennedy International	*Skytrax* North America	Large
Austin-Bergstrom International	*ACI* Director General's Roll of Excellence	Medium	Las Vegas McCarran	*Skytrax* 40 to 50 million	Large
Charlotte Douglas International	*Skytrax* 40 to 50 million *Skytrax* Best Regional (North America)	Large	Minneapolis-St. Paul International	*Skytrax* Best Staff (North America) *Skytrax* Best Regional (North America)	Large
Cincinnati/ Northern Kentucky	*Skytrax* North America *Skytrax* Best Domestic *Skytrax* Best Staff (North America) *Skytrax* 5 to 10 million *Skytrax* Best Regional	Large	Miami International	*Skytrax* 40 to 50 million	Large
			Philadelphia International	*Skytrax* Best Regional (North America)	Large
Denver International	*Skytrax* Best Staff (North America) *Skytrax* North America *Skytrax* 50 million+ *Skytrax* Best Domestic *Skytrax* Best Regional	Large	Phoenix Sky Harbor International	*Skytrax* 40 to 50 million	Large
Detroit Metropolitan	*Skytrax* Best Regional (North America)	Large	Raleigh-Durham International	*Skytrax* Best Regional (North America)	Medium
Dallas/ Fort Worth International	*Skytrax* Best Staff (North America) *Skytrax* North America *ACI* Director General's Roll of Excellence	Large	San Antonio International	*ACI ASQ* Best Improvement (North America)	Medium
			Seattle-Tacoma International	*Skytrax* Best Staff (North America) *Skytrax* North America *Skytrax* Best Domestic *Skytrax* Best Regional	Large
			San Francisco International	*Skytrax* Best Staff (North America) *Skytrax* North America *Skytrax* 40 to 50 million	Large
Grand Rapids Gerald R. Ford International	*ACI ASQ* 2 to 5 million	Small	Salt Lake City International	*ACI ASQ* 15 to 25 million	Large
Indianapolis International	*ACI ASQ* North America	Medium	Sacramento International	*ACI ASQ* North America	Medium
Jacksonville International	*ACI ASQ* North America	Medium	Tampa International	*ACI ASQ* North America *ACI ASQ* 15 to 25 million	Large

Source: ACI World and Skytrax websites.

items mentioned by North American passengers compared with global passengers based on the 2014 ACI-ASQ survey. Only the use of reliable customer feedback tools for all customers at an airport will accurately determine the true drivers of customer satisfaction at that particular airport.

3.3 The Role of Airport Customer Service Standards

Once the airport's brand has been defined and customer priorities determined using market research methodologies, airport service standards aligned with the brand can be established, starting with those standards that affect key drivers of customer satisfaction.

Table 3-2.   The ten most important items mentioned by North American passengers versus global passengers.

	Global Passengers Ranking	North American Passengers Ranking
Waiting time in check-in queue/line	1	1
Ease of finding your way through airport	2	2
Waiting time at security inspection	5	3
Cleanliness of washrooms/toilets	3	4
Internet access/Wi-Fi	4	5
Comfort of waiting/gate areas	8	6
Availability of washrooms/toilets	9	7
Restaurant/Eating facilities	16	8
Feeling of being safe and secure	7	9
Courtesy and helpfulness of security staff	11	10
Courtesy and helpfulness of airport staff	10	11

Courtesy of ACI World.

Airport customer service standards define more specifically the interaction between the airport and its customers and establish guidelines for all who provide service to airport customers (internally and externally). It is important that an airport's service standards be developed in collaboration with the airport community to obtain their buy-in and subsequently be adopted and shared with those affected by the standards. Over time, the customer service standards should be included in the instruments through which the airport does business—permits, leases, service-level agreements, contracts, concessions agreements, policies, processes, procedures, and systems. Ensuring buy-in becomes easier when customer service standards are formalized in written agreements.

Since customers expect seamless and transparent airport experiences and judge airports on the collective performance of the entire airport community, published customer service standards facilitate the delivery of consistently excellent service by providing generally accepted guidelines for all service providers at the airport. An airport's customer service standards define the service the airport customer is entitled to receive. Once developed and adopted, the airport community behaves as if all who provide service at the airport work for the same entity with a shared vision, a coalescing brand promise, and service standards to consistently guide them.

3.3.1 Why Have Customer Service Standards?

Airport operators are uniquely positioned to drive the development of the airport brand and customer service standards that are aligned with the brand. Customer service standards are like a musical score; without it the various musicians produce a cacophony of sounds.

If the airport brand is the essence or promise of what will be consistently delivered or experienced at the airport by its customers, customer service standards are key tools used by airport management to ensure that the airport can meet the brand promise on a consistent and reliable basis.

In addition, airport customer service standards:

- Clarify expectations and communications lines with business partners, stakeholders, and airport employees,

- Guide customer communications and marketing campaigns,
- Support airport-wide performance management, including action planning, and
- Help manage customer expectations.

3.3.2 Integrating Customer Service Standards with the Airport's Culture

An airport's customer service standards provide the framework that further defines the airport brand. They are most effective when integrated with the airport's culture and way of doing business. In addition to setting the level of customer service for the airport, customer service standards help make the airport brand tangible when standards aligned with the brand are developed for the key drivers of customer satisfaction. The Port Authority of New York and New Jersey (PANYNJ) compiled the first and one of the most comprehensive collections of airport service standards for all of its airports, including John F. Kennedy International, Newark Liberty International, and LaGuardia Airport. A portion of the 5th edition of the PANYNJ *Customer Care Airport Standards Manual* is illustrated in Figure 3-10. (The manual is also listed in Appendix B.) It should be noted that at the time of this writing, PANYNJ was in the process of updating the manual.

Courtesy of *PANYNJ.*

Figure 3-10.   *Cover of PANYNJ* Customer Care Airport Standards Manual.

Customer service standards may include:

- Airport and terminal planning and design;
- Operational efficiency;
- Facility condition and cleanliness, especially washrooms;
- Employee attitude, appearance, and knowledge;
- Airport ambience;
- Waiting times;
- Walking distances;
- Wayfinding and signage;
- Concession operations;
- Minimizing the impact of construction on customers; and
- Communications with customers on different communications platforms.

As each service standard is developed and collaboratively adopted, it will change the way the airport does business to be more customer-centric and aligned with the airport brand. To that end, well-rated airports use customer service standards:

- To define key measures of performance and monitor airport-wide service delivery and encourage continuous improvement;
- As inclusions in contracts, permits, leases, and service-level agreements to ensure compliance;
- As the foundation for employee recruitment, training, and rewards to identify and retain airport employees who can fulfill the airport's brand promise;
- As a factor in the selection criteria for airport service providers and contractors;
- As the basis for establishing incentives for airport service providers and airport employees; and
- To shape customer communications and marketing to help manage customer expectations and perceptions.

3.4 Creating and Sustaining the WOW Factor

Customer satisfaction is the degree to which a product, service, or experience meets a customer's expectation. The customer's needs, wants, preconceived notions, personal standards, and perceptions of any anticipated product, service, or experience influence their expectations.

The customer satisfaction gap is the difference between the customer's perception of performance and his or her expectation of performance.

$$\begin{aligned}
&\text{Customer's perception of performance} \\
&\underline{- \text{ Customer's expectation of performance}} \\
&\qquad = \text{Customer's satisfaction}
\end{aligned}$$

The more the experience exceeds the customer's expectations, the more satisfied or wowed the customer becomes (the WOW factor). Conversely, the more the customer perceives the experience as falling below expectations, the more dissatisfied or disappointed the customer becomes. If the customer satisfaction gap is zero, then the customer perceives the experience as expected and often views it as a typical experience.

Disappointment and delight are emotional responses to all of the tangible and intangible aspects of experiences. Ensuring delighted customers requires airports to design and manage the intangible aspects of the airport-wide experience as diligently as they do the tangible ones.

Customer perceptions and expectations are subjective, relative, and subject to change. They are affected by many factors, including the customers' prior experiences with the airport, other

airports, or with other related experiences such as malls, restaurants, or parking garages off-airport; their own standards for service, condition of facilities, and the behavior of people; their reason for travel (business versus leisure); their gender; their age; and their culture. Perceptions and expectations will rapidly change and will also be influenced by changes occurring in the aviation industry, other service industries, technology, and the world in general.

For airports to create and sustain the WOW factor requires:

- An intimate knowledge of customers and their needs, wants, expectations, and perceptions;
- A customer-centric strategic response and service delivery strategy;
- Managing the physical and the emotional aspects of the travel experience to ensure that the customer satisfaction gap remains positive and sustainable; and
- Taking a leadership role and working in collaboration with the airport community that makes up the service delivery chain.

As problematic as it is to achieve high customer satisfaction measures in an environment where there are numerous quasi-independent companies and agencies, the best-rated airports recognize that sustaining a high level of customer satisfaction may be even more difficult than attaining it in the first place. In the airport world, creating and sustaining strong relationships, collaboration, and buy-in is critical.

3.4.1 Customer Touch Points and Getting the Basics Right

Customer touch points are all of the interactions that a customer has with an airport. These interactions can be experienced before, during, or after the actual visit to the airport. Customer touch points fall into several different categories:

- **Physical.** Physical touch points relate to the aspects of the airport environment that can be experienced through any of the five human senses. The design and architectural treatment of the space, furnishings and finishes, airport announcements, and scents used in the restrooms are examples of physical touch points.
- **Subliminal.** Subliminal touch points are subconscious. These include, for example, airport ambience (the mood or unique atmosphere evoked by a place, which is discussed in Section 3.4.3) and sense of place (highlighting the unique culture or geographical attributes of the airport's location, which is discussed in Section 3.4.2).
- **Human.** Human touch points are the interpersonal interactions between airport staff and airport guests/customers, whether in person, on the phone, or over the Internet.
- **Procedural.** Procedural touch points include interactions between customers and airport systems, policies, and procedures. Automated call attendant systems, airport lost and found procedures, and airline baggage policies are examples of procedural touch points.
- **Communication.** Communication touch points include messages from the airport, responses to customer queries, public service announcements, information concerning how to use the airport's services, and the exchange of any information or ongoing dialogue between the airport and its customers in both the real and virtual worlds. Ready access to important travel information makes customers feel more in control of their journey, less stressed, and more satisfied with the airport experience. Airport apps, airport websites, social media, signage, flight information displays, baggage information displays, public address systems, visual paging systems, brochures, and responses to customer complaints are important customer touch points that demonstrate the airport's customer service philosophy, personality, and commitment.

Airports that are well-rated by their customers, like highly rated companies in other industries, do many things well, including putting the customer at the center of all that they do, designing experiences from the customer's point of view, and paying attention to every detail that makes up the customer experience, including those in all of the customer touch-point categories.

In spite of all efforts to create positive customer experiences, sometimes efforts in customer touch points fail (such as lost luggage, a rude airport staff member, or a missed flight) and customers become upset, agitated, and stressed. These events are often referred to as "moments of truth."

How airports handle moments of truth differentiates those that hope to be customer service leaders from those who are truly at the leading edge. Successful service recovery at the moment of truth is critical as it is the first response from frontline or customer-facing staff that determines if the customer's real and emotional needs are put first. Effective service recovery at the moment of truth can transform irate, stressed, and sometimes aggressive customers into calm, cooperative, and appreciative lifelong fans of the airport.

3.4.2 Leveraging Sense of Place

Sense of place is an important contributor to an airport's ambience. Airports that highlight the unique culture and geographical attributes associated with their locations are usually rated better by their customers. When integrated with the airport's vision, brand, and service delivery strategy, a sense of place can create a delightful and memorable airport experience.

Airports are the gateway to a city or region. They are the first and last opportunity for visitors to experience the history, culture, and richness that the locale has to offer. When sense of place is emphasized, passengers feel valued and enriched as the airport educates them about the uniqueness of the place at which they have arrived or are transiting. A strong sense of place also evokes a sense of pride in the travelers returning home or the locals who work at the airport.

Leveraging a sense of place and allowing customers to experience the best of a place right at the airport creates a unique experiential and educational opportunity. A strong sense of place fosters a complementary and positive ambience that other airports cannot simulate and provides a valuable opportunity for an airport to differentiate itself from others.

3.4.3 Ambience

The overall look and feel of a place that evokes a unique mood or atmosphere is referred to as "ambience." Many of the clues or signals that influence the customer's perception of the ambience of a place are subliminal, emotional, and compelling. In fact, ambience greatly influences the customers' experiences anywhere. Airports are no different. Third-party market research companies have identified ambience as a key driver of customer satisfaction at many airports worldwide.

Components of ambience include:

- Natural lighting;
- Open spaces free from congestion and crowding;
- Natural features such as plants, gardens, and water features;
- Artwork;
- Music;
- Sense of place features and touches;
- Educational features, such as museums;
- Areas to de-stress and recompose;
- Services and amenities that focus on unique traveler needs:
  - Children's play areas,
  - Nursing stations for mothers,
  - Quiet zones,
  - Pet relief areas;
- Efficient processes;
- Well-maintained facilities;

- Orderly queues;
- Cleanliness and neatness of airport;
- Clear wayfinding;
- Well-groomed, hospitable, and knowledgeable staff;
- Attentive, polite, and professional security officers;
- Unique services and amenities; and
- Special events and opportunities for fun.

Designing customer experiences that integrate these aspects with the airport's brand generally creates an airport with a more positive and holistic ambience as well as a more enjoyable overall airport experience. By so doing, these airports are purposefully creating a pleasing, cohesive airport experience using a consistent theme. The results are evident as the customers respond emotionally and intellectually.

Without establishing an overarching vision to go with the airport brand, each business partner would deliver what it thinks is the best customer experience and implement and manage it differently, resulting in a disjointed experience.

3.4.4 Differentiation and Uniqueness

Although airport management often says "If you have seen one airport, you have seen one airport," most airport customers often say "All airports are alike. If you have seen one, you have seen them all."

Connecting passengers have reported that they often cannot tell what city or country they are connecting through since the airport looks like any other airport anywhere. Rather than a blur of terminals, gates, concourses, and concessions that are all the same, the world's best-rated airports excel at creating a unique sense of place that differentiates them from other airports. They proactively seek out opportunities to offer their customers unique, novel, educational, calming, valued, and memorable experiences that can be seen, heard, touched, and enjoyed.

3.4.5 Constant Innovation

As discussed earlier, a basic tenet of customer experience management (the customer satisfaction gap) dictates that when the customer experience exceeds the customer's expectation, the customer is delighted. Conversely, when the customer's expectations exceed the customer's experiences, the customer is disappointed. However, customer expectations are a moving target, influenced by all sorts of stimuli, both real and perceived. Since passengers benchmark at least two airports every time they fly, their expectations on departure can change by the time they arrive back at the originating airport. As other airports and other related industries such as retail and hospitality continually raise the bar, customer expectations are raised as well. In fact, for most industries, today's innovation is tomorrow's new normal. Airports are no different.

This reality requires airports to look to constant innovation across the entire service delivery chain to improve their performance in the delivery of basic services as well as the introduction of new services, amenities, entertainment options, and customer service programs. Technology is clearly a powerful enabler when it comes to innovation. In addition to leveraging technology, additional tools used by airports to constantly innovate include:

- Market research to understand customers' needs, wants, expectations, and perceptions;
- Benchmarking with other airports and other industries to understand best practices and next practices; and
- Continuous improvement programs to streamline, re-engineer, and re-invent airport processes.

3.4.6 Use of Technology

Technology is quickly changing the travel experience. As increasingly empowered passengers seek new ways to take control of and customize their own travel experiences, airports, often working in collaboration with airlines, have embraced intelligent innovations. Technology and constant innovation are shaping air travel as we know it.

A few of the growing list of technology objectives and uses that are enabling the transformation of the airport experience and influencing customer satisfaction are discussed in the following.

- **Improve airport efficiency.** Self-service technologies such as online check-in; mobile boarding passes; flight rebooking; self-tagging of baggage and bag drop; radio-frequency identification (RFID) bag tags; automated gates; APC kiosks, the Automated Passport app; reporting a missing bag via a self-service channel; clearing security using technology and biometrics; and common-use technology to maximize the use of airport terminal space and the flexibility to serve passengers, including common-use terminal equipment (CUTE), common-use self-service (CUSS) system, and common-use passenger processing system (CUPPS).
- **Ease navigation.** Dynamic signing and digital wayfinding; flight information displays (FIDs) and baggage information displays; mobile apps; airport websites; use of Bluetooth, beacons, and Global Positioning System (GPS) technology that communicate directions via the customer's smart phones; and operational alerts indicating delays and congestion along the customer's way.
- **Reduce waiting times.** Using technology to monitor waiting times and length of queues that alerts management to open additional stations when wait standards are approached; advising customers of waiting time at the queue using Bluetooth, beacons, or other technology; alerting passengers of checkpoints with the shortest queues before passengers arrive so they can divert to the shortest queue; enabling passengers to make reservations online to clear the security checkpoint; and using biometric data to expedite processing.
- **Provide flight, baggage, concessions, and other information.** Automated airport alerts, airport apps, and social media; digital wayfinding; website and social media promotions; virtual assistants; remote customer service representatives using robotics or interactive kiosks; and customer relationship management systems.
- **Facilitate terminal planning.** Passenger flow applications and automated dashboards.
- **Solicit customer feedback.** Engaging in a two-way dialogue with customers through social media, websites, and customer relationship management systems.
- **Streamline and simplify the customer experience.** Apps to order food online that is delivered to the gate or picked up in the terminal to take on the plane; and automated parking, including entry and payment options as well as online parking reservations.

When it comes to communications, being mobile and social is what is important today. The always-connected passenger expects to have the right information at his or her fingertips at the time it is needed. These passengers also want a seamless experience between all communication channels and across the various devices they use. In addition, they also want a seamless, efficient, and enjoyable experience from each of the service providers in the service delivery chain and the airport as a whole. Passengers want to be more in control of their journeys and to be empowered to make choices that can expedite their trips and make the airport experience more enjoyable. Technology can help make all these wishes come true. As airports start to introduce these new technological innovations, the innovations transition from customer wants to customer expectations and affect the bottom line of airports that have not implemented them in terms of increased customer satisfaction gap and decreased non-aeronautical revenues. (Chapter 10: Improving the Customer Experience—New and Innovative Technologies provides a more comprehensive view of recent technological improvements in operator customer service.)

3.4.7 Opportunities for Fun, Surprise, and Customer Enrichment

In the not too distant past, words like "fun" and "customer enrichment" were seldom used in conversations about airport experiences. This is changing. Today, more and more U.S. airports are implementing opportunities for fun, surprise, and customer enrichment. Many of these opportunities have generally been implemented through the airport's concessions programs by the addition of spas, wine tastings, restaurants created by celebrity chefs, and local cuisine and arts and crafts. Other innovations include passenger appreciation events, local performing artists, animals for pet therapy, museums and art programs, holiday programs, and creative and innovative children's play areas. Many airports are indeed addressing the emotional and the physical, the tangible, and the intangible aspects of the airport experience.

3.5 Lessons from the Past and from Other Industries

This section uses lessons learned in other industries to review how customer service has evolved.

It is a well-observed fact that customers across all industries are more savvy, empowered, and demanding than ever before. This new order of business has led to what some call the age of the customer, the experience economy, the voice of the customer, or the customer-led market. Organizations are at a critical juncture as they attempt to deal with the resulting challenges and opportunities.

3.5.1 The Changing Nature of Customer Service

Historically, customer value was predominantly viewed through a focus on products or services as the sole economic offering, rather than as the effect of the total customer experience as an economic focus (which includes products and services). Businesses are increasingly faced with the reality that loyalty, advocacy, and willingness to pay depend on the way experiences cause customers to feel. In other words, the effect the overall experience has on customers is the true driver of their level of engagement with a business or brand. Companies have begun to pay attention to managing the clues or signals they produce in order to maximize customer engagement because it is foundational to sustained customer value, loyalty, and advocacy to do so.

Apple is a good example of this critical insight. If one considers how shopping for, purchasing, and using Apple products causes the customer to feel, it is connected to advocacy, loyalty, and a willingness to spend. It is not just function, features, or benefits, but the total impact Apple has in enhancing customers' lives and how they feel when they experience and interact with the brand— from shopping to purchasing to use. The ethos that guides every aspect of Apple, from product design to customer service, is to be simple, elegant, and easy to use. Their credo is "We are at our best when we deliver enriching experiences," not when they sell more products or deliver a better service. Steve Jobs understood the critical importance of the total experiential effect, and it is the reciprocal nature of this exchange that builds extraordinarily strong brands.

Over several decades, a series of dramatic changes took place in business that repositioned the customer experience from an afterthought to being at the top of corporate managements' minds and the essence of thriving and vibrant brands. For many years, it was enough to simply make goods or offer services and sell or push them to customers with marketing/advertising dollars. This ultimately led to a period of highly commoditized value creation and commoditized pricing. Additionally, as competitors below and above the market leaders entered markets, the market leaders realized that loss of market share was not going to be remedied through cost cutting and process improvements alone. Rather, customers had become considerably more empowered,

and as a result, brought new expectations and influence into the marketplace. By the 1980s, it started to become apparent that if businesses were to grow and maintain market share, they had to become much closer to their customers.

Today, businesses ranging from banking to healthcare, hospitality to transportation, and government to retail are awakening to the reality that old-world, make-and-sell business practices born out of the industrial age are over. A new world has been entered that requires transforming businesses' focus from the organization's needs to the customer's needs, feelings, and preferences in order to create deeply engaged, loyal customers that will return.

Perhaps the greatest proof of this new world of business practice is legendary organizations like Starbucks, Apple, Google, Ikea, Amazon, Costco, Jet Blue, Emirates, and Singapore Air. Through their successes in creating emotionally bonded, loyal customers through distinctive experiences, they have changed business as it was known.

Fortunately, more businesses today are jumping on the customer experience (CX) train and looking for approaches, methods, and tools that provide a greater return on CX strategy and investments. Throughout the journey, however, many fall into the trap of doing what they have always done and simply relabeling it as CX. Efforts to fulfill brand promises presume that the way to learn about customers' needs and wants is to ask them and they will tell you. Often what is characterized as "consumer insight" is in reality the reporting of defects. Efforts are often focused on customer opinions versus an understanding of customers' deep-seated emotional needs. Many businesses tend to focus on what customers think about experiences as opposed to how they think about experiences.

Of course, speaking to and understanding customers is essential in any CX effort, but the presumption that customer responses alone are sufficient to understand customers is misguided. Old-school methodology actually primes customer responses, and the rational framework employed yields haphazard strategies and incomplete results.

The future of CX is a holistic understanding of the customer and the business strategies and processes that interact with customers. In particular, businesses need to know the unconscious and emotional effects of their customer interactions because as human beings, "we cannot not have an experience" (Carbone 2004). Every interaction with a business—its people, products, or services—affects a customer's total valuation of that business's brand, products, and services. Those feelings shape customer attitudes, and in turn, customer behavior.

It is only after a business fully understands the minds of their customers that they can develop and implement a rigorous system to understand, design, and manage the overall effect to ensure it is delivered every time.

3.5.2 Balancing What Customers Value with What Businesses Value

The engine of any business is to provide value to customers, and the rewards for that are profit, loyalty, and advocacy. The seller creates an experience and the buyer responds—accepting or rejecting the feelings they have that are stimulated by the clues embedded in the experience. Even if a customer purchases the good or service, it does not mean that he or she is emotionally vested; it may just mean that there are no options that are more preferred or that the options are all mediocre or commoditized. It takes intentional experience management rigor and tools to consistently deliver experiences with a consistent effect that emotionally engage and bond customers.

Today, lean processes and supply chain efficiencies are not enough to develop a sustainable competitive advantage. Any serious effort at value creation must include experience-based strategies that address the unconscious, emotional desires of customers.

Starbucks, a brand populating airports worldwide, is an often-cited example of the successful balance of customer value and business value. In 1971, Starbucks was not what it is today. Upon opening on the Seattle waterfront, it was a coffee bean shop that provided product tastings or business cuppings for buyers.

It was, in short, a commodity business (selling coffee beans), and any experience that coffee drinkers had with Starbucks was in their homes. In those early years, Starbucks did not offer a rigorously managed experience as its value proposition. As Starbucks's CEO Howard Schultz recounted:

> We treated coffee as produce, something to be bagged and sent home with groceries. We stayed one big step away from the heart and soul of what coffee has meant throughout the centuries. If we could recreate in America the experience of an authentic Italian coffee bar culture, it might resonate with Americans the way it did with me. Starbucks could be a great experience, not just another coffee bar (Schultz 1997).

Insight into the value around the experience of coffee and the deep emotional desire of customers allowed Starbucks to transform a 10-cent/cup commodity into a $2.50 cup of coffee or a $3.75 latte.

Starbucks' approach to the experience of coffee is an example of how business value and customer value can result in invested customers and strong growth. Customer attentiveness is not a luxury; it is a necessity because, as Starbucks demonstrates, "the tangible attributes of a product or service have far less influence on consumer preference than the subconscious sensory and emotional elements derived from the total experience" (Zaltman 2003) that a business provides. If businesses desire to grow their own value, they must rigorously manage the sensory and emotional elements in the total experience. It is not merely how a customer feels about a business but how the customer feels about themselves when they are interacting with a business. In the end it is the customer who is the ultimate arbiter of business value.

3.5.3 Experience Clues, the Manageable Building Blocks of an Experience

Clues are drivers of experiences. Experiences are composed of identifiable indicators, signals, and stimuli—some of them rational, some of them emotional—that are registered consciously and unconsciously by the senses. In combination, clues evoke the aggregate feeling experienced by a customer.

The distinction between how customers feel about a business and how customers feel about themselves when interacting with any aspect of a business is the essence of customer experience. Customers do not value a brand without first valuing the experience the brand offers in total. All too often, brands assert themselves in an effort to declare their value to the customer without getting into the mind of their customers and how they feel and want to feel.

Knowing how customers want to feel and actually do feel in an experience will help businesses align the experiences that create distinctive value for customers. Knowing what they want to feel is the code that unlocks emotional bonds to experiences. The sensory information embedded in an experience is the conscious and unconscious data that create an impression and fuel how customers value and prefer a particular experience. This unconscious sensory data and the customer's emotional experience have more power and influence on customer preference than the tangible attributes of a product or service.

3.5.4 Integrating Clues into the Customer Experience

The clues in an experience are processed both on a conscious and an unconscious level. These clues are what the customer sees, smells, tastes, touches, and hears and are best referred to as

types of clues. Experience management is therefore about clue design and management. Experiences can be orchestrated in a haphazard fashion or intentionally designed and managed to create an intentional effect or feeling. Disney, Starbucks, and Apple are experience-clue conscious businesses that intentionally align clues to create powerful experiences to which customers are emotionally bonded.

A hallmark of these experience leaders is their ability to see the experience from the customer's perspective, often referred to as "customer back thinking" or "outside-in thinking." What are the clues or signals being processed by customers and how do those clues align with how customers desire feeling in the experiences they have?

The clues in an experience affect how customers feel emotionally, which in turn shapes their attitudes and ultimately drives their behavior. They can become loyal advocates or complaining detractors. The rise of social media and the impact of consumers having more control over the broadcasting of the reality of their experiences are critical factors in this new age of connectedness.

3.5.4.1 Experience Design

In his book *Clued in: How to Keep Customers Coming Back Again and Again*, Lou Carbone (2004) coined the often-quoted line "you cannot not have an experience, it's simply a matter of how managed or haphazard the experience is." That perspective of intentional experience design through the management of clues is the essence of a business management discipline that is here to stay.

Intentional experience design requires a deep understanding of the customers' unarticulated needs, translating those needs into how customers desire feeling in an experience, and then designing a system that emits clues and signals throughout to create a consistent emotional effect. When organizations perform what is called "journey mapping," they often map processes and do not pay enough attention to the psychological and emotional journey experienced by the consumer. Designing an experience that not only meets the rational needs of customers but also reflects the emotional moments that resonate most with customers is a distinguishing characteristic of top-flight experience design.

3.5.5 Relevant Best Practices from Other Industries

Several trends in business practices are emerging:

1. A shift from customer service to customer experience.
2. A rise in the awareness that experiences are emotionally charged and unconscious impressions are critical; a hunger for understanding the unconscious.
3. Thinking about experiences from the customer back, not from the company out. The customer's emotional journey is fused with the physical or process journey. The two cannot be separated.

Trends and practices in these approaches can be seen in breakthrough work at John Deere Financial Services and at John Deere Corporate Brand Management on a global basis. The company has had such great success in programs developed for consumer/dealer experiences that it has even taken a global approach to designing the new employee's first day of work as a distinctive experience. The work led to a significant decrease in first day no-shows and employee retention in highly competitive third-world work environments. The experience is designed on a framework of managing clues to create the emotional connection desired to help create engagement and a deeper sense of being vested in the brand and the company.

Medica, a not-for-profit medical insurance company in the upper Midwest, has been achieving success in many programs that were designed to repair a corporate image of indifference and help

its members feel understood, assured, and unconcerned. Phone conversations began to include phrases like "I want to make this simple for you" versus "I'd be happy to help you with that." The total effort is called "Speaking Medica." Every aspect of communication, including call center conversations, collateral material, letters, and email, was designed to use phrases that help build an emotional bond.

Lowe's Home Improvement Centers have been working diligently to create a distinctive appliance delivery experience. Lowe's experience efforts helped reveal that being in thousands of homes delivering appliances daily was an underleveraged opportunity. That experience has been a central focus in developing a deeper emotional bond with customers by aligning clues and signals in the delivery experience to demonstrate an empathetic connection to what customers are feeling when appliances are delivered.

Work done in a financial services credit card call center embedding specific clues into the language tone of conversations actually led to a 42% increase in the save rate when people were calling to cancel their credit cards.

It is obvious that more organizations are pushing the boundaries of customer satisfaction and customer service into a new era of robust, meaningful, and engaging experience design and delivery. Dedicated efforts to more deeply understand customers who unconsciously process clues that affect how they feel in an experience and affect how they feel toward a brand are helping companies strengthen their brands and their bonds to those customers.

Signs are all around us that the times are certainly changing. The customers' total experience represents the value they perceive, and their willingness to pay, to be loyal, and to advocate is becoming more evident. The perspectives, methods, and tools businesses use to manage this critical value for customers must keep pace with today's highly competitive and connected world.

3.6 Performance Management—Managing for Results

Performance management is critical for ensuring that an airport is delivering on its promise to its customers as expressed in its airport brand or detailed in its customer service plan. Performance management involves monitoring and managing the airport's collective performance on a regular basis by using published airport service standards and identifying key performance measures that indicate that the airport is moving in the right direction to address drivers of customer satisfaction. Top-performing, customer-centric airports track customer service performance indicators as closely as they do other key financial, operational, safety, and security measures. They use a broad spectrum of methods that include:

- Customer satisfaction results airport-wide (generally qualitative measures), and
- Measures of the efficiency of processes, services, and programs that affect customer experiences (generally quantitative measures).

As stated in *ACRP Report 19: Developing an Airport Performance-Measurement System:*

Performance management in today's economy has become a much more strategic, comprehensive, and high-level process. . . . For public- and private-sector organizations, regular measurement of progress toward specified and measurable outcomes is a vital component of any effort at managing for results (Infrastructure Management Group 2010).

Therefore, performance management of customer experiences is critical to ensure that the airport is delivering on its strategic customer service promise to its customers and, as a result, staying on brand.

Without a formal and effective market research program, it is difficult for airports to know the right actions to take to improve customer satisfaction, enhance the airport's image, and achieve

the increased non-aeronautical revenues that generally result from customer satisfaction increases. Without a formal and effective performance management system, it is difficult to know if the actions being taken are being done correctly or are making a difference.

3.6.1 Performance Metrics

Characteristics of a sound customer service performance management program include:

- Identifying baseline measures that indicate the status quo before improvements or enhancements are implemented;
- Establishing a critical few challenging but realistic targets that address customer priorities;
- Using reliable feedback systems for all customers;
- Implementing process measures to monitor and track the efficiency of the airport's processes;
- Benchmarking with other airports and other relevant industries and organizations;
- Sharing scorecards (also known as dashboards) that clearly communicate performance at a glance to each service provider;
- Managing action plans developed in collaboration with business partners, stakeholders, and other service providers committing what will be done by whom (including the airport operator) and by when that are then monitored and reported;
- Designing incentives, including awards and recognition programs, to improve the performance of airport service providers and airport employees; and
- Implementing programs to engage, educate, and energize airport employees.

It is extremely important that the right things get measured to achieve the results that matter most. When it comes to customer service at an airport, the right things to measure, monitor, and continuously improve include:

- Overall customer satisfaction and the key drivers of that satisfaction;
- Important aspects of basic services at the airport, such as cleanliness, ambience, courtesy of airport staff;
- Net revenues;
- Operational efficiency, including baggage delivery times and length of queues, especially at security checkpoints, check-in, and in customs and immigration arrival areas;
- Stressors associated with the airport experience, such as wayfinding, delays, wait times, especially at security checkpoints and customs and immigration, terminal noise, and temperature;
- Complaints and compliments;
- Social media feedback; and
- Media reports about the airport.

3.6.2 Performance Management Tools Used by Airports

Performance management tools used by airports to measure, monitor, and improve customer service include:

- Customer satisfaction surveys,
- Mystery shopping (also known as secret shopping),
- Inspections,
- Process measures,
- Customer feedback mechanisms,
- Scorecards,
- Incentives such as reward and recognition programs, and
- Benchmarking.

As with the adoption of the airport brand and customer service standards, the airport operator is best positioned to spearhead airport-wide customer service performance management using a number of tools. These tools are often used in conjunction with each other and are often integrated with other performance management tools, such as financial performance indicators, to design a performance management system that gives a more complete picture of how the airport is performing.

- **Customer satisfaction surveys.** Airports use a variety of third-party or proprietary surveys designed for or by the airport to better understand their customers' needs, wants, expectations, and perceptions as well as their overall satisfaction with the entire airport experience. Customer satisfaction surveys help airports determine the key drivers of customer satisfaction so that airport management can establish services that are linked to key performance indicators and implement customized standards and action plans to address/improve them working in collaboration.
- **Mystery or secret shopping** is a tool that uses unannounced and typically trained shoppers who are not known to the airport staff and act as typical customers. These shoppers test/evaluate the performance of airport staff interactions based on the service standards set by the airport. These may include employee attitude, appearance, and knowledge and quality of the service provided, usually in relation to published standards and service-related operational protocols. Shoppers are usually given a script and a checklist to guide their visits, which are conducted without disclosure at the time of the visit. The script and checklist form the basis of the subsequent report submitted to management. Typically the services and staff shopped include:
  - Information desks,
  - Customer service representatives,
  - Airport volunteers,
  - Restaurants and retail stores,
  - Services and amenities,
  - Bus and shuttle service, and
  - Parking lot operations.

  Mystery shopping results are reported, tracked, and trended. They are shared with the providers of the services, generally as soon as possible after the shop so that corrective action can be taken immediately. Trends are analyzed, and a determination is made regarding improvements needed such as enhancements to training programs or retraining of certain employee groups. As with other performance measures, a baseline for mystery shopping scores is determined, and changes to the baseline are tracked based on initiatives implemented to enhance or correct the services provided. Mystery shopping scores are also used as one determinant for incentives or reward and recognition programs for business partners, stakeholders, and airport employees.
- **Inspections.** Mystery shoppers can also note the condition of facilities/equipment on their reports as an observation; however, a more thorough, technical, and professional review of items such as facility or equipment conditions, facility or restroom cleanliness, and food preparation areas is usually done by inspectors who have a trained eye and know the regulations, protocols, and specific standards regarding the processes, procedures, or regulations for the services being inspected. An inspector is more like an official or auditor who is checking technical compliance with established standards and regulations. This may be performed in-house by staff using checklists or through the use of outside professionals with technical expertise.
- **Process measures** are measures of discrete steps in a process to improve, streamline, or re-engineer the outcome of the process. Airports that are focused on improving customer satisfaction frequently measure those processes that affect customer satisfaction, and especially the key drivers of customer satisfaction, at their airport. Typical airport process measures include:
  - Waiting time at check-in,
  - Waiting time at security,

    – Waiting time at customs,
    – Waiting time at immigration,
    – Time of first bag on carousel,
    – Time of last bag on carousel, and
    – Number of baggage carts available.

- **Customer feedback mechanisms,** such as surveys, uses of social media, and complaints/compliments/comments that come to the airport through comment cards or other feedback channels such as the airport website or social media, provide a wealth of information about the airport's performance and the needs, wants, perceptions, and expectations of airport customers. While process measures are generally quantitative measures of performance, customer feedback mechanisms generally provide more qualitative measures of customers' perceptions of the airport experience. Although airports monitor and track the number of complaints and compliments received as well as the number of friends and followers they have on social media, the information received from customers is more often than not qualitative and based on their perceptions of their experience. Measuring and improving the airport's performance on both the quantitative and qualitative (tangible versus intangible) measures of the airport experience are equally important to significantly improve customer satisfaction and for closing the customer satisfaction gap—the difference between the customer's perception of performance and his or her expectations.

- **Scorecards.** A performance scorecard is usually a graphical representation that indicates the progress of an organization toward the achievement of a target, goal, or result over time. Scorecards display baseline metrics, the changes in those metrics (i.e., progress), and targets for each key performance indicator (KPI) that are crucial to the successful attainment of the desired result.

    Some organizations use the term "dashboard" rather than "scorecard," and papers have been written to debate the difference in nomenclature. Some say that while scorecards track progress over time, dashboards report a snapshot of KPIs at a point in time and do not provide context for interpreting the measures. Scorecards and dashboards can be displayed and tracked using spreadsheets or more sophisticated application software that can be accessed on managers' computers or smart phones. Depending on the methodology used to collect the data, they can show information at the airport level or allow management to easily drill down to the terminal level, the concourse level, or the service-provider level. Both scorecards and dashboards are considered important performance management tools that allow managers to know at a glance their progress toward achieving results that matter and allow them to make mid-course corrections sooner rather than later.

    Customer service scorecards to enhance the customers' experience include KPIs such as customer satisfaction scores, mystery shopping scores, inspection results, queue lengths and wait times, and complaints. It is important to identify the critical few measures that matter most for measurement and tracking airport-wide. The targets that are set are often challenging but achievable and are part of a continuous improvement approach to service excellence. Figure 3-11 shows an example of the scorecard in use at the PANYNJ airports.

    Scorecards can also be used to manage the performance of any airport service, business function, or operation. For example, a scorecard for the airport's parking operation can be implemented to enhance the parking experience, the satisfaction of the airport parkers, as well as parking revenues, regardless the impact of parking on overall customer satisfaction at the airport. The critical success factor of any scorecard and/or dashboard tool is using the performance metrics as input to an effective action planning process.

- **Incentives such as reward and recognition programs** are mechanisms that can be used by airport management to encourage business partners, stakeholders, and airport employees to align with the airport customer service brand and to enhance the customer experience. The incentives should be meaningful and should be based on fair and transparent criteria that include key performance measures of customer satisfaction. Incentives are tools that help

2007 PERFORMANCE MEASUREMENT SCORECARD—GATE AREA							
Terminal XYZ—Airport Y							
Gates	Gate Sq. Ft.	Avg. Mvmt. Per Day	Avg. Mvmt. Per Gate Per Day	Outbound Pax. 12 Months Ending June 2007	Avg. Sq. Ft. Gate Area	Sq. Ft. Average Daily Pax	IATA Level of Service
38	43,500	457	13	6,949,150	1,145	2.3	F

	Customer Satisfaction (% Highly Satisfied)	Mystery Shopping (# of Deficiencies)	Quality Assurance (# of Deficiencies)
	Overall	Condition	Standards Missed - All Items
Timeframe	Annual - June 2007	6-Mon. Rolling Average - June 2007	Annual - April 2007
Actual Score	38	4	51
Performance Target (PT)	53-58	2	29
Specific Results	Needs Improvement	Needs Improvement	Needs Improvement

Overall Progress Since 2006	Customer Satisfaction Score increased 1% point, remaining at Needs Improvement Mystery Shopping Deficiencies increased 1 point, remaining at Needs Improvement Quality Assurance Deficiencies unchanged, remaining at Needs Improvement

Notes/Recommendations

- Cleaning up the terminal/gate areas, improving/upgrading facilities, offering more comfortable seating, a larger gate area to reduce crowding, more frequent updates when there are delays, better lighting, more WiFi connections, more electrical outlets and more entertainment options are all key items that air passengers say needs attention in order to improve their rating of the terminal. Comfortable seating, cleanliness/condition of the gate area and concessions offerings near the gate area are rated lower than other gate elements, more so among business travelers.

- Remove heavy accumulation of dust at ceiling vents/fixtures, everywhere. More frequent cleaning of gate areas needed, especially during peak times (paper/food/ debris/residue on floor/seats, windows smeared/smudged and debris on window sills at many gates, phones have adhesive residue and dust -- C9 phone bank damaged).

- Replace all damaged and/or missing ceiling tiles (present at most gates), ceiling damaged at A2, D10, HVAC cover damaged at C3). Repair scuffed/scratched/scraped/ gouged walls/columns/doors in all concourses (e.g., wall vinyl curling/damaged at A7/ B1/ B3/C2/D1 outlet covers missing at A6, walls gouged at A1).

- Clean carpet in all gate hold areas to remove stains; also repair torn/worn/damaged carpet/floor at A2/A3—trim strip missing, A7—carpet taped and matted, stairs worn at B5A, B7 & B8.

- Some seating torn at A5-6, B1, B2, B7, C2, C4-6, D2, D6. Counters/podiums chipped/worn at most gates, some also have adhesive residue (graffiti on C5 jetway counter).

- Many non-working ceiling lights and/or missing light covers (e.g., A1, B4, C1-3, C5-6, C11). Lighting insufficient relative to IES standards at gates A5, B1-3, C10-11, D1-10.

Courtesy of PANYNJ.

Figure 3-11.   Sample performance measurement scorecard, from PANYNJ **Customer Care Airport Standards Manual.**

engage and energize the airport community and airport employees to achieve results that go beyond the success of their own organizations or jobs and contribute to the success of the airport as a whole.

To that end, opportunities to celebrate success should not be overlooked to enhance the community's sense of pride, achievement, and teamwork in service to the airport's customers. Typical celebrations run the gamut from barbeques and pot-luck lunches to gala dinners that are sponsored by the airport community.

Incentives for business partners, third-party service contractors, and stakeholders include:
– Financial rewards tied to achieving customer service targets;
– Recognition awards, such as best cleaning contractor, friendliest concession, cleanest facility, and most hospitable airport employee;

  – Contract extensions tied to achieving customer service targets; and
  – Advantages in competing for new business based on historical performance.
      Incentives for airport employees that may be donated by airport business partners and stakeholders in conjunction with the airport operator often include:
  – Financial rewards tied to customer service criteria in performance reviews for annual increases or promotions or tied to mystery shopping or customer satisfaction scores for frontline airport staff, and
  – Team or individual awards tied to mystery shopping, customer satisfaction scores, or other customer service criteria.

3.6.3 Establishing Targets and Monitoring Improvement Against a Customer Service Baseline Through Action Planning

Action planning is the process of sharing the airport's customer service performance metrics with the members of the airport community who are responsible for providing the service or who can have an influence on the desired results. The action planning process records and tracks who will do what and by when and thereby establishes accountability.

Certain drivers of customer satisfaction, such as the attitude and behavior of airport staff, are affected by many members of the airport community. In fact, the number of frontline or customer-facing staff who work for the airport operator pales in comparison to the number of airport staff who work for the other service providers at the airport. Therefore, whenever metrics can be readily identified with the responsible service provider, sharing relevant measures, targets for improvement, and jointly agreeing to a performance improvement action plan is the key to effectuating change. Progress can then be tracked over time.

Overall airport customer satisfaction scores should be shared regularly with the entire airport community so that each entity understands its contribution to the overall scores. So should key drivers of customer satisfaction that are pervasive throughout the airport. Everyone who does business at the airport has an opportunity to help improve the results for these key measures, either directly or indirectly.

Once an action plan has been agreed on and accepted, the airport operator works in collaboration with the airport community to see to it that commitments are kept and results are achieved. Airports often use customer service councils (see Section 3.1.3) as a tool to report on performance, set targets, agree on airport-wide customer service programs and action plans, and determine service excellence awards.

3.6.4 Benchmarking

Benchmarking is the process by which organizations such as airports compare aspects of their business to best practices or to the performance of other organizations. Airports benchmark with:

- Other airports, including:
  – Competitor airports,
  – Airports in the same region,
  – Airports of the same size, and
  – Airports in the same class;
- Other related industries, such as best malls or best websites;
- Best functional practices, such as best signage; and
- Best processes, such as best customer complaint handling process.

Benchmarking is a powerful performance management tool because it counters paradigm blindness (i.e., the inability or refusal by management to see that the previously accepted paradigm is or has shifted). Benchmarking is useful in understanding how models and practices change; helps in identifying new services, improved processes, and new ideas and trends; helps increase efficiency and effectiveness; and helps airports enhance customer satisfaction.

Performance management is an important topic of interest to airport management and has been the subject of several ACRP syntheses and reports as well as other publications. For additional information on the use of performance measurements, the reader is referred to:

- *ACRP Synthesis 48: How Airports Measure Customer Service*,
- *ACRP Report 19: Developing an Airport Performance-Measurement System*,
- *ACRP Report 19A: Resource Guide to Airport Performance Indicators,* and
- [ACI] *Guide to Airport Performance Measures* (Wyman 2012)

3.7 Two-Way Communication with Customers

The adage that information is power has never been truer than it is today. In the fast-paced and often stressful world of air travel, passengers want to be informed on the go so that they know the best course of action at each step of the journey. Receiving the right information at the right time reduces stress and helps manage customer expectations, especially when it relates to disruptions in the journey such as delays (either flight delays or delays in getting to or from the airport) or baggage collection. It helps set the tone for the entire travel experience and can positively affect the emotional components of the trip and thereby customer satisfaction. Leveraging technology as a powerful enabler, airlines and airports are working on providing customers with the information they need to:

- Enhance the travel experience, and
- Establish stronger relationships and loyalty with their customers before, during, and after each journey has been completed.

3.7.1 Types of Communications

Customer communications take many different forms and have different intended purposes. Customers welcome them when they deliver information that the customer perceives as having value. Traditionally, airports pushed information out to customers, especially as they informed them about the information the airport wanted the customers to know, such as construction updates and tips on how best to use the airport, or they pulled information from customers when they solicited customer feedback, such as through the use of surveys.

In the past, communications from airports to customers were typically accomplished as a monologue. Today the situation has changed significantly, spurred by the popularity and fast growth of social media. Airports communicate much more robustly and transparently. Today's more customer-centric, progressive airports are actively engaged in an ongoing dialogue with their customers.

3.7.1.1 Informing

Airports inform their customers about several different types of important information that will benefit them and enhance their airport experiences. These include tips regarding how to use the airport; the status of services and operations at the airport; how to get to, from, and around the airport; new facilities and the impact of capital construction on travelers; operational alerts; events; and answering customer queries.

3.7.1.2 Listening

Airports also use various customer feedback techniques to listen to their customers. These techniques run the gamut from airport management having a presence in terminals and interacting with customers to the use of social media, surveys, focus groups, comment cards, airport websites, emails, and the media.

3.7.2 Channels of Communication

A communication channel is one of the many media through which customers communicate with the airport and the airport communicates with its customers.

The major communication channels used to inform and listen to customers are:

- On-site at the airport,
- Social media,
- Websites,
- Call centers, and
- Written and email communications.

3.7.2.1 At the Airport

Airports communicate with their customers at the airport on a daily basis. These communications include face-to-face, static, and digitized communications channels such as:

- Information booths and help desks;
- Customer service staff who move about the airport to assist customers and answer their questions;
- Wayfinding assistance through signage and airport maps, which can be static or digital paging systems and both audio and visual;
- Virtual assistants that provide information to customers via a repeating, static loop;
- Robots that provide information through conversations with a remote customer service agent; and
- Brochures, newsletters, and operational alerts.

3.7.2.2 Social Media

Social media has become a community without borders. It has changed customer expectations regarding communications with companies and service providers in dramatic ways. In a short time, social media has gone from an interesting emerging communications trend to a critical part of the communications landscape. Customers expect to get answers to their questions 24 hours a day, 7 days a week through their preferred online platform or application. According to Facebook, there were 1.44 billion monthly active Facebook users as of March 31, 2015. That equates to one out of every seven people on earth.

Today, airports cannot afford to be out of touch. Going online to get needed information; to learn about the experiences, perceptions, and opinions of other customers; or to shop for goods and services has become the new normal. Customers expect airports to communicate and respond as effectively as other progressive entities that they do business with.

Social media is a great communicator but an even better influencer. Airports are increasingly using popular social networks such as Facebook, Twitter, YouTube, Google+, Instagram, and Yelp to communicate important airport information; to listen to their customers and their community neighbors and engage them in dialogue; to understand, respond to, and shape customers' needs, wants, expectations, and perceptions; to watch for emerging themes and issues; and to identify customers who influence others.

Social media is changing the interaction between the customer and the airport. Communications are more direct and immediate, often allowing the airport to have more effective communications with customers. In addition, being social and available all the time can be an effective way to build an airport brand. Airports do not have a choice about whether to be involved in social media; the question is how well they do it. (Social media platforms are discussed in Chapter 10.)

3.7.2.3 Website

Many airports use their websites to establish a personal relationship with their customers and manage that relationship over time. The airport's website should have a personality that mirrors the airport's approach to servicing the customer. Websites are portals to all sorts of travel information that can facilitate the customer's use and enjoyment of the airport and its services. They are windows encouraging the customer to contact the airport.

In addition to providing the usual information about flight status, airport and terminal layout, parking lot status, service directories, amenities, and operational advisories, airports use their websites to solicit customer feedback and push information to customers to better help them understand the airport's strategic vision, its capital agenda, and its customer service brand. Some airport websites offer services that can be booked online via the website such as reserved parking or meet-and-greet services for passengers.

A good example of managing customer expectations through airport websites is providing a virtual tour in multiple languages that familiarizes passengers with airport facilities, services, processes, wayfinding, and even roadways before the customer arrives at the airport.

As airport websites continue to evolve to match the fast pace and preferences of today's travelers, they are also being made portable through custom-built airport apps or mobile websites so that customers can connect with their airport of choice anytime and anywhere through mobile devices.

3.7.2.4 Call Centers

Many airports have introduced a central phone number to allow customers to contact the airport about any query. The airport's centralized number is answered at the airport's call center, and the service, as well as the information and messaging provided to the customer, should be consistent, effective, and aligned with the airport brand.

3.7.2.5 Written Correspondence and Email

Customers continue to contact the airport using email and written correspondence although, over time, most customers have moved to other channels of communication. Similar to the call center for phone inquiries, typically the airport has a centralized email and/or physical address for all customer queries. The airport acts as the communications hub to ensure that the customer query is forwarded to the responsible service provider and tracks that the query is acted on and responded to in a timely manner.

Figure 3-12 shows an example of Gerald R. Ford International Airport's quarterly newsletter.

Regardless of the channels of communication used, it is important that:

- The airport informs or responds to the customer in a timely and courteous manner;
- Customer compliments/complaints are forwarded to the responsible department, business partner, or stakeholder for acknowledgment and resolution, if needed, as expeditiously as possible, and they are tracked, trended, and reported as part of the airport's performance management system; and
- The approach and the messaging are aligned with the airport's brand.
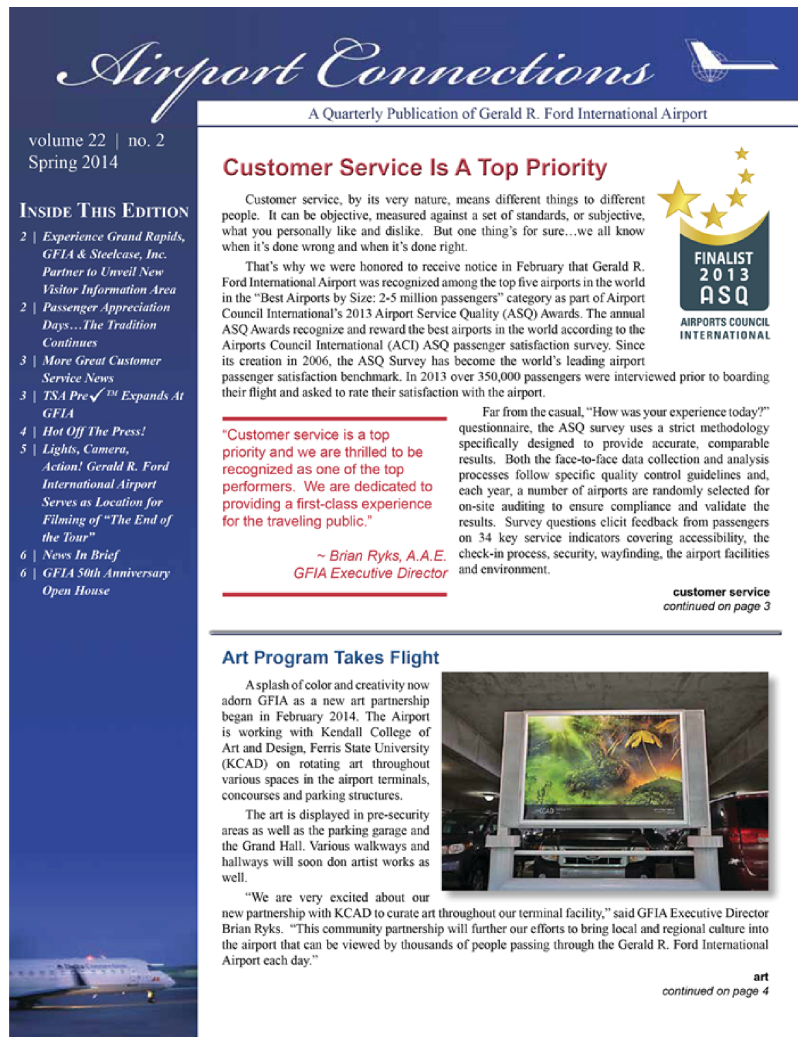
Courtesy of Gerald R. Ford International Airport.

Figure 3-12.   Gerald R. Ford International Airport quarterly newsletter.

3.8 Engaging, Energizing, and Motivating Staff Airport-Wide

In their book *The Customer Comes Second*, Hal Rosenbluth and Diane McFerrin Peters write about the importance of focusing on employees first because engaged employees will take care of customers.

Customers are unlikely to experience excellent customer service consistently unless the airport's employers and employees are aligned with a strategic service delivery strategy and customer service brand.

Additionally, effective and regular employee communications ensure that airport employees are the first to know about upcoming events, operational changes, and capital construction so that they not only feel that they are valued members of the airport family but so that they, in turn, can better anticipate customer needs, answer customer questions, and participate in promoting the airport's image.

3.8.1 Educating, Training, and Rewarding Employees

To allow members of the airport community to act as if they all work for the same entity, airports use several tools to educate, engage, and energize airport employees:

- **Airport orientation programs** to welcome new employees as members of the airport community and to educate them about the airport's history, brand, customer service charter, and service standards.
- **Customer service training** for all employees. Some airports have made customer service training a part of the badging process for all employees, similar to safety and security training.
- **Reward and recognitions programs** to acknowledge those employees who are in good standing and who exemplify the airport's brand, values, and service standards and who go above and beyond to please the airport's customers.

See Chapter 9: Improving the Customer Experience—People for a more detailed discussion regarding the impact of airport staff on the customer's airport experience and what airports are doing to engage all airport employees to focus on improving customer satisfaction in ways that support the airport's service delivery strategy.

Customer Service Needs and Expectations by Customer Type

This chapter examines the types of passengers and their key characteristics. For the airport customer service manager, understanding the airport's customer profile and demographics (including the nature of the passenger traffic) is important in planning and prioritizing customer service improvements and concessions (including new services and amenities), as well as in successfully responding to the needs, wants, and expectations of each customer market segment that the airport services.

This chapter discusses the following classifications of airport customers:

- Domestic passengers,
- International passengers,
- Non-passenger customers,
- Families,
- The aged and aging, and
- Customers with special needs.

The chapter then discusses clarifying and understanding customer needs.

Airport customers often fall into multiple categories. Depending on the type of customer service enhancement that the customer service manager is contemplating, it is important to consider these categories and other customer demographics such as the customer's gender and socio-economic and cultural profile to adequately assess the needs, wants, expectations, and satisfaction gaps of the specific customer types who may use the service enhancement and compare it to its revenue potential.

Figure 4-1 shows passengers classified by their status (domestic or international), purpose of travel, airline class of service, direction of travel (arriving or departing), origin, frequency of travel, length of trip, whether special assistance is required, and their mode of access to the airport. Three passenger profile examples are shown in Section 4.7.

4.1 Domestic Passengers

Domestic passengers are divided into two categories: business and leisure.

4.1.1 Business

A small number of business travelers tend to account for a high number of trips. Business travelers tend to be more frequent travelers than leisure passengers. The most frequent travelers are likely to belong to airline clubs.

Business travelers are on a schedule and therefore spend less time in the terminal, both prior to departure and after arrival. They are more likely to be carry-on passengers and to bypass

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Status	Domestic		International	
Purpose	Business		Leisure	
Airline Service	First Class	Business Class	Coach Class	
Direction	Departing		Arriving	
Origin	Local Originating	Visiting	Connecting	
Frequency	Frequent Traveler	Occasional Traveler	First-Time or Seldom Travels	
Duration of Trip	Weeks	Days	Same Day	
Special Needs	Families	Aged	Other (VIP, Wheelchair, etc.)	
Visitors	Meeters	Well-Wishers	Employees	
Access	Parking	Taxi/Limo/Van	Rental Car	Personal Vehicle

Figure 4-1.   *Classifying and understanding passengers.*

arriving concessions. Because they have a limited amount of time, they tend to make purchases near the departure gate or along their routes to the departure gate, and they are less likely to wander, browse, and shop casually.

Business travelers are less price sensitive than other passengers, are likely to be on an expense account, and (depending on the amount of time available) may be more likely to purchase a meal in a restaurant than fast food to take away. They are good purchasers from convenience retail units, where they buy newspapers, magazines, business publications, mints, gum, water, and other items. They are unlikely to be accompanied by family or friends, and only a small percentage is likely to be traveling with business associates.

Business travelers value their time more than other passenger segments. They appreciate free Wi-Fi to stay connected and power outlets to stay charged, and they like quiet places where they can work, such as study carrels (with power outlets) at or near the gates. Business travelers appreciate the amenities in private clubs, thereby transferring much of the airport customer service experience to club management (typically the airlines).

As frequent travelers, they value quality food and have the means or expense accounts to pay for it. They have occasional need for a business center where they can print their documents or send express packages. As frequent travelers, they have more experience with flight delays and cancellations, where the things they appreciate take on even greater value.

4.1.2 Leisure

Leisure travelers are more price and value sensitive than business travelers. They are typically traveling with others, such as family members. They spend more time at the airport, and are therefore more likely to explore the concessions and services and to make purchases related to their trips. For leisure travelers, the travel experience is a treat. They are not going or coming from a business meeting so they are not as rushed as a business traveler. They are also more likely to be accompanied to the airport by a well-wisher. They are sometimes burdened with carry-on baggage in order to avoid additional airline fees, and, as less frequent travelers, worry more about missing their flights. They also tend to worry more about the length of queues at ticketing and security, and they are much more dependent on signs and airport staff to assist them.

Depending on the airport, family travel may be highly seasonal, a factor which should be considered when planning cultural events like music and museum displays. If leisure travelers

are traveling with children, they are likely to be burdened with equipment such as strollers, car seats, diaper bags, and toys.

4.2 International Passengers

International passengers constitute a smaller percentage of passengers at U.S. airports compared with most airports of similar activity levels in other countries, but they are an important segment. International passengers are high in value for the airport, their airline, and the local community. Studies have shown that new international air services will stimulate substantial new business opportunities and have a high economic impact for the community.

4.2.1 Departing International Passengers

Departing international passengers are the most lucrative and demanding of all categories of passengers.

International passengers will, on average, spend the most time in the terminal since the frequency of flights by airlines to their destinations is usually less than for domestic destinations. The cost in time, money, and aggravation if the customer misses an international flight is high relative to a domestic passenger.

The international passenger is also eligible to patronize the duty-free shop and purchase merchandise on a duty- and tax-free basis. However, not all departing international passengers are alike. Foreign visitors are much more likely to spend in duty-free shops, often by a factor of 2 to 5 times that of the U.S. passenger. Overseas passengers' purchasing habits in airports, particularly for higher-end tax-free and duty-free merchandise, are closely related to the tax structures of their countries of origin. Chinese, Korean, Japanese, and Brazilian passengers are much higher spenders due to the high excise taxes, value-added taxes, and import duties in their home countries.

The duty-free average spend rate for a departing international passenger at an airport serving multiple international destinations may range from $4 for an East Coast airport serving Caribbean or Mexican destinations to close to $30 for a West Coast airport serving a mix of destinations that include Asian and European destinations. With average duty-free percentage rents of 20% to 31%, the revenue from duty-free concessions will exceed all other terminal concessions on a per-international-enplanement basis. In addition, international passengers are strong specialty retail and convenience retail customers. Foreign visitors do not find U.S. sales taxes burdensome on a relative basis and may find items they are looking for (such as souvenirs or packaged gift boxes of chocolates) in specialty retail shops rather than in duty-free shops.

International visitors enjoy art and museum displays and have more time to enjoy them. On the whole, they:

- Spend the most time in the terminal;
- Spend the most money in concessions, particularly duty-free and other retail;
- Use services and amenities more than other passengers;
- Possess the highest per-capita incomes; and
- Spend the most time in food and beverage facilities.

International passengers can also be classified as business or leisure travelers, and they display some of the same characteristics as domestic business and leisure travelers. International business travelers are more likely to use an airline lounge or patronize a pay lounge, and they appreciate electrical outlets, quiet places, workstations, and other services typical of domestic business passengers on their outbound legs of their journeys.

International leisure travelers, like their domestic counterparts, are looking for a positive, even fun, experience, and will be more likely to wander and take advantage of concessions, services, and amenities. They are also more likely to be accompanied to the airport by friends and family.

4.2.2 Arriving International Passengers

Arriving international passengers are likely users of currency exchange services and ATMs, which allows them to convert money or withdraw it from home accounts. They are also more likely to use showers and luggage storage services, purchase flowers, rent mobile phones, and buy food and beverages than an arriving domestic passenger.

Arriving international passengers tend to bring more meeters and greeters to the airport, and they also use more limousine or transportation network company drivers.

4.2.3 Connecting International Passengers

Because duty-free purchases are limited to international departing flights, a passenger making a domestic connection for an international departure can only purchase duty free at the airport where the international flight departs. Therefore, the connecting international passenger can be an important contributor to non-aeronautical revenue for airports.

On the return trip, a passenger making an international-to-domestic trip will be more likely to take advantage of the arrivals concessions and services as well as concessions and services typical of a departing domestic passenger.

4.3 Non-Passenger Customers

Non-passengers include meeters and greeters, who come to the airport to meet an arriving party, and well-wishers (sometimes called "farewellers"), who go to the airport to see their party depart. These non-traveling passengers form a small percentage of the airport's total visitors but are also users of the airport and likely customers of concessions pre-security on departure and on the arrivals level as they wait. They are predominately local citizens with an interest in the airport. They are also persons who are likely to be traveling in the future. Their perceptions of the airport as non-traveling visitors help to shape their perceptions of the airport's brand.

4.3.1 Meeters and Greeters

Meeters and greeters have a singular focus when visiting the airport: to meet their party as soon as possible. The number of meeters and greeters generated per passenger and their typical practices while at the airport depend on variables such as the passenger's reason for travel and demographics. This phenomenon is also true of well-wishers discussed in the next section. Meeters and greeters who meet passengers in the terminal tend to concentrate as close to the exit from security or FIS areas as possible (sometimes creating congestion during busy periods or when large aircraft are deplaning passengers). They do not want to miss meeting their passenger so tend to stay close. The primary needs of these passengers are:

- Proximity to where passengers exit the secure area;
- Availability of restrooms;
- Convenient parking;

- Comfortable, nearby seating; and
- Use of a snack, coffee, or other food and beverage concession or purchase of gifts such as flowers, if proximate to their waiting area.

Some meeters and greeters prefer to collect their passengers at the curbside. This can cause congestion and impede traffic and the loading and unloading of passengers. For this reason, many large airports have developed cell phone lots, which are remote parking areas where meeters and greeters can wait until their passenger arrives and calls or sends a text message that he or she is at or near the curbside.

Cell phone lots create goodwill. Users can:

- Avoid paying parking fees,
- Not have to worry about being asked to move on by police or other airport personnel when sitting at the curbside, and
- Avoid having to worry about meeting their party inside the terminal.

Cell phone lots have become a source of non-aeronautical revenue for those airports that have implemented concessions at them.

4.3.2 Well-Wishers

Well-wishers—people who accompany departing passengers to the airport—cannot enter the secure area and are therefore more likely to use food and beverage concessions in the pre-security area.

Well-wisher behavior can be influenced by culture. In Asia and Latin America, it is common for family members to accompany a member of the family to the airport to say goodbye, and it is often a big event. This is seen among Asian communities in the United States as well. Many Asian airports have extensive pre-security restaurant programs to serve the large number of well-wishers who come to the airport. These passengers will check in early and have a meal with friends and family. For example, Singapore Changi has 21 restaurants in pre-security locations, exclusive of food courts and fast-food units.

Well-wishers are also likely to park, often in the premium, short-term lots, generating parking revenue for the airport. Between the potential concession revenue and parking revenue, well-wishers are a market segment that should not be overlooked. And, like those meeting flights, their perceptions of the airport are influenced by their non-traveling experiences.

4.3.3 Employees

Employees of the airport, airlines, service companies, ground transportation companies, and concessionaires are another group of customers, ones that are often taken for granted. Compared with domestic terminals, international terminals will have a higher proportion of employees to passengers, including employees of U.S. Customs and Border Protection, ground handling companies, public health organizations, and airlines.

Employees can be an important segment, particularly for food and beverages, especially coffee, and for gifts during holiday periods. Many airport concessions offer discounts to airport employees and special offerings for employees during the holidays. Although employees may not spend in concessions every day, they are typically present in the terminal 5 days a week.

A customer's location in the terminal will heavily influence the amount of time and money spent and should be taken into account when planning customer service improvements.

4.3.4 Visitors

Other than meeters and greeters and well-wishers, most airports have relatively few visitors. However, this group can include those:

- Coming to do business with the airport, airlines, and other tenants;
- Coming to the airport for meetings at an airport conference center;
- Coming to arrange travel for another day;
- Coming to the airport to obtain airport IDs, apply for TSA, Trusted Traveler, ✔™, or other documentation; and
- Coming to the airport to apply for employment with the airport, airlines, or other tenants.

These individuals are part of the everyday mix of people using the airport. They may be users of parking facilities, pre-security concessions, or other services. Collectively, they may be a group worth remembering, but not necessarily planning around. As airports evolve, however, they might become more than that.

The "airport city" concept has gained much traction in recent years as conceptual framework for airport planning. Under this concept, the airport city is the land inside the boundaries of the airport, while the "aerotropolis" is the larger area around the airport that includes a variety of land uses and activities that are primarily or secondarily related to the activities of the airport.

At some of the larger airports outside the United States, the airport city concept is exemplified by developments in and around the terminal area that take advantage of the proximity to services and transportation links and provide income for the airport in the form of office rentals, conference centers, showrooms, corporate regional headquarters, and other developments that, while not core to the functioning of the airport, provide additional revenue and economic benefits.

These airports generate a large number of visitors who are coming to the airport for purposes unrelated to passenger movements. These employees and visitors form a market that allows for other types of development to cater to their needs. Two examples of this type of development are seen at Amsterdam Schiphol and Munich airports, which are discussed in the following chapter. Schiphol and Munich airports have developed office buildings, conference centers, shopping plazas, and a range of services to cater to the needs of the employees and visitors who otherwise would not be at the airport. This actually may spur additional activity in a virtual circle of economic development. These airports and others have created airports that are multipurpose destinations in their own right that receive large numbers of visitors. As more U.S. airports embrace the airport city approach, there may be more development in, around, or above terminals to take advantage of this potential.

4.4 Families

Family travel tends to be clustered around the summer months, major holidays, and local school break periods. Leisure travelers are out to have a good time and to enjoy the travel experience. Family travel has built-in stress from juggling children and their equipment such as car seats, strollers, and diaper bags, which make it difficult to move around. For these harried passengers, a kids' play area can be a godsend. Co-locating a play area with, say, a coffee kiosk can provide a welcome break for both parents and children. Family travel is particularly stressful at the security checkpoint, where families are likely to slow down the process for other passengers and have to manage children and their accessories through inspection. Wait times with children can also seem longer.

Families traveling together are likely to prefer food courts to other types of food and beverage outlets since these allow for different preferences to be accommodated.

4.5 The Aged and Aging

As the U.S. population ages, older passengers are likely to form a larger share of the customer profile.

ACRP Synthesis 51: Impacts of Aging Travelers on Airports identifies a number of challenges facing the elderly at the airport:

- **Wayfinding.** Unfamiliarity with the complexity of the airport, unclear informational and directional signage, and difficulty understanding the meaning and terminology used on signs;
- **Fatigue.** Standing in lines at check-in, security screening, bag claim, or curbside; long walking distances in the terminal, parking garages, and surface lots; and handling heavy bags;
- **Technology.** Problems understanding self-service devices; using escalators and moving walkways; and
- **Amenities.** Difficulty using toilet facilities; using congested retail and food service units (Mein et al. 2014).

Efforts designed to help the elderly were identified at a number of U.S. airports. These include:

- Staffed information kiosks or touch-screen displays;
- Visual paging systems;
- Smart phone wayfinding applications;
- Signage audits/inventories;
- Increased availability of wheelchairs;
- Seating in areas where passengers are made to wait (bag claim, check-in, curbside) and along lengthy connectors between terminals and concourses;
- Motorized carts;
- Remote and off-site bag check;
- Parking products offering drop-off at the customer's car;
- Shuttle buses with low floors for easier boarding and alighting at curb level;
- Lounges for use when waiting for ground transportation;
- Customer service personnel assisting at self-service devices;
- More elevators, ramps, and sloped floors as alternatives to escalators;
- Audible caution alerts for escalators and moving walkways;
- Wider toilet stalls that allow baggage to be secure;
- More family toilets; and
- More room to access concessions and concession seating areas easily and without obstruction.

4.6 Customers with Special Needs

Airports must deal with a range of exceptional passengers in the everyday course of business. Some of these types of passengers include:

- High-status individuals, such as politicians, celebrities, and VIPs;
- People traveling with guide dogs or therapy animals;
- People afraid of flying or with medical or emotional disabilities; and
- Those with no ability to speak English, especially those who do not speak a major language found in the United States.

Some passengers with special needs may require assistance when traveling, such as wheelchair assistance. Others may have developmental disabilities that make the stress of travel emotionally challenging. Others require ADA-compliant facilities and may be frustrated during busy periods if facilities, such as restroom stalls capable of accommodating wheelchairs, are not available.

Finally, these passengers may have to wait an excessive amount of time for airline-provided services such as wheelchairs, which reflects on the airport as well as the airline.

4.7 Profiling the Airport's Passengers

Understanding the airport's customers is important for successfully enhancing customer satisfaction. For example, knowing the needs, wants, and expectations of the airport's passengers (the largest customer segment using the airport), including the reason for their travel, their likely behaviors, and how they will interpret clues and signals in the environment, is important in customer experience planning and prioritizing future investments and service offerings that will significantly improve customer satisfaction and may improve non-aeronautical revenues as well. It helps everyone involved in customer service to understand how each of the passengers and other customers who rely on the airport every day have different needs and perceptions.

Figure 4-2 illustrates a profile for three types of passengers using the classification shown in Figure 4-1. With survey data, a weighting of passenger profiles can be developed that will help airport management and staff involved in customer service understand each passenger type.

- **Example 1.** A local businessperson who is a frequent traveler, is making a same-day trip to another city, parks in the airport's parking structure, and is unaccompanied. This passenger will be in and out of the airport quickly and has no checked baggage. She may use concessions if they are convenient to her gate or are located on the way to her gate. She will want Wi-Fi (preferably free) and a comfortable place to sit and work before her flight.
- **Example 2.** A local passenger going with his family on a vacation to an international destination, accompanied to the airport by other family members who parked at the airport long enough to see them off. This family includes children and has a lot of luggage that must be checked. Controlling the children and getting through check-in and security is something of an ordeal during peak hours. They would love to see a children's play area, decent restrooms, and a food court where they can satisfy everyone's preferences. They are at the airport to begin an adventure, and they want to have fun, circumstances permitting.
- **Example 3.** A visitor from overseas, a frequent business traveler, traveling home in first class after visiting for a few days. He arrived at the airport by taxi or limousine and will use an airline lounge if one is available, or might use a pay lounge, if available. After checking in at his designated area, he will stop by the duty-free shop for his favorite single-malt Scotch and will pick up something for his wife and some chocolates for the family. He values quiet and efficiency.

	EXAMPLE 1			EXAMPLE 2			EXAMPLE 3		
Status	Domestic		International	Domestic		International	Domestic		International
Purpose	Business		Leisure	Business		Leisure	Business		Leisure
Airline Service	First Class	Business Class	Coach Class	First Class	Business Class	Coach Class	First Class	Business Class	Coach Class
Direction	Departing		Arriving	Departing		Arriving	Departing		Arriving
Origin	Local Originating	Visiting	Connecting	Local Originating	Visiting	Connecting	Local Originating	Visiting	Connecting
Frequency	Frequent Traveler	Occasional Traveler	First-Time or Seldom Travels	Frequent Traveler	Occasional Traveler	First-Time or Seldom Travels	Frequent Traveler	Occasional Traveler	First-Time or Seldom Travels
Duration of Trip	Weeks	Days	Same Day	Weeks	Days	Same Day	Weeks	Days	Same Day
Special Needs	Families	Aged	Other (VIP, Wheelchair, etc.)	Families	Aged	Other (VIP, Wheelchair, etc.)	Families	Aged	Other (VIP, Wheelchair, etc.)
Visitors	Meeters	Well-Wishers	Employees	Meeters	Well-Wishers	Employees	Meeters	Well-Wishers	Employees
Access	Parking	Taxi/Limo/Van	Rental Car	Personal Vehicle	Parking	Taxi/Limo/Van	Rental Car	Personal Vehicle	Parking	Taxi/Limo/Van	Rental Car	Personal Vehicle

Figure 4-2.   Profiling the passenger—three examples.

4.8 Market Segmentation

Customer needs will vary with the demographics of the key customer segments. For planning purposes, segmenting the customer base provides insights into the types of customers using the airport and is helpful in planning customer services such as concessions, cultural programs, and amenities. The demographics of customers also influence their behavior, the amount of time and money they spend in the airport, and their preferences for dining, retail, and services.

Demographic information can be gathered by customer interviews and surveys. Demographic information valuable to customer service planning may include:

- Age of customer,
- Nationality,
- Airline,
- Whether alone or with family or associates,
- Household income,
- Origin/destination, and
- Average spend rate by type of concession or service.

Additional survey research can be performed to develop the demographics of passengers and other customers of the airport, including breakdowns by age, nationality, residence, income, typical spending rates, and what types of services they would like to see.

Denver International Airport has done extensive research in segmenting its customers to understand their motivations, needs, and wants. The airport publishes market demographics on its website and makes them available to current and prospective concessionaires and others with an interest in doing business at the airport. An excerpt of the airport's customer segmentation is shown in Figure 4-3.

The Denver airport brand statement is "Live Life. Travel Well." Its published brand experience principles include:

- Accessible urbanism,
- Naturally dynamic,
- Enjoyably productive, and
- Modern west spirit.

Source: FlyDenver.com/bizops/documents/DEN_Customer_Experience_Overview.pdf.

Figure 4-3.   Excerpt of Denver International Airport passenger market segmentation.

Each brand experience is defined in terms of what it means ("streamlined operations and well-designed environment") and does not mean ("a focus on hyper-efficiency") (Denver International Airport, no date). The airport classified its market into six segments, with the first two being important target segments for customer service planning.

The classifications and keyword descriptors are as follows:

1. **Explorers.** Optimists, love travel, open-minded, like to share thoughts and opinions.
2. **Elites.** Frequent travelers, value status, career and family oriented, demanding, want access to options.
3. **Experts.** Think travel is routine, see themselves as experts and advice givers, not easily impressed, and want a streamlined and productive experience.
4. **Escapists.** Welcome travel as a treat and a break, infrequent travelers, excited and optimistic, appreciative.
5. **Aspirers.** Stressed by real life, struggle to maintain balance in interests, careers, and children, but will indulge on occasion.
6. **Early birds.** Infrequent, anxious, find travel stressful and filled with unexpected hassles, want it over with as quickly as possible.

Customer Experience Management Approaches and Customer Service Programs at Leading Non-U.S. International Airports

This chapter presents overviews of customer service programs at five leading international airports outside the United States. The chapter also describes some of the fundamental differences between U.S. airports and the well-known and highly regarded mega-hubs that are often used as standards for comparison; the differences with U.S. airports are significant and should be taken into account.

The chapter presents a brief description of each airport, reviews its ownership and governance structure, and presents a summary of each airport's most important airlines and characteristics of their passenger traffic. Summaries of each airport's strategic vision and customer service management approach are presented based on a review of annual reports, shareholder briefings, and other documents produced by each airport.

These leading international hubs may not be directly relevant benchmarks for the reader's airport. However, the scope, scale, and diversity of services and the airports' commitments to customer service may offer useful insights for customer service managers at airports in the United States. All of these airports are strategically driven with well-developed brands. All are on the right side of the airport customer experience management continuum shown in Figure 2-2.

Additional details of the extensive range of customer services at each of these international hub airports are included in Appendix A, which is organized under the headings of:

- Transportation;
- Terminal Configuration;
- Services; and
- Culture, Entertainment, and Education.

The airports presented in this chapter are:

1. **Singapore Changi Airport,** named the world's best airport for 2015 by Skytrax and second best airport in the Asia-Pacific Region in the 2014 ACI-ASQ awards. To attract transfer passengers, Changi uses technology, nature, art, and architecture combined with an enormous array of services, attractions, and distractions.
2. **Seoul Incheon International Airport,** named the world's second best airport for 2015 by Skytrax, and a perennial first-place finisher in the ACI-ASQ awards. Incheon airport is known for extensively incorporating cultural features into an airport that is spotlessly clean and planned to the smallest detail.
3. **Amsterdam Airport Schiphol,** named a four-star airport by Skytrax, features expansive commercial and cultural offerings combined with a single terminal for ease of transfer.

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4. **Munich Airport,** named by Skytrax as a five-star airport, the third-best airport in the world, and the best airport in Europe for 2015. Munich's two terminals surround the Munich Airport Center, a huge mixed-use, multipurpose facility that gives meaning to the term "airport city."
5. **Vancouver International Airport (YVR),** named a four-star airport and the best airport in North America for 2015 by Skytrax. YVR has a unique sense of place and features the art, nature, and natural materials of the Pacific Northwest and British Columbia.

5.1 Differences—U.S. Airports Versus Leading Non-U.S. International Hubs

U.S. airports are often criticized for their shortcomings. In 2014, *The Economist* published an article critical of U.S. airports and their "soggy pizza, surly security staff, and endless queues. American airports offer a shabby welcome to the greatest nation on earth" (*The Economist* 2014). *The Economist* estimated that ⅔ of international passengers departing from a U.S. airport arrive at a better airport (as based on the Skytrax ratings).

Comparing major international hub airports with U.S. airports is not a completely fair comparison. Most international departures from the United States arrive at one of the well-known mega-hubs that are predominately international in nature. The economics of passenger travel are such that international passengers are far more profitable than domestic passengers. The airports repeatedly named among the world's best all have something in common: intense competition with other airports (and those airports' hub airlines) for lucrative international transfer passengers. These world-leading airports are then rewarded with a larger share of international passengers and far greater revenues than those of domestic passengers, further strengthening their mega-hub status.

5.1.1 Competition for Passenger Traffic

For most of the large international airports, competition for passengers drives much of their business planning. They have built reputations around the high levels of service offered to international transfer passengers, who generally have a choice of airlines and connecting hubs and value a great customer experience.

U.S. airports are unable to compete for this type of business. Under current policy, the international-to-international connection is highly limited at U.S. airports. A foreign transfer passenger (other than those coming from a country in the visa waiver program) is required to have a U.S. visa and must undergo customs and immigration inspection upon arrival.

Airports like those in New York (Kennedy), Miami, Los Angeles, San Francisco, and Seattle would be ideal connecting points for millions of passengers making connections between continents. However, U.S. airlines have no reasons to build schedules to carry international-to-international traffic. If U.S. airports were able to compete, service levels would undoubtedly improve. U.S. airports are not without competition, however. Some major hubs compete for domestic connecting traffic. (Atlanta, Denver, Chicago O'Hare, Dallas/Fort Worth, and Houston Intercontinental are examples.) Some airports have local competition (the San Francisco Bay Area has three commercial airports) or compete with airports within driving range (Tampa and Orlando, Austin and San Antonio, Milwaukee and Chicago). The mainly domestic nature of the traffic, however, does not provide the same financial incentives as the long-haul international passengers.

5.1.2 Different Traffic Mixes

In a list of the top 20 airports in the world ranked solely by international passengers, the United States has only one—New York's John F. Kennedy International Airport, which is ranked 17th.

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Table 5-1. Top 20 airports—international passengers only.

WORLD RANK	AIRPORT	INTERNATIONAL PASSENGERS (000s)	PERCENT OF TOTAL PASSENGERS
1	Dubai	69,954	99%
2	London Heathrow	68,091	93%
3	Hong Kong	62,901	100%
4	Paris Charles De Gaulle	58,627	92%
5	Amsterdam Schiphol	54,941	100%
6	Singapore Changi	53,289	99%
7	Frankfurt	52,713	88%
8	Seoul Incheon	44,906	99%
9	Istanbul Ataturk	38,037	67%
10	Bangkok Suvurnabhumi	37,183	80%
11	Taipei	35,402	99%
12	London Gatwick	34,438	90%
13	Kuala Lumpur	34,437	70%
14	Munich	30,247	76%
15	Madrid Barajas	29,618	71%
16	Tokyo Narita	29,591	83%
17	New York Kennedy	28,248	53%
18	Barcelona	27,246	73%
19	Rome Fiumicino	26,841	70%
20	Doha	21,163	80%

Derived from ACI and individual airport reports.

The next highest-ranked airport is Miami International (MIA), which is ranked 28th. Table 5-1 shows the number of international passengers for the top 20 international airports and the percentage that international passengers represent as a share of total passengers.

By comparison, leading airports [Amsterdam (100%), Dubai (99%), Hong Kong (100%), London Heathrow (93%), Seoul Incheon (99%), and Singapore Changi (99%)] have few to no domestic passengers.

These top 20 airports also have high proportions of international passengers, with many of the airports exceeding 90% international. Kennedy airport, the only U.S. airport to make the top 20, had the lowest share of international passengers, at 53% of the total.

5.1.3 Revenues

Airlines flying international routes pay higher user fees, and their passengers are generally richer and more free-spending than domestic passengers. When volumes are sufficient, they can support VIP processing, luxurious pay lounges, and other services that are demanded by international passengers. The competition for international passengers provides financial incentives for these airports to offer a wide range of customer services to encourage use of their airports. This is particularly true for international connecting hubs, which often compete directly for transfer passengers.

In the United States, residents consider duty-free shopping a take-it-or-leave-it proposition as taxes on luxury items are not a major revenue source for the government. However, passengers from most of the rest of the world live under a different system that taxes consumption more than income. The high taxes on luxury goods in most countries make duty- and tax-free purchases real bargains from their perspectives. For passengers from China or Brazil, where import
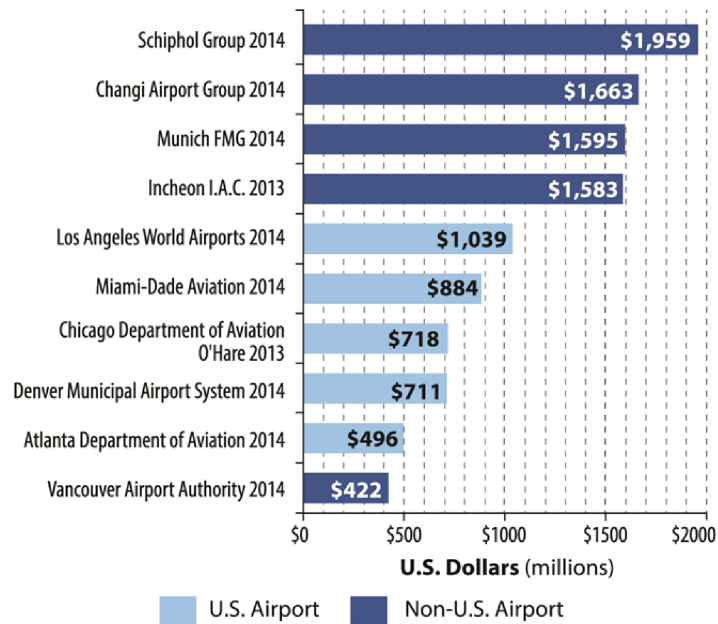
Derived from published airport financial statements.

Figure 5-1.   Annual operating revenues for selected airports (USD millions for years indicated).

duties and excise taxes of 40% or more are typical on imported luxury goods, airport duty-free shops offer meaningful savings that generate high revenues for the airport.

Seoul Incheon provides an example. On its $2 billion in annual duty-free sales, Seoul Incheon airport receives over $600 million annually in net duty-free revenue, an amount that exceeds the total operating revenue (airline and non-airline) of Hartsfield-Jackson Atlanta International Airport, the busiest in the United States.

Seoul Incheon, while a top performer, is not alone in producing such high revenues from duty-free and retail sales. Dubai International Airport also achieves $2 billion from duty-free sales, while London Heathrow is not far behind with its outstanding duty-free and extensive specialty retail program.

In 2013, Munich Airport Group (Flughafen Munich Gmbh, or FMG) had total revenues of €1,229.2 million ($1,619.6 million), an amount greater than the total operating revenues of Chicago O'Hare, Hartsfield-Jackson Atlanta, and Phoenix Sky Harbor airports combined.

Munich Airport had less than 20% of the combined passenger traffic of these three U.S. large hubs, 38.7 million versus 201 million. FMG operates a number of subsidiary companies, and the U.S. airports do not. This comparison demonstrates how FMG's integrated business model allows it to earn revenue across the range of activities that occur at its airport and why the competition for lucrative international passengers among the world's mega-hubs is so intense. Relative airport annual operating revenues for the airports described in this chapter and select U.S. airports are shown in Figure 5-1.

5.1.4 Security and Inspection

U.S. airports do not perform the security inspection function or hire, pay, and schedule security staff, unlike airports in most other parts of the world. Airports that control security inspection have the ability to manage work schedules to meet travel peaks, limit time spent in queues, and create

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a less intimidating, less stressful experience. Long lines and unpleasant staff are not conducive to spending or customer satisfaction and are a particular focus of customer experience management.

An examination of the Skytrax ratings shows that TSA and customs and immigration inspections at U.S. airports are not well regarded, particularly by citizens of other countries. While U.S. airports are not directly responsible for the work performed by federal agencies, the impression made at security inspection reflects on the airports. In the minds of customers, the airport is the sum of its parts.

5.2 Skytrax Leading International Airports

Skytrax rates airports using a star rating system, with 5-star being the highest level. Ratings are based on a worldwide online survey of more than 13 million airline passengers.

Only five airports received the highest rating as of mid-2015, as shown in Figure 5-2. Of these, four are in Asia and one is in Europe.

Only 34 airports received 4-star ratings, with two U.S. airports, San Francisco and Cincinnati/Northern Kentucky International, making the list.

The five airports that were chosen for review represent airports with outstanding reputations, which are affirmed by their Skytrax rankings. Singapore Changi, Seoul Incheon, and Munich airports ranked first, second, and third in the overall Skytrax rankings, while Amsterdam Schiphol was ranked 9th and Vancouver 11th. Vancouver airport was the highest-ranked airport in North America. The five airports were also chosen based on geographic diversity and a mix of old and all-new airports.

North America	Africa	Asia-Pacific	Europe	Latin America	Middle East
Skytrax 5-Star Airports					
		Hong Kong Seoul Incheon Singapore Changi Tokyo Haneda	Munich		
Skytrax 4-Star Airports					
Cincinnati/N. Kentucky San Francisco Vancouver		Beijing Capital Chengdu (China) Gimpo (Korea) Haikou Meilan Kansai Kuala Lumpur Kualanamu (Indonesia) Nagoya Chubu Centrair Ordos Ejin Horo (China) Sanya Phoenix Shanghai Hongqiao Sydney Taiwan Taoyuan Tokyo Narita Xi'an Xianyang (China) Yichang Sanxia (China)	Amsterdam Schiphol Barcelona El Prat Copenhagen Düsseldorf Frankfurt am Main Helsinki Vantaa Kazan (Russia) Koltsovo (Russia) London Heathrow Paris Charles de Gaulle Zurich	Bogota El Dorado	Abu Dhabi Baku (Azerbaijan) Hamad (Qatar)

Source: http://www.airlinequality.com/ratings/4-star-airport-ratings/; http://www.airlinequality.com/ratings/5-star-airport-ratings/.

Figure 5-2.   Skytrax 2015 4-star and 5-star airports.

Skytrax 2015 World's Best Domestic Airports

1. Tokyo Haneda
2. Shanghai-Hongqiao
3. Durban
4. Cincinnati
5. Denver
6. Seattle-Tacoma
7. Halifax Stanfield
8. Chengdu Airport
9. Haikou Meilan
10. Bengaluru

Source: http://www.worldairportawards.com/Awards/airport_award_winners_2015.html.

Figure 5-3.   Skytrax 2015 World's Best Domestic Airports.

Skytrax also produces a ranking of the world's predominantly domestic airports, as shown in Figure 5-3. On this list, U.S. airports perform reasonably well, with three—Cincinnati, Denver, and Seattle–Tacoma—occupying the 4th, 5th, and 6th positions on the list. These U.S. airports stack up extremely well when compared to airports with similar traffic, scale, and resources and, along with others, provide meaningful and realistic benchmarks for customer service.

The five leading international airports are profiled in the following sections. Details of their extensive customer service programs are included in Appendix A.

5.3 Singapore Changi Airport

Singapore Changi Airport (SIN) is a major Asian hub that served over 54 million passengers in 2014. SIN ranked 16th in the world for 2014 in total passengers and sixth in the world in international passengers. The airport is served by 65 passenger airlines, and another 35 serve through code shares. According to the airport, the airlines serving Changi serve 300 cities in 70 countries. Changi was named the world's overall best airport by Skytrax in 2013, 2014, and 2015 and is the perennial runner-up to Incheon in the annual ACI-ASQ Best Airport award in the Asia-Pacific region.

5.3.1 Ownership and Governance

SIN is operated by Changi Airport Group (CAG), which was created in 2009 and is wholly owned by the government of Singapore. Prior to 2009, the airport was operated by the Civil Aviation Authority of Singapore (CAAS). After corporatization, CAAS retained regulatory responsibility while CAG focused on airport management and development.

5.3.2 Key Airlines and Traffic Overview

Changi is the primary hub of Singapore Airlines (SIA), which ranks 10th in the world in international passengers carried. The airline is part of the SIA Group and is 56% owned by Temasek Holdings, which is the investment arm of the government of Singapore. SIA Group also owns SilkAir, a regional airline operating mostly short-haul routes, and Scoot, an ultralow-cost airline started in 2012. The SIA Group, including SIA (32.1%), Silk Air (8.3%), and Scoot (2.7%), together account for a 50.5% market share at Changi.

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With a home market of only 5.5 million, Singapore Airlines' long-haul success has historically relied on superior in-flight service and an industry-leading hub airport to compete.

Since the 2008 financial crisis, however, the airline has seen a 12% decline in passengers, the largest drop among the major full-service Asia-Pacific carriers. Changi and SIA face tough competition from other Asian hubs and airlines, including Hong Kong (Cathay Pacific), Seoul Incheon (Korean Air and Asiana), and Bangkok Suvarnabhumi (Thai Airways).

Fueled by oil-rich governments, Middle East airlines like Emirates Airlines, Qatar Airways, and Etihad Airways, operating at hubs in Dubai, Qatar, and Abu Dhabi, have further eroded Singapore's long-haul markets. Qantas Airlines recently moved its off-shore "kangaroo route" hub, connecting cities in Australia and Europe, from Changi to Dubai. Meanwhile, low-fare airlines such as Jetstar and AirAsia have provided price competition that has further eroded Singapore Airlines' market share.

While Singapore Airlines' traffic has declined, Changi Airport has seen a 44% increase in passengers since 2008, as its O&D traffic has grown faster than its connecting traffic. Offsetting the loss of long-haul transit traffic is increasing regional connectivity from airlines like Jetstar.

5.3.3 Strategic Vision and Customer Service Management Approach

Changi Airport Group (Figure 5-4) has well-defined mission and vision statements, a definitive statement of core values, and a clear statement of its customer service approach embodied in its "Changi Service DNA."

"Mission Statement: To be the world's leading airport company, growing a vibrant air hub in Singapore and enhancing the communities we serve worldwide.

Vision: Exceptional People, Connecting Lives.

Values: Integrity is at the heart of everything we do.

- We value our people.
- We are committed to our customers.
- We are the best in our business.
- We succeed with our partners" (Changi Airports International, no date).

Figure 5-4.   Singapore Changi Airport logo.

Changi Airport Group has defined its approach to service quality management for its stakeholders, business partners, and airport staff through its "Changi Service DNA." The attributes of the Changi Service DNA are shown in Table 5-2.

The quality service management approach is built on the three key tenets shown in Table 5-3.

Table 5-2.   Changi Airport Service DNA.

P.S. I Love Changi		
Personalized	**Stress-Free**	**Positively Surprising**
Every customer is unique	*To provide customer peace of mind*	*To create fond memories for every customer*
Be welcoming	Be knowledgeable	Be involved
Be interested	Be resourceful	Be enthusiastic
Be attentive	Be responsive	Be creative
To serve versus to engage	*To deliver versus to anticipate*	*To satisfy versus to delight*

Source: Changi Airport Group website, www.changiairportgroup.com.

Table 5-3. Changi Airport Group quality service management approach.

1. Service Process Management	*Changi experience is by design and not by chance! This involves rethinking, redesigning, and realigning airport processes to meet the growing expectations of the customers. We are steadfast in creating a Changi Experience that brings delight to the customers we interact with, and to achieve a consistent level of service in our daily operations.*
2. Learning & Development	*People competencies are imperative in the development of a successful service organization. We are determined to train and equip our workforce to deliver excellent service to each and every customer. Emphasis is put into inculcating the Changi Service DNA to all new staff joining the Changi family. Our core service skills training program is designed to equip every individual with the skill sets to deliver the Changi way of service. Continuous learning efforts are an integral part of the learning and development road map for all airport staff.*
3. Service-Driven Initiatives	*Feedback from our customers sets the foundation for the work we do. We listen to what our customers are telling us and seek to improve our service standards. Through our service-driven initiatives, we seek to connect, communicate, commend, and collaborate with our airport community to drive service excellence. These initiatives address the following:* • *Creating a high level of service awareness* • *Promoting every individual's contributions through awards and recognition* • *Seeking out collaborative opportunities through agency engagement.*

Source: Changi Airport Group website, www.changiairportgroup.com, accessed June 1, 2015.

5.4 Seoul Incheon

5.4.1 Ownership and Governance

Seoul Incheon International Airport (ICN) is owned by the South Korean government and operated by the Incheon International Airport Corporation (IIAC). ICN opened in 2001 after 8 years of construction that included reclaiming seabed between two islands and the construction of a major highway and suspension bridge serving automobiles and express trains.

The government has announced its intent to partially privatize the airport, but no progress has been made to date due to political opposition. The government continues to own all of the shares in IIAC.

ICN replaced Gimpo International Airport as the major international airport serving South Korea. Gimpo continues to operate as a largely domestic airport with limited short-haul international service to Japan, Taiwan, and China. Gimpo is now the third busiest airport in Korea after Incheon and Jeju International Airport.

IIAC is developing the area south of the airport as Air City, a large-scale development area that includes hotels, several multistory office buildings, a driving range, car wash, medical center, and several shopping centers. IIAC has also developed a 72-hole golf club near the airport. IIAC recently entered into a memorandum of understanding with the Connecticut-based Mohegan Tribe of American Indians, owner of the Mohegan Sun Casino, to develop a destination resort and casino with 1,000 rooms, a 20,000-seat arena, an amusement park, and a fixed-base operator physically connected to the resort. The development is expected to cost $4.6 billion and is targeted toward gamblers from China.

5.4.2 Key Airlines and Traffic Overview

Figure 5-5. Incheon Airport logo.

ICN handled 40.7 million passengers in 2014, nearly all international. Only 1.3% of ICN passengers were domestic. ICN ranked 23rd in the world in total passengers and 8th in the world in international passengers. The ICN logo is shown in Figure 5-5.

ICN is the headquarters and principal base of operations of Korean Air and Asiana Airlines, which operate extensive long-haul services to destinations around the world. Korean Air and Asiana together handled 62% of total passengers in 2014. The airlines operate from the main terminal.

After the airport opened in 2001, there was considerable growth in transit passengers, reaching 18.5% in 2013. However, transit passengers declined by 460,000 in 2014 due to increased competition from Chinese and Japanese hubs for long-haul flights.

Korean Air and Asiana are the two largest foreign airlines operating in China. Korean Air alone serves 22 cities in Mainland China. As the two local carriers' worldwide route system expanded into China, the airport responded by improving and expanding the range of services and ease of transfer for connecting passengers in order to strengthen ICN as an international connecting hub for Asia.

5.4.3 Strategic Vision and Customer Service Management Approach

Vision Statement: "Incheon Airport, Loved by the World, and Airport Corporation, Loved by the People."

Core Values:

1. **Customers**—We are dedicated to efficiency, safety, and convenience. We plan to become a world best air hub by providing unparalleled services.
2. **Investors and shareholders**—Our partnerships are based on trust, collaboration, and creation of new value.
3. **Community responsibility**—We are founded on transparent corporate management, contribution to local society, and national development. We promise to be a responsible public enterprise.
4. **Employees**—Incheon Airport is founded on creativity, passion, and flexibility. No challenge is too great, through continuous development.

Main Strategies:

1. Ensure safety and convenience.
2. Strengthen the hub network.
3. Expand new infrastructure.
4. Gain trust and respect as a public corporation.

Customer Charter:

- We will prioritize the safety of customers as top priority.
- We will become a convenient, comfortable, and impressive airport.
- We will faithfully fulfill social responsibilities.
- We will take care of the customers like our family.
- We will reflect the opinion of the customers in our management.

In order to fulfill this commitment . . . we will establish a concrete service standard and put it into practice (www.airport.kr/co/ko/file01/2015_Green_report_ENG.pdf).

5.5 Amsterdam Schiphol

Amsterdam Airport Schiphol (AMS) is the 14th busiest airport in the world based on total passengers and the 5th busiest in Europe. In 2014, AMS ranked 14th in total passengers and 5th in international passengers. AMS was named a 4-star airport by Skytrax. The Schiphol logo is shown in Figure 5-6.

Figure 5-6. Amsterdam Schiphol Airport logo.

Schiphol has been a leading airport in terms of customer service for several decades, long before the rise of the Asian and Middle East hubs and the improvements at major hubs in Europe. With a home market of only 5.5 million, Schiphol, as KLM Airlines' major hub, had to rely on drawing connecting traffic from other parts of Europe to thrive.

The Schiphol terminal has a pier/finger design and has grown over the years. The airport company has also developed office buildings and hotels in the terminal area.

5.5.1 Ownership and Governance

Amsterdam Airport Schiphol is a subsidiary of Schiphol Group, which is organized as a commercial corporation although it is primarily government owned. Shareholders include the Dutch government (70%), the municipalities of Amsterdam (20%) and Rotterdam (2.2%), and Aeroports de Paris (8%). Shareholders are paid dividends from year-end profits.

Schiphol Group also owns Rotterdam The Hague Airport and Lelystad Airport and has a majority interest in Eindhoven Airport as well as an 18.72% share in Brisbane Airport in Australia. It is also 100% owner of Schiphol USA, which owns JFK IAT, Inc., owner and operator of Terminal 4 at John F. Kennedy International Airport. Schiphol USA was a minority partner in the public–private partnership that built Terminal 4, and it later bought out its partners.

Schiphol has a subsidiary company that operates most of its duty-free liquor, tobacco, and confectionery shops. The company is 40% owned by Schiphol Group and 60% owned by Gebr Heinemann, a major European and international duty-free operator with shops in 77 airports.

5.5.2 Key Airlines and Traffic Overview

In 2014 Schiphol handled nearly 55 million passengers, almost 100% international. The Amsterdam metropolitan area has a population of only about 1.6 million, which is a small population to support a major connecting hub. Like Singapore Changi, Schiphol airport relied on offering superior service and an attractive connecting experience to grow traffic. The major airline, KLM, is now part of Air France/KLM group, although KLM continues to operate independently.

About 70% of KLM passengers make a connection at Schiphol. The business strategy of the airline and airport has been to attract passengers needing to make a connection from other European countries by offering a superior experience.

Europe accounts for 68.9% of passengers, followed by North America (10.4%), Asia (8.0%), Africa (4.9%), and South America (4.5%). The five largest markets are London Heathrow, Barcelona, Paris Charles de Gaulle, Rome, and Copenhagen.

5.5.3 Strategic Vision and Customer Service Management Approach

Schiphol Group's mission statement:

- **Connecting the Netherlands.** Permanently connecting the Netherlands to the rest of the world in order to contribute to prosperity and well-being in this country and elsewhere;
- **Connecting to compete and to complete.** We conduct our domestic and international operations in a balanced manner and in doing so reflect our key values: reliability, efficiency, hospitality, inspiration, and sustainability (Schiphol Group 2014).

The Schiphol Group strategy is summarized in Table 5-4.

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Table 5-4.   Schiphol Group strategy.

Top connectivity	*Maintaining and expanding the network of destinations, in collaboration with our home carrier and other airlines, is our most important duty. Thanks to its network Schiphol ranks among the five major hubs in Europe. The development of Eindhoven Airport and Lelystad Airport supports Schiphol's Mainport function. Good road and rail access is essential for ensuring the connectivity of our airports.*
Excellent visit value	*We aim to offer the best quality for an attractive price to airlines, travelers, and all other users of our airports. We invest in sufficient high-quality capacity and a high-quality range of commercial products. The appreciation shown by our customers for our facilities and services serves as the compass guiding the upgrades we carry out.*
Competitive marketplace	*Our airports are attractive business and visitor locations. If we are to remain a competitive business location, we must provide a competitive marketplace where businesses can share and combine knowledge and skills. We tailor the range of facilities and real estate to demand and aim to continue developing Schiphol into a cargo distribution hub.*
Sustainable performance	*Schiphol Group is a financially solid enterprise that conducts its business in a socially responsible manner, consciously weighing people, planet, and profit aspects. Our airports can only grow by balancing their interests with those of the local communities. We continue to invest in a good relationship with administrators, local residents, sector partners, and the government.*

Source: Schiphol Group website, www.schiphol.nl/SchipholGroup/Company1/Strategy, accessed June 4, 2015.

5.6 Munich Airport

Munich Airport (MUC) is the 7th busiest airport in Europe and handled 39.7 million passengers in 2014. Munich Airport passed Frankfurt (FRA) as the top domestic airport for Lufthansa. It is the only European airport rated 5-star by Skytrax as of mid-2015.

5.6.1 Ownership and Governance

Munich Airport is owned and operated by FMG, a government-owned, limited liability company whose owners are the Free State of Bavaria (51%), the Federal Republic of Germany (26%), and the City of Munich (23%). Although government owned, FMG is organized as a corporation with shareholders and a corporate governance structure, including numerous subsidiary companies. Figure 5-7 shows the airport's two terminals surrounding the Munich Airport Center. The airport logo is shown in Figure 5-8.

Figure 5-7.   Terminal complex at Munich Airport.

Figure 5-8.   Munich Airport logo.

FMG has an unusually high degree of control over the services provided to the public, airlines, and other tenants through its subsidiary companies, some wholly owned and others partly owned, that provide services and operate concessions and facilities at the airport. While most airports' staff have limited direct contact with passengers, Munich Airport and its sister companies have direct contact with passengers at check-in, security inspection, food and retail concessions, passenger services, baggage services, and often at the departure gates. Thus FMG has a high degree of control over the entities that have direct contact with customers.

Some examples of the range of services provided directly by FMG are listed in the following.

- **Aerogate** is a wholly owned subsidiary that provides ticketing, check-in, and passenger handling services for airlines.
- **Aeroground** is a wholly owned subsidiary that provides airline ground handling services.
- **Allresto** operates the public staff restaurants in the terminals and the airport hotel.
- **CAP** provides guards and security inspection services as required by law.
- **Eurotrade** operates retail shops in the terminal, including duty-free, luxury specialty, and gift and souvenir shops. It is a franchisee of the luxury brands offered at the airport, including Chopard, Dunhill, Omega, Piaget, Ferragamo, and Versace. Eurotrade is wholly owned by FMG.
- **Terminal 2 Operating Company** is jointly owned (60%) with Lufthansa (40%) and operates Terminal 2 used by Lufthansa and Star Alliance member carriers.
- **MediCare** provides medical services and operates the airport clinic.

5.6.2 Key Airlines and Traffic Overview

Of the 39.7 million annual passengers, 4.3 million (22%) were domestic travelers, 11.2 million (57%) were going to or from destinations in the EU or other countries in Europe, and 4.2 million (21%) were international passengers traveling outside of Europe. The top European markets were London Heathrow, Paris Charles de Gaulle, Madrid, Amsterdam, Barcelona, Istanbul, Palma de Mallorca, Rome Fiumicino, Antalya (Turkey), and Vienna. The top intercontinental markets were Dubai, Newark, Chicago O'Hare, Abu Dhabi, Doha, Tokyo (Narita and Haneda), Washington Dulles, Beijing, Toronto Pearson, and Shanghai Pudong.

Originating/destination passengers accounted for 63% of total passengers, and transfers were 37% of the total. Like many European airports and legacy airlines, airlines and airports in the Middle East are providing stiff competition for the long-haul intercontinental passenger. Dubai, Abu Dhabi, Istanbul, and Doha have all become major destinations in recent years.

5.6.3 Strategic Vision and Customer Service Management Approach

Brand Statement: Living Ideas: Connecting Lives.

Brand Attributes:

"Passionate: We're passionate about what we do. As a team we create exciting moments in an extraordinary atmosphere.

Appealing: We inspire—with attractive ideas, offers, and services that keep creating new surprises.

Farsighted: We're the experts. With our many years of experience, we offer orientation and are always thinking ahead" [Munich Airport, no date (a)].

Munich Airport defines its brand values as shown in Table 5-5.

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Table 5-5.   Munich Airport brand values.

Partnership	Our airport functions only through the closely coordinated interaction of all service providers. Teamwork with each other and with partners is the centerpiece of our business model. We see ourselves as a team at our home location and beyond it.
Expertise	Our expertise is based on more than 20 years' experience. At our location and in the airport industry, we have positioned ourselves as a successful operator and developer. Entrepreneurship is at the focal point of our work – now and in the future.
Responsibility	We assume responsibility – for employees, the region, and our environment. We strive for a balance between business success and the economical use of resources, on the one hand, and environmental protection and a commitment to society and the common good, on the other.
Innovation	Progress is never-ending: We have a long tradition of constantly developing our business. We want to be more than just one of many – we want to lead. Innovations are essential for the successful development of our company.

Source: http://www.munich-airport.de/en/company/konzern/marke/index.jsp.

"Corporate Strategy:

Munich Airport's corporate strategy 2025 is based on the principle of sustainable development. It consists of five fields of action, which address the key strategic opportunities and challenges for Munich Airport. These are underpinned by a strategic foundation, which provides the basis for all strategic business decisions and for future development within the fields of action.

Implementation of the strategy ranges from the picture of the future at the very top level down to individual fields of action and the associated strategic objectives. These are allocated to the divisions and broken down into initiatives and measures.

Our strategic fields of action:

1. Air traffic development,
2. Landside access and traffic development,
3. Seamless Travel,
4. Expansion of non-aviation business,
5. Off-campus growth, and
6. Strategic foundation" [Munich Airport, no date (b)].

5.7 Vancouver International Airport

Vancouver International Airport was voted the top airport in North America in the Skytrax survey for 2015 and all the five previous years. It is the second busiest airport in Canada (after Toronto Pearson). While not handling near the volume of SIN, ICN, AMS, or MUC, Vancouver International Airport has a strong reputation for customer service, sense of place, and ambience, and it competes for connecting international transfer passengers between the United States and Asia.

YVR conducts quarterly customer satisfaction surveys. According to the airport, its 4.3 customer satisfaction rating for 2014, based on 2,952 separate surveys taken over four quarters, was the highest rating ever and matched the 2013 rating, with 91% of airport users either satisfied or very satisfied with the airport.

5.7.1 Ownership and Governance

YVR is operated by the Vancouver Airport Authority, which took over operation of the airport from Transport Canada in 1992. The airport is leased to the authority by the federal government.

YVR is focused on a 10-year gateway strategy intended to "build a world-class, sustainable gateway between Asia and the Americas" (YVR, no date). The Airport Authority is building new expedited transfer facilities that include additional baggage systems and capacity to minimize baggage transfer times, a new international-to-domestic transfer facility, and a new A–B connector to improve the functionality of the domestic terminal.

In 1994 the Authority created YVR Airport Services, which became active in airport privatization and contract management projects around the world. YVR Airport Services has been rebranded as Vantage Airport Group and is jointly owned by the Airport Authority and Citi Infrastructure Investors. Vantage Airport Group holds management contracts and equity positions at airports around the world. Its portfolio includes Pafos and Larnaka airports, Cyprus; Santiago, Chile; Montego Bay, Jamaica; Nassau, Bahamas; and Kamloops, Fort St. John, Hamilton, and Moncton airports in Canada. The airport's logo is shown in Figure 5-9.

Figure 5-9.
Vancouver Airport
Authority logo.

YVR also developed BORDEREXPRESS automated self-service passport control equipment to speed up passport inspection. YVR has since sold 600 kiosks to 23 airports in the United States, Canada, and Aruba in the Caribbean.

5.7.2 Key Airlines and Traffic Overview

YVR handled 19.4 million passengers in 2014. It is served by 53 airlines serving 110 non-stop destinations. Its most traveled destinations are Toronto, Calgary, Edmonton, Los Angeles, Victoria, and San Francisco. The airline serves as a hub for Air Canada, Air Canada Jazz, and Air Transat.

5.7.3 Strategic Vision and Customer Service Management Approach

YVR's customer service management approach is as follows.

"**Mission Statement:** Connecting British Columbia proudly to the world.

Vision: A world-class sustainable gateway between Asia and the Americas.

Values: Safety, teamwork, accountability, and innovation.

Strategy: As a world-class and sustainable airport, YVR will grow to 25 million passengers in 2020 by creating a connecting hub between Asia and the Americas, advancing air policies, delivering remarkable customer experiences, and bringing economic and social benefit to the people of British Columbia" (Vancouver Airport Authority 2015).

5.8 Overview of Customer Experience Management at Leading Non-U.S. International Airports

The five airports described in this chapter share some common attributes.

1. **All have an extensive range of customer services—many free, some on a pay basis.** All have well-defined mission statements, vision statements, and business strategies that stress the importance of customer service. The development of these airports as international leaders has been decades in the making, and their business strategies are well documented in various annual reports and reports to shareholders.
2. **A heavy-rail transit system or mainline rail service connecting the airport with the city center.** All five airports have heavy-rail transit systems connecting their airports with the city center. Some are part of local transit systems (Singapore Changi, Vancouver, Munich) while others are part of a national or regional rail service (Amsterdam Schiphol, Seoul Incheon). Rail connection to the city center is common in Europe and in many places in

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Asia. Some U.S. airports may also have heavy-rail connections (e.g., New York Kennedy, San Francisco, Chicago O'Hare), while others have or are developing light-rail services (e.g., Denver, Los Angeles, San Diego).

3. **Premium services for high-end customers, including special lounges, private lounges, escorted arrival and departure services, and premium close-in parking.** Because all five of the airports profiled in this chapter are major international gateways and connecting hubs with high levels of international passengers and large numbers of first- and business-class passengers, there is a demand for high-end passenger services. These affluent passengers, mostly business travelers, are making long trips and are willing to pay for services that maximize the use of their time while traveling.

4. **Extensive and informative websites,** most offering terminal maps, guides, and other collateral materials for free download.

5. **Extensive range of restaurants, duty-free shops, and other retail shops and services.** All have extensive food and beverage and retail programs, with most having multiple concessionaires competing for business. The high percentage of international passengers creates substantial demand for opportunities to provide duty- and tax-free shopping to customers from high-tax environments. While most concession development is post-security, particularly in international departure areas, all of these airports also have extensive developments in their arrival areas to serve arriving passengers, meeters and greeters, and employees.

6. **A strong sense of place, with local culture incorporated throughout the terminals.** Vancouver airport is routinely cited as a leading example of an airport providing a sense of place through its use of Northwest native culture, local materials, and architectural styles. More modernist airports like Munich and Amsterdam use local culture to strengthen their sense of place, including concession offerings (Amsterdam Avenue at Schiphol and an archetypical Munich beer garden at Munich Airport). Seoul Incheon airport incorporates Korean culture, design, and materials throughout its terminal complex and offers cultural and educational offerings to transit passengers in order to create a strong cultural identity.

7. **Extensive commercial development in and around the terminal.** Most of the profiled airports have multiple hotels and office complexes on airport property (Amsterdam, Seoul, Munich) in addition to in-terminal transit hotels (Singapore, Seoul).

8. **Extraordinary attention to detail.** All five airports have excellent reputations for offering comprehensive customer service programs designed to meet the needs of all types of passengers, although with particular emphasis on international transfer passengers. Each of these airports has competition for connecting international traffic, which drives their attention to detail and high standards. Each also has strong working relationships with national carriers: Singapore Changi with Singapore Airline Group carriers, Amsterdam with KLM/Air France, Munich with Lufthansa, Seoul Incheon with Korean Air and Asiana, and Vancouver airport with Air Canada.

9. All five airports **routinely and consistently get the basics right.**

10. **All five airports have major terminal expansion projects under construction** to add capacity and maintain service levels.

CHAPTER 6

Airport-Wide Customer Experience Management Approaches at Leading U.S. Airports

This chapter provides an overview of U.S. airports with strong reputations for providing outstanding customer service, and provides a detailed discussion of customer experience management at these airports.

Research conducted for this guidebook revealed that leading U.S. airports can be categorized into four broad airport types when it comes to their overall approach to and responsibility for customer experience management. Not every airport fits neatly into any one category, and some may demonstrate attributes from multiple categories. However, an airport will tend to gravitate toward one type. It is not uncommon for an airport to transition from one type to another over time as it becomes more progressive and consistent in search of excellent customer experiences.

Figure 6-1 shows the four broad airport types of the leading U.S. airports. All four airport types share a set of common characteristics, which are discussed in the following section.

6.1 Shared Characteristics of the Four Broad Types of Leading U.S. Airports

In Section 2.2, the worldwide airport customer experience management continuum was discussed. The continuum is depicted in Figure 6-2.

The leading U.S. airports are positioned toward the right-hand side of the spectrum and are continuously improving to move further to the right. They are highly regarded in their communities and are often a source of civic pride. Their management takes a more holistic approach to customer service, with a focus on all aspects of the operation, including building the airport brand. They collaborate with their business partners and stakeholders, and they set standards for themselves and others. They value and engage all airport employees. Customer service is incorporated into all aspects of planning, including airport master plans and capital plans. They are more likely to have a strategic business plan, and that plan incorporates customer experience management throughout. These airports are strategically directed and customer-centric, setting goals based on a vision for the airport. Top leadership understands the importance of customer experience management without needing to be constantly convinced. Leaders run their airports prudently as successful businesses that provide excellent services consistently within a constrained, regulated, and problematic environment where many are involved in the service delivery chain. They have a can-do attitude.

Shared key attributes of leading U.S. airports in each broad type include those discussed in the following subsections.
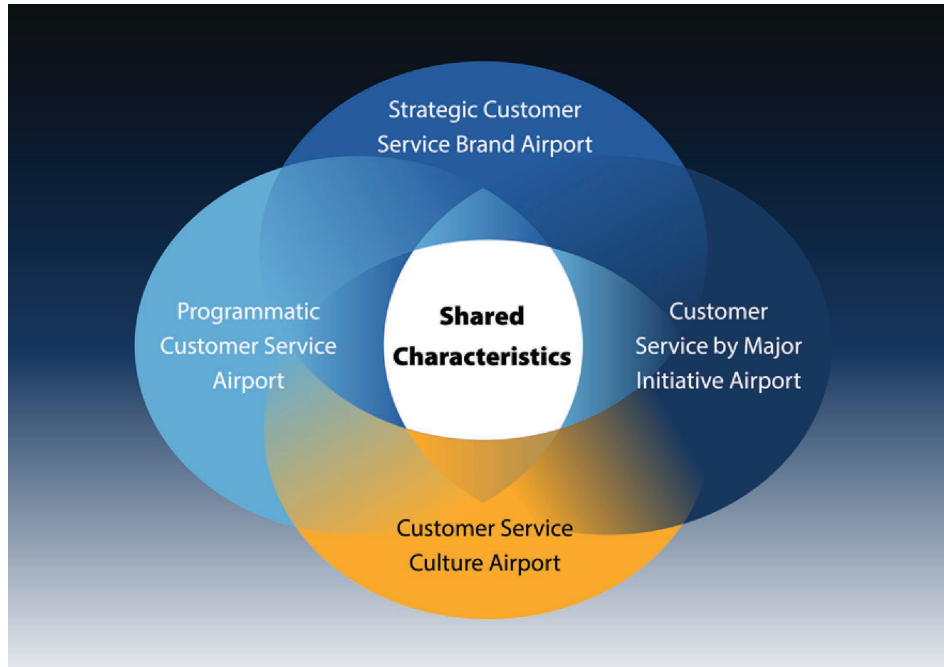
© Butterfly Consulting.

Figure 6-1.   Four approaches to improving customer service.

© Butterfly Consulting. Note: Pax = passengers.

Figure 6-2.   Airport customer experience management continuum.

6.1.1 Customer Experience Management Approach

Airport management:

- Ensures executive-level commitment and support for airport-wide customer service approach
- Takes a strategic holistic approach to customer experience airport-wide
- Provides airport-wide leadership to enhance customer experiences
- Leverages the relationship between enhanced customer satisfaction and increased non-aeronautical revenues
- Using market research tools, focuses on customers' priorities
- Assumes management responsibility and accountability for customer experience airport-wide
- Focuses on service excellence from the basics to the opportunities to delight, which includes facilities, operations, maintenance, processes, services, art, education, and fun
- Working in collaboration with the entire airport community, develops and implements an airport-wide customer service plan
- Creates an airport with positive ambience and a strong sense of place
- Focuses on the emotional as well as the physical aspects of the airport experience
- Monitors service performance across the entire service delivery chain and works in collaboration with business partners, stakeholders, and airport staff to enhance customer satisfaction
- Invests in enhancing the customers' airport experiences
- Leverages value of entertainment and customer appreciation events.

6.1.2 Airport Operator Organization Structure

Airport management:

- Designates a customer service executive or customer service manager as single point of leadership for airport's customer experience management approach, often with dedicated customer service staff assigned. A customer experience executive or manager is often found on the airport operator's organization chart.

6.1.3 Stakeholders

Airport management:

- Develops a culture of ongoing collaboration and buy-in by the stakeholders, business partners, and others in the airport community
- Implements airport-wide customer service reward and recognition programs for airport staff, business partners, stakeholders, and others in the airport community
- Creates a customer service culture that is woven into the fabric of the way the airport operator does business and provides services airport-wide.

6.1.4 Airport Staff

Airport management:

- Promotes the importance of employee engagement and empowerment
- Provides customer service ambassadors at information desks and provides roving ambassadors, who may be employees, volunteers, or outsourced employees, supplemented by robots or virtual assistants
- Implements airport-wide customer service training programs for airport staff, often provided as part of the security identification display area (SIDA) badging process.

6.1.5 Communications

Airport management:

- Maintains open, ongoing, and transparent communications with airport staff, stakeholders, business partners, and others in the airport community
- Empowers customers with the right information at the right time using the communications channels preferred by their customers
- Leverages social media as a two-way communication tool with customers
- Adopts a proactive strategy to build relationships with customers that reflects the airport's customer service commitment using social media in a human way
- Cultivates the power of social media to build a relationship with customers that is mobile, operating full-time, and human.

6.1.6 Technology

Airport management:

- Embraces technology as an enabler and differentiator for enhanced customer experiences.

6.2 The Strategic Customer Service Brand Airport

Of the four broad airport types identified during this research (see Figure 6-1), the first and most progressive is the Strategic Customer Service Brand airport type. At these airports, customer service was initially generally identified as a corporate priority, and, subsequently, a conscious decision was made and an initiative was launched by the CEO (or other executive-level management with the support of the CEO) to define, implement, and manage a strategic airport customer service brand airport-wide by working in collaboration with stakeholders and business partners in the airport community. The strategic customer service brand may also be called the airport's customer service charter or the airport's service delivery strategy. This airport type is often seen at large hub to medium-sized airports.

These airports tend to ascribe to a more formal approach to customer experience management that is integrated with the way business is otherwise conducted at the airport. Airports that have been named among the best airports in the world by ACI-ASQ or as 5-star airports by Skytrax, such as Seoul Incheon and Singapore Changi, generally fall into this category. Examples of U.S. airports that participated in this research that fall into this category are identified at the end of this section. The research team confirmed the classification with representatives of these airports.

Important differentiators of the Strategic Customer Service Brand airport include those discussed in the following subsections.

6.2.1 Customer Experience Management Approach

The Strategic Customer Service Brand airport:

- Has a CEO who is typically the customer service champion;
- Adopts a hospitality mindset/model, and the airport refers to their customers as "guests";
- Builds a strong airport brand that clearly defines the airport's customer service commitment and service delivery strategy in collaboration with the airport community;
- Addresses key drivers of customer satisfaction that are typically identified using market research and customer feedback as well as leveraging customer service trends and notable and

emerging practices aligned with the airport brand as a means to improve customer satisfaction and non-aeronautical revenues.

6.2.2 Airport Operator Organization Structure

The Strategic Customer Service Brand airport:

- Appoints a chief customer experience officer, usually at the executive level, who is comparable to other senior executives in the organization chart; and
- Uses customer satisfaction scores as key performance indicators for the airport operator organization as well as when reviewing the performance of its departments and key staff.

6.2.3 Airport Brand

The Strategic Customer Service Brand airport:

- Builds a customer-centric airport brand—a shared mission, vision, and airport brand (i.e., a service delivery strategy) that highlights the airport's customer service commitment across the entire continuum of services, all of which are integral to the airport's strategic plan and are developed with the buy-in and collaboration of the entire airport community;
- Uses market research to know its customers' needs, wants, and expectations as well as the airport's key drivers of customer satisfaction;
- Adopts customer service standards aligned with the airport brand to provide guidance on the level of service expected from all who provide service to the airport's customers;
- Manages performance across the entire service delivery chain to ensure alignment with the airport's brand, compliance with standards, and enhanced customer satisfaction; and
- Implements branded customer service programs and priority customer service initiatives to improve service levels as well as address drivers of customer satisfaction and provide value to customers.

6.2.4 Stakeholders

The Strategic Customer Service Brand airport convenes formal customer service forums for the airport community to work together to enhance customer experiences and overall customer satisfaction airport-wide.

6.2.5 Communications

The Strategic Customer Service Brand airport uses marketing and public relations that support the airport's customer service brand. They are important to building the brand but do not drive the brand.

Airports in this category include:

- Cincinnati/Northern Kentucky International,
- Los Angeles International Airport, and
- San Francisco International Airport.

Figures 6-3, 6-4, and 6-5 illustrate the strategic and holistic approach to guest (customer) experience management recently launched by Los Angeles World Airports for Los Angeles International Airport (LAX).

Courtesy of Los Angeles World Airports.

Figure 6-3.   LAX guest experience information sheet.
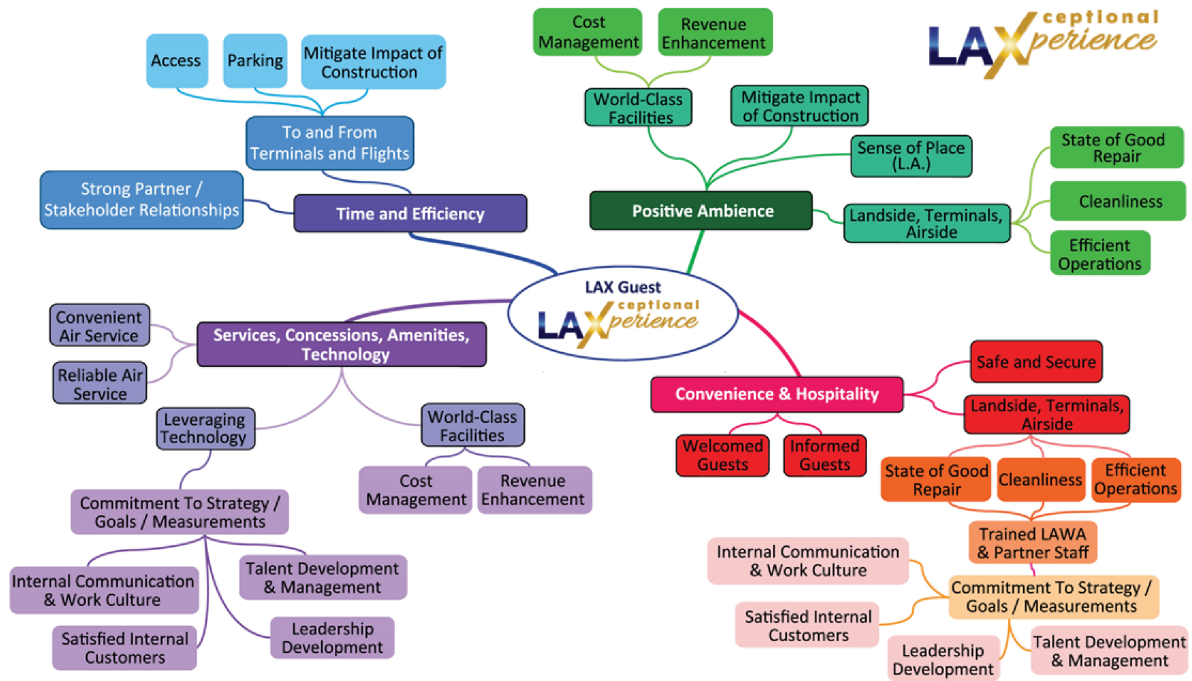
Courtesy of Los Angeles World Airports.

Figure 6-4.   LAXceptional guest experience.

Courtesy of Los Angeles World Airports.

Figure 6-5.   How to create an LAXceptional experience.

6.3 The Programmatic Customer Service Airport

The second type of airport is the Programmatic Customer Service airport. At these airports, customer service was initially identified as a strategic or operational priority, and service levels are enhanced airport-wide, typically through the implementation of identifiable customer service programs that are usually aligned and linked. The customer service programs implemented to improve customer satisfaction are often individually branded or branded as a group to make them more readily identifiable to the airport's customers and those in the airport community who participate in the programs.

This airport type is often seen at large hub to medium-sized airports.

Important differentiators of the Programmatic Customer Service airport include those discussed in the following subsections.

6.3.1 Customer Experience Management Approach

The Programmatic Customer Service airport:

- Approaches customer experience management predominantly through the implementation of branded airport-wide customer service enhancement programs; and
- Focuses on addressing key drivers of customer satisfaction, often identified using market research, customer feedback, and industry trends.

6.3.2 Airport Operator Organization Structure

The Programmatic Customer Service airport:

- Appoints a customer service manager, who may be an executive or a middle manager, as the single point of customer service program management; customer service manager may have dedicated customer service staff assigned;
- Assigns the customer service manager with responsibility for managing one or all of the following: information booths, airport ambassadors, and volunteer program; the airport's market research and quality assurance functions; customer service training; the airport's reward and recognition program; and supervising dedicated customer service staff; and
- Ensures participation of customer service manager in all major initiatives that will affect airport customer service and customer satisfaction.

6.3.3 Branded Customer Service Programs

The Programmatic Customer Service airport:

- Implements branded customer service programs that address drivers of customer satisfaction that are of value to customers and that typically include customer service training programs, reward and recognition programs, ambassador programs, volunteer programs, pets unstressing passengers (PUP) programs, entertainment programs, programs for customers with special needs, customer service performance management programs, and communications programs;
- Adopts customer service standards to provide guidance on the level of service expected from all participants in each branded customer service program; and
- Uses data-driven performance management across the entire service delivery chain to identify drivers of customer satisfaction, promote compliance with program standards, track the impact of programs implemented, and enhance customer satisfaction.

6.3.4 Stakeholders

The Programmatic Customer Service airport:

- Implements formal customer service forums for the airport community to collaborate on airport-wide customer service program management as well as share the results of customer satisfaction surveys as a means to improve overall customer satisfaction; and
- Convenes customer service forums, typically under the leadership of the customer service manager, for stakeholders, business partners, and others in the airport community.

6.3.5 Airport Staff and Technology

The Programmatic Customer Service airport enhances airport staff's effectiveness by providing programs such as customer service training, reward and recognition programs, airport ambassadors, volunteer programs, PUP programs, and technological enablers such as robotics, airport apps, and interactive kiosks to provide customers information and put them in control of their journeys through the airport.

Airports in this category include:

- Hartsfield-Jackson Atlanta International Airport,
- Jacksonville International Airport,
- John F. Kennedy International Airport,
- Newark Liberty International Airport, and
- San Antonio International Airport.

Figure 6-6 shows the vision and mission statement of the guest relations office at Hartsfield-Jackson Atlanta International Airport. The office is responsible for customer service management and the OneATL program.

Courtesy of Hartsfield-Jackson Atlanta International Airport.

Figure 6-6.   OneATL guest relations office vision and mission statements.

6.4 The Customer Service by Major Initiative Airport

The third airport type is the Customer Service by Major Initiative airport. At these airports, customer service was generally identified as a strategic or operational priority. Airport-wide service levels are typically enhanced through the implementation of major initiatives that leverage technology or people to significantly improve service levels and distinguish the airport's service delivery strategy from others.

This airport type is often seen at large hub to medium-sized airports.

Important differentiators of the Major Initiative Customer Service airport include those discussed in the following subsections.

6.4.1 Customer Experience Management Approach

The Major Initiative Customer Service airport:

- Approaches customer experience management predominantly through the implementation of major initiatives that typically leverage technology or people to enhance customer experiences and, as a result, customer satisfaction; and
- Leverages customer service trends and best practices to identify customer service initiatives.

6.4.2 Airport Operator Organization Structure

The Major Initiative Customer Service airport:

- Appoints a customer service manager, typically a senior executive or middle manager, who serves as the single point of contact for customer service management initiatives and who may serve as the project manager for major initiatives. If not serving as project manager, the customer service manager closely coordinates with the project managers throughout implementation.
- Assigns the customer service manager with responsibility for managing one or all of the following: information booths, airport ambassadors, or volunteer programs; the airport's market research and quality assurance functions; customer service training; the airport's reward and recognition program; and supervising dedicated customer service staff.

6.4.3 Major Customer Service Initiatives

The Major Initiative Customer Service airport implements major customer service initiatives that respond to customer service trends and notable or emerging practices to significantly enhance its customers' airport experiences and significantly improve their overall satisfaction with the airport. Major customer service initiatives typically include airport apps, airport websites, progressive social media strategies, digital maps, implementation of beacons for airport-wide use, and aggressive launches of customer service training for airport staff sometimes using customer service giants such as Disney.

6.4.4 Stakeholders

The Major Initiative Customer Service airport implements formal customer service forums for the airport operator, stakeholders, and business partners in the airport community to collaborate and coordinate airport-wide customer service initiatives and share the results of customer satisfaction surveys. The customer service manager may facilitate the customer service forum(s) for stakeholders and business partners in the airport community.

6.4.5 Airport Staff

The Major Initiative Customer Service airport:

- Implements airport-wide programs to enhance airport staff's effectiveness by providing customer service training, reward and recognition programs, airport ambassadors, volunteers, and PUP programs; and
- Implements major initiatives using customer service leaders to provide customer service training to airport staff.

6.4.6 Technology

The Major Initiative Customer Service airport implements major customer service initiatives that predominantly leverage technology as an enabler to enhance service levels to delight customers and differentiate the airport from others. Technology-enabled initiatives often respond to customer service trends or best practices and include applications such as digital signs, airport-wide installation of beacons (discussed further in Section 7.3.1 and Section 10.10), interactive kiosks, the implementation of airport apps, web-based virtual tours of the airport, and progressive social media strategies.

Airports in this category include:

- Boston Logan International Airport, and
- Miami International Airport.

6.5 The Customer Service Culture Airport

The fourth airport type identified in the research is the Customer Service Culture airport. At these airports, customer service was generally identified initially as a corporate (airport operator) priority and subsequently was woven into the fabric of the airport's culture. Customer service is integrated into the way business is done by all departments and staff with the support of airport management. Customer service and working collaboratively with the airport community are embraced and are distinct attributes of the airport's culture.

This airport type is often seen at small to medium-sized airports.

Important differentiators of the Customer Service Culture airport include those discussed in the following subsections.

6.5.1 Customer Experience Management Approach

The Customer Service Culture airport:

- Recognizes top executive leadership, often the CEO, as the igniter for the airport's customer service approach, which has now evolved into the airport's culture;
- States the importance of customer service in its airport's mission and vision statements;
- Approaches customer service management as one of distributed responsibility for customer service ("Everyone understands that customer service is everyone's job"), although the airport operator may have management-level customer service staff responsible for specific functions such as analyzing and sharing customer satisfaction survey results;
- Focuses on the airport's customer priorities, which are often identified using market research tools;

- Embraces customer service, which is woven into the fabric of the way the airport operator does business rather than providing formal airport-wide leadership to enhance customer experiences;
- Implements customer service programs, both formal and informal, that address drivers of customer satisfaction or are of value to customers;
- Leverages customer appreciation events, cultural and holiday events, and local entertainment that capitalize on sense of place and fun to improve customer satisfaction; and
- Maintains relatively low overhead structure to achieve high customer service performance.

6.5.2 Airport Operator Organization Structure

The Customer Service Culture airport identifies management staff at the executive or middle-management level who work together to fulfill customer service management functions. Their responsibilities may include managing the airport's ambassadors or the airport's volunteers, managing the airport's market research and quality assurance functions, and implementing customer service training or the airport's reward and recognition programs.

6.5.3 Stakeholders

The Customer Service Culture airport:

- Implements less formal customer service forums for the airport community to share the results of customer satisfaction surveys to improve overall customer satisfaction, to collaborate on airport-wide customer service matters, and to plan and coordinate customer appreciation events and entertainment; and
- Facilitates the appropriate customer service forums for the airport community based on function or need.

6.5.4 Airport Staff and Technology

The Customer Service Culture airport enhances airport staff's effectiveness by providing programs such as customer service training, reward and recognition programs, airport ambassadors, volunteer programs, PUP programs, and technological enablers such as robotics, airport apps, and interactive kiosks to provide customers with information and put them in control of their journeys through the airport.

Airports in this category include:

- Austin International Airport,
- George Bush Intercontinental Airport,
- Indianapolis International Airport,
- Sacramento International Airport, and
- Tampa International Airport.

6.6 Advice to Others

The consistent advice that was offered to other airports by U.S. airports with strong reputations for providing outstanding customer service was the importance of top management leadership, commitment, and support for customer experience management. Support from top management facilitates:

- Alignment of the airport operator's organization to enhance customer service and improve customer satisfaction;

- Funding for customer service investments, including customer service programs and initiatives;
- Credibility with the airport community that the airport operator is serious about customer service;
- Support and buy-in for the airport community to act as one in order to enhance service across the entire delivery chain and to design/implement customer experiences (tangible and intangible; facilities and services) that support the airport's brand; and
- Recognition of customer service as second only to safety and security—it too is a prime directive airport-wide.

Customer Service Trends in Terminal Design

For the purpose of understanding how customer service is affecting passenger terminal design, the research team interviewed a panel of architects with recent experience in designing terminal projects, including representatives from Alliiance; Corgan; Fentress Architects; HNTB; HOK; and Skidmore, Owings & Merrill. The architects offered their views on the current state of terminal design, how technology is affecting terminal design, and influences on recent terminal projects in the United States and abroad.

Airport terminals have evolved substantially over time. Many early terminals were designed with a simple and utilitarian style that provided passengers with direct access to the tarmac for ground loading. As terminal design progressed in the second half of the 20th century, architects began to design iconic statements and civic masterpieces that mimicked flight, such as the TWA Flight Center at JFK and Dulles' International Terminal by the famous architect Eero Saarinen. Only basic amenities existed at the time, with a primary intent being to take the traveler from the curbside to the aircraft by the most direct route and minimize unassisted walking distances—the guiding principle behind the development of Tampa International Airport in the early 1970s.

In the early 1990s, architects used glass curtain walls to introduce light and air and to reflect the modern era. Passenger terminals evolved from simple boxes to larger and more complex facilities to meet the growing needs and demands of passengers.

Today, as technology and passenger self-servicing are playing more prominent roles in the airport environment, airport terminals are becoming more passenger-centric. According to the architects interviewed for this chapter, passengers who are exposed to greater air travel through international gateways have a higher perception of quality standards for an airport terminal. With limited availability of funding sources for capital improvement projects, maintaining customer satisfaction in order to attract more non-aeronautical revenue is becoming a bigger factor for U.S. airports.

Passenger profiles have also changed:

1. **Millennial generation.** Defined as people born between the early 1980s and the early 2000s, will become the next core group of airport travelers. This population is reliant on technology, likes to take control of their own processes, needs to stay connected at all times, and wants information at their fingertips. They prefer an efficient airport with lots of amenities and choices.
2. **Aging population.** As baby boomers approach retirement age and have increased time available to travel, there is a growing population of travelers with special needs that must be accounted for.
3. **Families with young children.** More kid-friendly amenities are needed to keep the less patient travelers occupied, such as children's play areas, interactive art exhibits, and museums, along with upscale restaurant and retail options; all have been incorporated into many large hub airports.

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4. **Business and leisure travelers.** Technology is bringing the business and leisure traveler profiles much closer together because of their dependencies on various types of electronic devices, wireless Internet services, charging stations, and workstations, to name a few.

5. **Traveling with pets.** More passengers are traveling with their four-legged friends, which places a different set of demands on space and amenities.

To satisfy the evolving needs of these travelers, airports and airlines will have to implement changes in order to enhance the overall passenger experience.

This chapter represents a distillation of the thoughts and observations of the architects interviewed for this guidebook.

7.1 What Do Airports and Customers Want in a Terminal?

A majority of the architects interviewed believe this new generation of travelers and airport owners/operators has distinctive desires in passenger terminals. These important elements include:

- Local culture and sense of place. An airport needs to reflect the local civic hospitality. Understanding the locality and sense of place through the use of materials, art, and food offerings.
- Streamlining passenger processing, both domestically and internationally (e.g., check-in, security screening, customs and immigration inspection).
- Passengers want to control their own processes and personalize the overall journeys; reduce stress and make the traveler more at ease.
- Comfortable walking distances, natural light, and cleanliness.
- Intuitive wayfinding, quality food offerings, and more choices.
- Multimodal connectivity in the transportation network and better connectivity between terminals, especially at larger hubs with multiple terminal buildings.
- Airports are destinations. People go there to eat, work, shop, and so forth—along with the travel experience. Airports are multi-use facilities, which increases the need to provide amenities such as nursing areas for mothers, family restrooms, showers for long-haul travelers, free Wi-Fi connection, workstations, charging stations, and power outlets.
- Hospitality atmosphere, where customers are expected to be treated like guests. Airports are more than just a transient place; integrate the retail service concept into the airport environment.

7.2 Evolution of Terminal Design and Impact on Customer Service

As passengers' habits, needs, and demands continue to evolve, passenger terminal design must also adjust and adapt. Uncertainty in the world economy and volatility in the aviation market within the past decade had one common message for airports across the board: build responsibly and with flexibility to accommodate future unknowns. Less compartmentalized, free-span, open spaces are quickly trending to help airports reduce capital costs and allow for reallocation of space for changing functions and demands, as shown in Figure 7-1. For example, airline ticket offices (ATOs) used to be a major component in the ticketing area, with many airline staff present to support ticket sales. Today, airline tickets are generally no longer purchased or issued at the terminal, significantly reducing the need for ATO spaces behind the counters. Airports are able to reclaim this primary real estate for revenue-generating or customer enhancement functions due to this change of use.

Courtesy of Alliiance.

Figure 7-1.   Free-span, open ticketing halls.

The architects interviewed believe the increasing popularity of self-servicing that takes place outside of the terminal (before passengers arrive at the airport) will eventually lead more passengers to bypass the ticket lobby and go straight to the SSCP. This will reduce space requirements for the ticket lobby area and call for a route (particularly from the parking garage or curb) directly to security screening, bypassing the ticket lobby.

7.2.1 Security Screening

The SSCP is a major function that will remain in high demand. Because security protocols are reactive and based on threat assessment, it is hard to gauge what security measures and requirements the TSA will have in the future. According to the architects, many airports do not want to relive the post-9/11 era when terminals that were not designed to handle a massive influx of passengers at the checkpoint became huge bottlenecks, severely affecting passenger throughput and customer satisfaction. Therefore, it is safe to reserve more space to accommodate any potential change that may be implemented in future security screening checkpoints.

7.2.2 Terminal and City Transportation Links

Interconnectivity between terminals and how the airport is connected to surrounding infrastructure will be critical in enhancing efficient passenger processing in the future. Intermodal integration will be important; according to most of the architects surveyed, U.S. airports are lagging behind their European counterparts, particularly with respect to intercity rail services, primarily because Americans are more dependent on cars whereas Europeans and Asians are more dependent on public transit. As population increases and demographics change, the public transportation network will be increasingly more important, especially for large hub airports where land is scarce.

The airport express at Hong Kong International Airport (shown in Figure 7-2) is a great example of how public transportation links the airport to the city's center. Examples of U.S. airports having excellent rail service to the city center and having integrated the rail station into the terminal include the airports serving Atlanta, Denver, Minneapolis, Portland (Oregon), San Francisco, and Washington, D.C. (Reagan National Airport).

7.2.3 Amenities

As passengers become more dependent on their portable electronic devices, they expect a wide array of amenities to help them stay connected, such as charging stations, free Wi-Fi connections, and workstation-type counters for laptop users.

Source: MTR Corporation Limited 2015.

Figure 7-2.   Airport Express—Hong Kong International Airport.

Passengers also want diversity and to maintain their lifestyles everywhere they go. As such, terminals must be dynamic enough to accommodate the needs of passengers with a diverse set of profiles.

Singapore Changi Airport is a good example. To serve its diverse passenger traffic, it offers a large selection of passenger amenities ranging from a butterfly pavilion, swimming pools, cacti, orchids, sunflower gardens (rooftop gardens with a large variety of flowers in different terminals), a social tree (9-meter interactive display board), a koi pond, a 12-meter high slide, a video game gallery, and movie theaters. The butterfly garden at Singapore Changi Airport is shown in Figure 7-3.

Through the use of technology, passengers are also staying more informed throughout their journeys. They are less stressed or worried about whether their gates have changed, if their flights are on time, how far it is to the closest restroom, or if there are better food options near their gates. Being informed allows the passenger to dwell longer in the concessions area, which generates higher revenue for the airport while providing greater customer service. Several of the architects believe that this higher level of information will create a potential opportunity for larger, more centralized concession malls supporting smaller holdrooms by area compared to larger dedicated holdrooms where passengers have traditionally spent most of their time.

Courtesy of Singapore Changi Airport.

Figure 7-3.   Butterfly garden—Singapore Changi Airport.

7.2.4 Sustainability

Sustainability is playing and will continue to play a huge role in the evolution of terminal designs. Sustainable design not only increases passenger satisfaction with better ambience through natural light and ventilation; it also provides better passenger comfort with adjustable temperature ranges via beacon technology sensors. In addition, it reduces energy consumption, which can result in net zero waste, enhancing social responsibility and further reducing maintenance costs. *ACRP Report 80: Guidebook for Incorporating Sustainability into Traditional Airport Projects* (Landrum & Brown, Inc. 2012) provides additional information on sustainable design.

7.2.5 Baggage

Several architects noted that, aside from passengers, baggage is the second largest issue an airport terminal must deal with. As the aging population increases, sloped-plate devices—known to provide double or triple the capacity of flat-plate devices—may become a challenge. In July 2010, Tampa International Airport installed new flat-plate baggage claim devices to accommodate its senior customers. With flat-plate devices, aging passengers are not required to lift baggage over a lip or edge, and they require less reach since sloped-plate devices are designed to handle depths of up to three bags.

As technology advances, baggage tracking technology such as smart baggage tags (discussed in Section 7.3.4) will become fully adopted. The main advantage of this technology is precise tracking of bags, which reduces the passengers' uncertainty and discomfort related to whether their bags made the journey. This may reduce space needed for baggage service offices and airline staff to handle lost bags because passengers are kept informed throughout the entire process. The bag is tracked, not lost, and no longer requires a tracing request.

7.2.6 Retail and Hospitality

Many of the architects interviewed believe that the next trend in passenger terminals will be a blend of hospitality-quality guest services and high-end retail services. The future terminal will require less processing and more passenger-centric services and hospitality treatment. For example, as shown in Figure 7-4, the new terminal at Jackson Hole Airport in Wyoming resembles a

© Gensler; image credit: Matthew Millman.

Figure 7-4.   Jackson Hole Airport.

lodge-type terminal. The architects took the cues from hospitality and high-end retail services and integrated them into the airport environment; they have received a positive response from the traveling public.

7.3 Innovations and Technological Trends Affecting Terminal Design and Layout

In recent years, passenger trends have changed since the adoption of smart phone and mobile technologies. In 2014, the airline telecommunications service company Société Internationale de Télécommunications Aéronautiques (SITA) reported in its Passenger IT Trends Survey that mobile device adoption among passengers is at a high point, with 81% of passengers carrying a smart phone, 43% carrying a laptop, 43% carrying a tablet, and 18% carrying all three devices (SITA, June 2014). The 2015 SITA's 360-degree report noted that globally, 97% of passengers bring a mobile device with them on trips. Technology has transformed the way passengers experience the airport terminal (SITA 2015).

A wide variety of self-service technologies have been implemented in many U.S. airports, including self–bag tagging, self–check-in, and self–gate boarding. Due to different security protocols, some airports abroad are more advanced in implementing automated bag-drop stations, home-printed bag tags, and 100% self-service passenger terminals to take full advantage of passing control of the check-in process to customers. Examples of airports using these technologies are Halifax International Airport in Canada and Bergen Airport in Norway. Meanwhile, American Airlines is implementing handheld device check-in via roaming agents at Dallas/Fort Worth International Airport (DFW). These technologies are discussed in further detail in Chapter 8.

Additionally, according to some of the architects interviewed, a shift in the relationship between airports and airlines is occurring. Because airports want better control of their revenues and expenses, they are beginning to want more control of their facilities and are resisting airline control of color schemes, holdroom furniture, and other airline brand elements, which airlines had previously fought for. Airlines, on the other hand, are increasingly trying to execute on their brand within the airport passenger experience, through mobile apps, or online when passengers purchase their airfares. Some airlines are beginning to feel more at ease about turning back the brand identity to the airport in exchange for common-use technology to relieve their lease obligations. Common-use technology not only allows airports more flexible use of their facilities, it also improves processing capacity within the same building footprint and avoids or delays the need to expand.

Courtesy of SITA.

Figure 7-5.   I-Beacon technology.

7.3.1 Beacons

According to the architects interviewed, the recent popularity of beacon technology at airports (see Section 10.10) has fostered new opportunities in terminal design, and their use goes beyond identifying locations. With an add-on sensor, beacons can enhance sustainable features within the terminal by monitoring temperature ranges and lighting levels and then sending signals back to the heating ventilation system to self-adjust throughout the day. This not only reduces the airport's energy consumption but also enhances the overall passenger experience. Because of the technology's capability to deliver hyper-contextual content to the passenger, beacons can serve as a wayfinding tool for passengers to navigate around the terminal independently, get up-to-date airline boarding information or changes, and receive concession coupons as passengers pass through certain points within the terminal. Keeping the passengers informed will allow for less convenient spaces to still be visible to the passenger and navigate around. In addition, beacons can track passenger patterns through Bluetooth technology. Data collected can be used to inform airports of bottleneck/congestion points and customers' spending habits so that airports can more effectively position retail and hospitality offerings to customers and provide personalized services. I-Beacon technology is illustrated in Figure 7-5.

7.3.2 Advanced Security Screening

Since 9/11, security screening has become a part of the traveler's experience that has changed the space requirements and priorities in terminal planning and design. Some industry associations and airports have explored new ways to improve passenger service at the SSCP, with benefits such as increased processing throughput and reduced queues and building footprints.

Courtesy of IATA.

Figure 7-6.   Smart Security checkpoint.

- **The Smart Security Program** (formerly known as Checkpoint of the Future) is a joint collaboration between ACI and the International Air Transport Association (IATA) to provide for a seamless journey from curb to airside. The goal of the program is for passengers to proceed through security in a streamlined process via risk-based screening. It promotes remote image analysis for carry-on bags as well as greater automation with biometric ID. With advancements in screening technology, the program projects that by 2020, the security screening flow will be uninterrupted. An example of a Smart Security checkpoint is shown in Figure 7-6.

- **SecurXpress** is a unique screening reservation system rolled out at Montreal International Airport to let passengers reserve a specific time during peak to go through checkpoint screening. The reservation system is a text-based free service provided by the airport to expedite security access and to improve queue management.
- **Biometrics** involve using various unique passenger tokens, such as the fingerprint, iris, face, or heartbeat, to authenticate security screening. This technology is more popular in European airports where privacy intrusion is less of a factor for passengers than in the United States.
- **Automated Passport Control** is a CBP program to expedite the entry process for U.S., Canadian, and other eligible international travelers. The automated process is provided through CBP's primary inspection area to promote shorter wait times, less congestion, and faster processing.
- **Preclearance initiative.** The U.S. Department of Homeland Security announced in May 2015 that it intends to expand air preclearance operations to nine foreign countries: Belgium, the Dominican Republic, Japan, the Netherlands, Norway, Spain, Sweden, Turkey, and the United Kingdom. This means that passengers boarding flights from these countries can go through immigration, customs, and agriculture inspection by CBP officers at foreign airports before boarding a direct flight to the United States. The initiative could greatly reduce the amount of CBP facilities needed at U.S. international gateways, improve passenger throughput, and enhance the customer experience.

7.3.3 Concessions and Holdrooms

According to most of the architects interviewed, concession and holdroom integration is a growing trend to optimize passenger exposure to revenue-generating opportunities while providing a more pleasant experience for the passenger waiting to board. San Francisco International Airport's Terminal 2 is a perfect example of this successful integration; it recorded the highest combined spend rate for food and beverage and retail of domestic terminals within the United States. JetBlue Airways also implemented a similar concept at John F. Kennedy International Airport's Terminal 5. As airports continue to take in more non-aeronautical revenues from this type of space integration to enhance passenger interaction, other airports will follow. Other innovative technologies include automated food ordering on tablets that OTG Management has implemented at several airports such as Minneapolis–St. Paul, LaGuardia, Newark Liberty, John F. Kennedy, and Toronto Pearson International (pictured in Figure 7-7). LaGuardia Airport has recorded a double-digit increase in sales since deployment in 2012.

Photograph courtesy of OTG Management.

Figure 7-7.   Automated food ordering, Toronto Pearson International Airport.

7.3.4 Smart Baggage Tags

RFID baggage tags are a reliable technology for screening and identification of checked baggage. They substantially improve baggage processing and retrieval rates compared to the more common barcode technology. Large airports such as McCarran International Airport in Las Vegas and Hong Kong International Airport have already adopted RFID baggage tags for improved handling capacity. Permanent bag tags are the other paperless option and allow passengers to use Bluetooth technology to encode flight information on their permanent tags via mobile devices. This is a reliable technology that offers a separate tracking device in the tag using Global System for Mobile Communications (GSM) technology to broadcast the baggage tag's precise location at any given time to keep the passenger informed.

Individual carrier systems (ICS) provide for accurate and reliable baggage handling and are designed for both high-capacity and high-speed baggage handling systems. Baggage is transported throughout the system by individual bins or tubs. This technology enhances passengers' satisfaction through fast, flexible, and safe baggage handling from check-in to screening and discharge. With its increased reliability and traceability, ICS could be the next generation of mainstream baggage handling systems and would bring substantial improvements in customer satisfaction.

7.4 Aesthetic Considerations, Sense of Place, and Ambience

According to the architects interviewed, incorporating a sense of place is a priority for most airport operators. Passengers embrace reflections of local cultures in airport terminals that create a sense of place through use of local materials, art, and food offerings. For example, the new terminal building at Mumbai's Chhatrapati Shivaji International Airport showcased approximately 2,500 pieces of local art. Not many people get to visit the local museums, so the architects brought the museum to the airport, introducing local cultural elements to airport visitors. Similarly, San Francisco International Airport has a permanent museum with dedicated staff located inside the international terminal.

Singapore's Changi International Airport incorporated the Garden City principle into its terminals, reflecting Singapore's unique identity and nickname as the "Garden City." Aside from local cultural characteristics, well-lit, open, and column-free spaces that provide ample daylight reduce passenger anxiety and are great features to create a more welcoming area. Modern travelers appreciate a dynamic environment that they can personalize.

When asked which terminals offer a superb or best-in-class customer experience, most of the architects interviewed believed international airports are leading the way. International airports compete in the global market and serve passengers who value diverse amenities, concession offerings, and customer services at a greater scale. International airport operators are more sensitive to profit making and increasing revenue streams. They invest more time and energy in strategizing concession locations to maximize revenue generation so that design and revenue are integrated. Responding to a different set of customer demands, international airports strive to deliver better customer services through a wide array of amenities and facilities to enhance their bottom lines. This is the reason why there is such a difference between international airports shooting for an IATA level of service (LoS) "A" design standard, while a majority of the U.S. airports are shooting for an LoS "C" design standard.

London Heathrow's Terminal 5 does not have a traditional curbside; instead, the airport placed the curbside inside the parking garage and created a garden where curbside lanes

would normally be located, thereby enhancing the customer experience. Munich Airport, which also does not have a traditional curbside, integrated the airport city concept with an event center that offers passenger services such as shopping (supermarket), rock concerts, and a Christmas fair.

In North America, Vancouver International Airport is considered one of the best of its kind, according to the architects. San Francisco International Airport's Terminal 2 also received recognition for implementing a healthy food, fresh-from-farm concept for passengers who are more conscious about food sources.

Many of the architects interviewed focused on specific terminals that are done well. Examples include airports in Atlanta and Denver, which have efficient terminal layouts that separate the airside and landside using an automated people mover (APM) to assist connecting passengers. Meanwhile, Dallas/Fort Worth International Airport's Terminal D integrates concessions well with the terminal. The synergistic marketplace at San Diego International Airport's Terminal 2 West is also cited as a successful example where food, retail, art, and services are all offered in one location.

Airport terminals are passenger driven. Any substantial change in passenger habits, demands, and usage patterns will affect terminal space design. In general, the panel of architects agreed that some elements will be important in the development of future airport terminals:

- **Flexibility.** The future is full of unknowns. To minimize expensive capital expenditure later to modify the terminal facility, it is wise to incorporate flexibility by creating large column-free space within the terminal to allow for more fluid use of space.
- **Sustainability.** Integrating sustainability within the terminal to enhance passengers' comfort and emotional experiences (e.g., through lighting and temperature) and also minimizing environmental impacts (e.g., through energy consumption and savings).
- **Revenue-generation opportunities.** More strategic location of concessions areas to increase passenger exposure will produce higher revenue. Beacon technology has the power to track passenger patterns and inform airports about where passengers congregate for more strategic placement of concessions. Holdroom/concession integration also produces high passenger exposure, which increases revenue.
- **Public transport connection.** Public transit—both bus and rail—promotes sustainability and reduces carbon emissions. These are positive social/economic factors that also provide a more convenient option for a changing demographic, especially in urban centers.
- **Streamlined passenger processing.** All passengers want efficiency in their travels, especially for the millennial generation, which is characterized as less patient. The less time they wait in a queue to be processed, the more time they will have to explore and generate potential revenues for the airport, and the more satisfied they will be.
- **Technology enhancement.** Self-servicing, common-use technology, beacon technology, RFID bag tags, and smart security have the common goals of increasing passenger throughput and satisfaction. The more passengers are informed of their flight status, change in gate, where they are in the terminal, and so forth, the more they feel at ease and less aggravated. A happy customer will anticipate a pleasant experience the next visit and will act accordingly.
- **Large array of amenities.** The passenger's dependency on technology and higher customer service at other international gateways are driving higher expectations in general. Many international gateways, such as Changi International Airport, Dubai International Airport, and Munich Airport, offer a wide variety of options to accommodate a diverse passenger base.

As airports become more business oriented, delivering a product that will leave passengers wanting to return is part of being successful. When the economy is poor, airports feel more

obligated to increase non-aeronautical revenues and keep costs per enplaned passenger low in order to be self-sustaining. Many international airports are modifying their business models by customizing their facilities to fit the changing needs of their passengers because they understand the financial benefits this can bring. U.S. airports are also upgrading facilities to meet the higher standards of today's passengers. As a result, future passenger terminals should be able to accommodate a diverse customer base, provide quality options, and deliver lasting impressions so that passengers will happily return.

CHAPTER 8

Improving the Customer Experience—Services and Amenities

This chapter is intended to provide customer service managers with a summary of notable services and amenities being implemented by airports in the United States and abroad to improve their customers' airport experiences. While not all practices may be appropriate, suitable, or worthy of the required investment, being aware of these innovations can be useful when opportunities to use them do occur—for example, in conjunction with terminal refurbishment or improvements or the expiration of service contracts.

The services and amenities documented in this chapter are those that passengers and other customers may routinely use in the course of their airport visits, with the exception of those related to technology innovations, which are discussed in Chapter 10. Chapter 9 presents a similar overview of notable practices in improving customer service involving people (e.g., airport staff).

8.1 Cleanliness and Janitorial/Maintenance

A statistical study of the drivers of airport satisfaction and dissatisfaction based on a content analysis of 1,095 traveler comments on an airport review website concluded that key drivers of customer satisfaction included terminal cleanliness and a pleasant environment (Bogicevic et al. 2013). Key drivers of dissatisfaction included security inspection, confusing signage and way-finding, and poor dining choices. Other surveys, including those conducted by ASQ and Skytrax, indicate that terminal cleanliness, especially of restrooms, is a core indicator of customer satisfaction. According to ACI, cleanliness remains one of the most important items for passengers and is a basic requirement for satisfaction (personal communication).

The appearance of cleanliness is harder to maintain in an older facility. Worn surfaces, poor lighting, older fixtures and furnishings, darker color schemes, and unchecked growth in permanent and temporary signage make it harder to maintain an image of cleanliness and order in older terminals and can give the appearance of a lack of cleanliness in spite of the best efforts of janitorial staff and increased maintenance spending.

Customer feedback mechanisms (discussed in Chapter 3) can be applied to determine how customers perceive the cleanliness of the terminal (and restrooms). Feedback cards, touch-screen and kiosk-based surveys taken in the restroom and terminals, text messages, Twitter, ASQ, and other ongoing user feedback mechanisms, as well as focus groups and web surveys, are proven techniques that can be applied to assessing customer perceptions of cleanliness. Tools such as these may be helpful in prioritizing the use of limited funds for terminal renewals and replacements.

Where the problem may indeed be janitorial maintenance, airports can benchmark their cost per square foot of janitorial expense against peer airports and determine if they are getting a good return on their expense. It may be necessary to adjust schedules, increase staffing during peak

periods, or perform deferred maintenance in order to improve cleanliness scores (as determined by benchmarking) to acceptable levels. Restrooms are particularly important as drivers of customer satisfaction and are discussed in Section 8.15.

8.2 Sense of Place

ACI-ASQ lists airport ambience as among the top drivers of customer satisfaction worldwide. Ambience is discussed in Chapter 7 as it relates to terminal architecture; however, one component of ambience is a sense of place. Creating a sense of place can be achieved through a combination of local attributes.

Creating a sense of place that reflects the architecture, culture, cuisine and local community served by the airport has become a common goal of most well-rated airports. Creating a sense of place is a proven concept that gives the passenger, particularly a visiting passenger, a differentiated experience from other airports and provides direct linkages with the local community. Creating a sense of place is popular with passengers and has been shown to encourage additional spending and increase customer satisfaction as customers are able to experience local cuisine or acquire merchandise that is different from what they have seen elsewhere. Sense of place can include physical, sensory, and programmatic elements.

San Francisco International Airport (SFO) placed major emphasis on an improved customer experience during the redevelopment of Terminal 2, the airport's former international terminal. At the conclusion of the project, the airport staff asked the terminal architect, Gensler, to prepare a document that, according to the airport, "explains SFO's unique point of view, existing conditions and dynamic passenger demographics, so these principles can be incorporated in projects." The document, entitled REACH (Revenue Enhancement and Customer Hospitality) "builds on the Airport's efforts to make [SFO] a world-renowned facility and a premium gateway to the West." The architect noted that the REACH guidebook "highlights the passenger experience from arrival at the airport to the boarding plane for five passenger typologies, addressing their values and expectations and identifying opportunities to improve their experience" (San Francisco International Airport 2013).

8.2.1 Architecture

Incorporating local architectural styles, themes, and history into the terminal design creates a visceral sense of the local community, even for the passenger who never leaves the secure area. There are numerous examples, from Savannah airport's southern interiors to Vancouver's use of Pacific Northwest themes, art, and materials. Denver International Airport is an excellent example of creating a sense of place, from its iconic fabric roof evocative of the Rocky Mountains to the concourse train stations featuring railroad imagery and music—the shuttle train's arrivals are announced with a few bars of "She'll be Coming Round the Mountain," a salute to Denver's early days as a rail hub.

8.2.2 Live Music

Incorporating live music into terminals during busy periods has become popular and offers entertainment to offset some of the hustle and bustle of peak periods. The 2012 ACI-NA Passenger Airport Amenities Services Survey reported more than 20 airports offered live music in terminals (ACI-NA 2012). Austin-Bergstrom airport does this extensively, with live music each day in up to six public areas, including larger leased food and beverage spaces. Austin has a long-standing musical tradition showcased by events such as Austin City Limits and SXSW (South by Southwest). Austin's musical links are evidenced in the floor of the departure concourse, across

from the main concession area, which features piano keys defined by different color terrazzo flooring. Austin has a full-time music curator who finds the performers and signs them for appearances all through the year.

Portland International Airport also features music in the terminal, with a piano positioned in a key post-security common-use seating area. The music program includes classical and local jazz and contemporary artists. Music can be enjoyed in public seating areas and in the nearby restaurant, bar, and coffee concessions area. Nashville International Airport, which serves the capital of country music, has featured music in the terminal since 1988. According to the airport, some 80 to 100 different bands or performers play over the course of a year, performing from four stages and offering all types of music.

Other airports with well-regarded music programs include those in Asheville, Baltimore/Washington, San Diego, and Seattle-Tacoma.

8.2.3 Local Cuisine

The presence of national brands at airports only became common in the 1980s and 1990s. With the same brands often appearing at most airports, national brands were soon taken for granted by many passengers. Some airports have gone in a different direction, preferring to emphasize popular local brands. From major airports such as those in Dallas/Fort Worth, San Francisco, and Denver to smaller airports such as in Albuquerque and Memphis, bringing in popular local restaurants has proven popular to passengers, particularly frequent travelers looking for something different. Barbeque in Houston, beignets in New Orleans, and Cuban cuisine in Miami are a few examples of local cuisines offering the customer an opportunity to customize his or her experience.

Well-known local restaurants have proven to be successful when translated to an airport setting. Local brands can be operated by (1) local companies, under sublease to a large company or through a direct lease with the airport; or (2) by a national concession company through a license agreement with the local restaurant. The former approach is more complicated and carries somewhat more risk for the airport, although the benefits of having an authentic, locally owned branch of an iconic restaurant may make it worthwhile.

8.2.4 Local Events

For many communities, major events result in some of the busiest travel days of the year. Airports must handle the influx of visitors related to the event and often embrace the event itself. Events such as SXSW in Austin, the Indianapolis 500, and Frontier Days in Cheyenne present challenges and opportunities for the airport to link itself to an important event through special displays, banners, and year-round themed concessions. Event coordination is an opportunity to extend the event experience to the airport and provide a glimpse of the event to others who may be using the terminal but not attending the event. The airport's ability to handle the traffic created by the event can become part of the event coverage, for better or worse.

ACRP Synthesis 57: Airport Response to Special Events (Kramer and Moore 2014) is a comprehensive resource for event planning at airports.

8.2.5 Art and Museum Exhibitions

Many airports are subject to local ordinances regarding art in public places; these require spending a small percentage of construction costs on permanent art installations.

Figure 8-1.   Art display, San Francisco International Airport.

Some airports are providing exhibit space and equipment for traveling or rotating displays. San Francisco International has one of the best-known airport museum programs (see Figure 8-1), which has a staff of curators planning and managing displays in all four terminals. The airport has installed museum-quality, climate-controlled display cases, which make it possible to secure from collectors exhibitions of rare, sensitive, and valuable objects that require specialized handling and presentation. Recent exhibitions have included such subjects as the history of board games, Egyptian revival art, Hindu sculpture, Tiffany glass, and life and style in the age of art deco.

Phoenix Sky Harbor airport also has rotating art exhibitions in its terminals as well as permanent installations through its art in public places program. Fort Lauderdale-Hollywood International has a permanent art gallery in its Terminal 2 featuring local artists, with exhibits changing every 3 months.

Amsterdam Schiphol has perhaps the world's most famous airport museum, a branch of the national Rijksmuseum, where works by Dutch masters such as Vermeer and Rembrandt are on display. Exhibits are rotated from the national museum's permanent collection.

8.2.6 Local Sightseeing Tours

For passengers with long layovers, a local tour from the airport can be an excellent use of time and can create a lasting impression of the local community. Los Angeles International Airport licenses several private tour operators to offer tours from the airport. Tours include those of Hollywood, movie studios, downtown Los Angeles, and the farmer's market. Seoul Incheon airport offers an extensive array of free local tours with an emphasis on Korean culture, and Amsterdam Schiphol offers free tours as well. Beijing, Istanbul, Barcelona, Frankfurt, and Paris airports, among others, also offer or arrange tours for passengers with long connect times.

8.3 Wayfinding and Signage

8.3.1 Ratings and Reviews of Airports

A simple definition of *wayfinding* is the act of finding one's way to an intended destination. The general approaches to providing wayfinding assistance are:

- Terminal directional signage—static or digital;
- Maps;
- Leaflets;

- Interactive kiosks, displays, or airport apps;
- Information counters; and
- Roaming airport ambassadors or customer service agents.

8.3.2 Signage and Wayfinding Assessment

Signage in airports is a complex subject. *ACRP Report 52: Wayfinding and Signing Guidelines for Airport Terminals and Landside* presents a comprehensive analysis of airport signage and wayfinding. The report notes that because wayfinding is such an important element of the passenger experience, airports should be prepared to align their wayfinding programs with the expectations of their customers (Harding et al. 2011).

ACRP Report 52 suggests that airports need to understand the value of their wayfinding systems and consider it a critical system just like HVAC or electrical systems, without which the terminal could not operate. The report suggests that each airport develop a wayfinding strategy, and base it on the following key principles:

- **Continuity.** Is the wayfinding system the one common thread that provides continuity in a diverse architectural environment as passengers navigate from one space to another?
- **Connectivity.** Does the wayfinding system deliver the right message at the right location at the right time?
- **Consistency.** Think of wayfinding as a giant exercise in packaging information that can be clearly communicated to the user. Does the wayfinding system communicate information in a consistent manner throughout the passenger journey? Consistency becomes visible to passengers through the following design elements:
  – Terminology and message hierarchy,
  – Visibility and legibility,
  – Typography and symbology,
  – Format and color, and
  – Placement (Harding et al. 2011).

ACRP Report 52 also suggests that airports consider four techniques for assessing the wayfinding system and its impact on customers:

1. **Ergonomic sign assessment.** The entire signing system is evaluated with respect to conspicuousness, legibility, information load, comprehension, and placement. The ergonomic assessment would identify major routes within the airport and assess the wayfinding chains along the route.
2. **Frequently asked questions survey.** Passengers having difficulty with wayfinding are likely to ask for help at information counters or at concessions. Assessing the most frequently asked questions can help assist in identifying signage problems.
3. **Task analysis.** The major wayfinding chains, when identified, would be tested by non-passengers recruited to do so. The test would include verbal feedback from the testers explaining their reactions along the way.
4. **Survey of unfamiliar passengers.** Passengers unfamiliar with the airport would be recruited before entering the terminal and then would be surveyed at their departure gates. Questions would be used to determine if they got lost or were confused about where to go (Harding et al. 2011).

If the customer-focused assessment techniques identify problems with wayfinding, the report suggests developing an overall wayfinding strategy by following three steps:

1. Obtain buy-in from airport management and recognize the capital cost in fixing the problems and maintaining the integrity of the wayfinding system once it is established.

2. Adopt a wayfinding philosophy. Wayfinding should take priority over other types of visual information such as advertising and retail. Specific information zones should be identified and created.
3. The logic of the overall wayfinding system includes continuity, connectivity, and consistency. Each path or route must be mapped and decision points identified for each type of passenger movement (Harding et al. 2011).

The report also notes that single-purpose fixes to the signage should be avoided since the solution may solve one problem but create others.

8.4 Queue Management and Waiting Time Perceptions

Customer perceptions of wait time are influenced by the quality of the information they have available. People are subject to less stress when they have an estimate of the amount of time they will spend waiting in a queue. Uncertainty over the time required to reach the departure gate is a major source of stress at the airport.

Indicators of wait times fall into the two broad categories of *static* and *dynamic*.

An example of a static indicator is a sign at a security checkpoint queue that says "from this point the estimated wait time is 10 minutes." Static indicators are imprecise and may not be relevant when the lines are shorter or longer than the point indicated by the sign. Static indicators also do not account for changing conditions. If fewer checkpoint lanes are open, the wait may be greater than the average used to estimate the wait time shown on the static indicator.

Dynamic indicators take into account changing conditions such as the speed at which persons in line are being processed. Dynamic indicators that take into account processing times are more exact and provide better information. They can also be linked to real-time information; for example, checkpoint status and projected wait times are available from the TSA website https:// apps.tsa.dhs.gov/mytsa/wait_times_home.aspx. Some smart-phone apps link to this site.

Another option for keeping passengers informed is through a website or through use of text or email messages. Hartsfield-Jackson Atlanta International Airport offers the Trak-a-Line service, where customers can indicate a flight time and receive an email or text message with the expected wait time at a checkpoint. However, the system appears to provide somewhat standardized information (e.g., 10 to 20 minutes) for most queries.

U.S. Customs and Border Protection does not provide real-time wait times for airport international arrivals inspections but does provide comprehensive, customizable statistical reporting of wait times for each airport. The reports are available from the CBP website, http://awt.cbp.gov/.

Technology for measuring, managing, and predicting waiting times is available in new queue management systems now being used in Europe. These systems use predictive software in conjunction with camera-based measuring of passenger flows to predict processing times and passenger movements in terminals. These innovations are discussed in Chapter 10.

8.5 Walking Distances

Walking distances are a customer service issue when the length of the walking distance is an inconvenience for the passenger or a challenge for a person with reduced mobility. Eliminating or reducing the negative effects of long walking distances on the customer experience may require long-term fixes and significant capital investment. Therefore, it may require waiting until there is a major terminal refurbishment project in order to bring the costs and operational impacts to manageable levels.

Source: *Wikimedia.*

Figure 8-2.   London Gatwick Airport directory with walking times to gates.

Some of the negative effects of long walking distances can be offset by placing seats every 500 ft or where there is space to accommodate short-term seating such as benches. This will be of increasing importance as the U.S. population ages. Art displays or other visual attractions along long walkways also reduce the perception of a long, endless walkway and the anxiety that this perception can bring about for a time-constrained traveler.

Some airports, particularly those in Europe, are indicating walking distance or time-to-walk estimates on airport flight information displays or terminal map displays in order to allow customers to plan their movements and manage their time effectively while the airport is able to manage expectations. An example of a directory with walk times at London Gatwick airport is shown in Figure 8-2.

8.6 Loyalty and Rewards Programs

Companies learned years ago that it is much harder to acquire a new customer than to retain an existing one. Beginning with S&H Green Stamps in 1896, companies looked for ways to get customers to return and spend money, as well as for ways to build loyalty over the long term. Efforts can be seen in industries as diverse as supermarkets, bookstores, pharmacies, and electronics. Loyalty programs are especially prominent in the travel industry.

The airline industry created the best-known loyalty programs as a response to the competition created by airline deregulation. Suddenly, airlines were free to enter markets and could expand beyond government-authorized routes and regional niches. Airlines were challenged with competition on existing routes, with many more airlines competing for business. Airlines looking to enter new routes looked for an edge.

The first airline loyalty program was the American Airlines AAdvantage program, which was begun in 1981. Airlines found it important to build relationships and preferred status with the frequent business travelers who bought the most tickets, usually at the highest fares. Hotels and rental car companies quickly followed suit, seeking to incentivize the same high-value passengers. Holiday Inn started the first hotel loyalty program in 1983, followed by Marriott later that same year. Different levels of activity were rewarded with increasing levels of perks and rewards. Today, virtually every major airline, hotel chain, and rental car company has a loyalty program.

It is helpful to distinguish a loyalty program from a rewards program. Although the two terms are often used interchangeably, a loyalty program is interactive, connecting with the customer at an individual level and offering incentives, perks, and rewards designed to build a favored relationship with its most profitable members. Rewards programs, on the other hand, are more passive, providing a reward for gross spending, but do not engage the individual at a personal level or incentivize a deeper business relationship.

Loyalty programs are used to build relationships with customers, learn about their needs, and strengthen the relationship using incentives and rewards. A loyalty program will typically offer rewards to customers for using the airport. Jacksonville International has a frequent parker program in which participants get discounts at airport businesses and accrue points in the parking facilities that can be redeemed for free parking. The program has a $20 membership fee.

A number of U.S. airports participate in a national rewards program operated by Thanks Again LLC. The Thanks Again program requires participants to register a credit or debit card and use that card for purchases at participating airports. Points or miles are earned automatically when using the registered credit or debit card at participating locations such as on-airport parking and participating concessions. Points or miles can be converted to awards through participating airline and hotel programs. Bonuses are awarded when reaching the $1,000 spending level. The company has rewards program agreements with some 100 U.S. airports ranging from large hubs to non-hubs.

The program is customizable and scalable. The airport may decide to offer special rewards or incentives, which can be arranged by paying additional fees. When combined with the analytical features of the program, the airport has an opportunity to learn about its most loyal and frequent users and build a relationship with them directly. Thus, it can turn a rewards program into a customizable loyalty program.

8.6.1 Small Airport Loyalty Programs

Small airports without significant resources can use a personal touch to build relationships with users. Gainesville Regional Airport (GVL) in Florida operates its own loyalty program, which is designed to build a relationship with local customers and encourage their use of the airport. GVL, a non-hub airport, competes directly for passengers with Orlando International and Tampa International airports, both large hubs, and Jacksonville International Airport, a medium hub, all of which are served by both legacy and low-cost airlines.

GVL operates the Ultimate Road Warrior Club as a means of building relationships with local frequent flyers and encouraging use of the airport. Each month, the passenger with the most round trips receives a prize donated by local sponsors. Each quarter, awards are drawn randomly among passengers making at least one trip. Any member making one trip within a month is eligible for random awards, including tickets to local performing arts centers, museums, theaters, and coffee shops. Members can also use a private lounge in the terminal.

Atlantic City International Airport (ACY) has a loyalty program that rewards its users and gathers information to help develop air service. Customers enrolling in the iFlyACY program

receive 10% discounts at airport shops, meal and drink discounts at airport restaurants (excluding alcohol), and reserved parking in the airport's premium parking area. Like GVL, ACY competes with the larger Philadelphia and Newark Liberty airports. The Port Authority of New York and New Jersey, which manages the airport, surveys the program membership on their flying patterns and destinations and uses the information to encourage airlines to introduce or expand air service.

8.6.2 Loyalty Program Features and Benefits

Airport loyalty programs offer customers varying benefits for participation. These often include the following common program features:

- Discounts at airport shops,
- Vouchers and gift cards,
- Discounts with external partners,
- Discounted access to airport lounges,
- Airline frequent flyer mileage,
- Free parking passes,
- Discounts on conference room rentals,
- Dedicated parking spaces/areas,
- Priority lanes at security,
- Free access to airport lounges,
- Complimentary services,
- Gifts,
- Priority lanes at passport control, and
- Check-in at business-class counters.

Airports with loyalty programs found the benefits of the programs outweighed the costs for several reasons, including increased spending and reduced price sensitivity by participants as well as lower costs for servicing passengers more familiar with the airports and their services. Other benefits to the airport were better knowledge of the passenger profile, increased customer loyalty, increased customer satisfaction, and increased utilization of parking facilities. Positive word of mouth was also cited as a factor.

8.6.3 Pay Loyalty Programs

Airports outside the United States are more likely to operate pay lounges, manage security inspection, manage queues at outbound passport control, and operate (staff) airline check-in counters. Thus, these airports have more potential services that can be bundled in a loyalty program.

An example is the Privium Plus program at Amsterdam Schiphol Airport. The program has three membership levels. The top level of the program offers use of a dedicated club lounge, priority car parking, check-in at business-class positions at certain airlines, discounts on valet parking, and expedited screening and passport control. Memberships run the equivalent of $230, $135, and $100 per year, with the lowest level of membership providing only expedited security and passport control.

Copenhagen Airport's CPH Advantage program is a rewards program that offers points for spending in the airport's duty- and tax-free shops, cafes, and restaurants and also offers discounts and points for use of airport parking facilities when reserved online in advance. Points are also earned when using the airport's pay lounges. Members must show a card at time of purchase, which is then scanned by the airport or its concessionaires.

8.6.4 Incentive Programs

Somewhat related to rewards and loyalty programs are incentive programs. SEA Group, operator of Milan Malpensa Airport, offers the ViaMilano service as an incentive for passengers to make off-line flight connections at Malpensa airport. The service is operated in conjunction with a search engine that will assemble flight connections and stopovers via Malpensa. Unlike loyalty programs, the ViaMilano program is targeted toward passengers who have a choice of airports for making connections. The ViaMilano service is free. To receive the incentives, arriving passengers are required to show tickets from two different airlines (arriving and departing) with connecting times within 24 hours. Passengers then receive a card that entitles them to use the fast-track lane at security checkpoints and provides them unlimited free Wi-Fi access, a voucher worth €10 accepted at shops and restaurants (with a minimum purchase of €40), free flight insurance covering missed connections, discounts for use of day rooms at the airport hotel, and a discount for use of the airport's pay lounges.

8.7 Contract Management

Aside from customer service agents, roaming ambassadors, and perhaps custodial staff or on-airport bus/shuttle drivers, few airport operator employees have direct contact with customers. Most frontline contact is with service providers' staff, including those of concessionaires, parking management companies, the TSA, CBP, airlines, ground handlers, and ground transportation companies. For companies that operate at the airport under a contractual relationship with the airport operator, incorporating standard operating procedures as well as performance and service standards in contracts can be used as a starting point for ensuring outstanding customer service.

8.7.1 Standard Operating Procedures

A good example of performance/service standards is the *Customer Care Airport Standards Manual* created by PANYNJ as part of its Customer Care improvement program. The manual can be downloaded at www.panynj.gov/airports/pdf/PA_Customer_Service_Standards.pdf.

The Port Authority defined the role of the Airport Standards Manual as similar, but separate, from other standards manuals, such as those for lighting, terminal planning, signing and wayfinding, and airport rules and regulations. The Airport Standards Manual is incorporated into each airport's leases, concession agreements, contracts, and permits.

8.8 Parking

Car parking is often the largest source of non-airline revenue and, at most airports, is subject to considerable, sometimes intense price and service competition from local and national off-airport parking companies.

8.8.1 Premium Parking Products

Premium parking products provide additional options for customers who are willing to pay for them. These products may provide additional security for the customer's vehicle, reduced anxiety about finding a place to park, and added convenience and proximity to the terminal building. Options such as vehicle washing and detailing provide a convenient service that customers can take advantage of while traveling.

Guaranteed Parking Spaces

Airports offering guaranteed parking spaces generally use two approaches. In the first approach, access to guaranteed spaces can be obtained through a membership program subject to an annual fee that is in addition to the standard parking fee. Alternatively, a standard monthly fee is used that covers unlimited parking. These may be for individual use or shared corporate use among employees. The programs may guarantee a specific space or any space in a designated area.

Another option is to offer parking reservations without a membership, where a space is guaranteed in a designated premium area for a one-time or daily fee in addition to the standard parking rate. Often these guaranteed spaces are those closest to the terminal and may be in a guarded area with controlled access. Some airports also offer wider spaces for purchase.

The airports serving Atlanta and Boston charge customers an annual access fee and an hourly rate to park in the reserved area. Houston Intercontinental Airport charges customers a one-time application fee in addition to an hourly parking rate that is slightly higher than the standard rate. Seattle and Washington Dulles charge customers a flat monthly rate for unlimited parking in a designated area, while Minneapolis–St. Paul charges customers a one-time application fee, a monthly fee, and an hourly rate for reserved parking. Kennedy, LaGuardia, and Newark offer online parking reservations for a flat fee plus the standard parking rates, while Denver has an online reservation fee per day in addition to the standard parking rate.

Jacksonville International Airport's premier parking program offers close-in covered parking, preferred TSA lane access, a guaranteed prepaid space, transferability to coworkers or family members, and no-wait entrances and exits exclusively for the use of members. The fee is $200 per month.

Online parking reservations are promoted at many European airports, with discounts available when reserving in advance. This guarantees space for the customer and, for the airport, decreases the likelihood that the customer will be lost to a competitor. Use of the same credit card used for booking can also provide ticketless transactions and quick entry and exit.

Valet and Reserved Parking

Valet or reserved parking services may be provided at the curbside or within a parking facility. Customers can leave their cars with an attendant and have them waiting for them when they land, or they can park in a reserved, premium area. Typically a service charge is added to the applicable garage parking rate.

Premium services such as valet parking provide a higher level of service for the customer but may not be profitable for the airport due to labor costs and diversion of existing customers. For premium reserved parking, new infrastructure may be required to create an access-controlled reserved parking area. Additionally, the parking and revenue control system may need to be upgraded to process different rates and fees or acceptance of access cards associated with a guaranteed parking program.

Vehicle Washing, Detailing, Battery Boosts, and Changing Flat Tires

Car wash and detail service in an airport parking facility can occur in whichever parking space the customer chooses to park. Washes are scheduled online. The process usually involves a waterless wash system and is for exterior washing only. The service does not require the customer to provide the vehicle keys.

Park and Bark

Park-and-bark services provide airport passengers with the opportunity to leave their pets in a convenient kennel or pet resort while they are away. As these kennels often provide veterinarians on-site, they are popular with airport passengers and employees.

Jacksonville International Airport has an on-airport kennel operated by Pet Paradise, a large company with facilities around the southeastern United States. Pet Paradise is located near the long-term parking lot and features private climate-controlled pet condos, a bone-shaped swimming pool, auto-fill water bowls, and grooming and exercise options.

Expedited Payment Systems

Airports increasingly are looking to automated payment systems to expedite vehicles and customers exiting the parking facilities. Use of credit card exits allows customers to handle the payment process on their own and generally exit the facility faster, reducing wait times. The airport benefits from lower labor costs as the payment process reduces the need for and cost of cashiers at exits.

Airports in regions with toll roads or toll bridges will sometimes arrange for expedited payment through use of electronic toll collection (ETC) systems such as E-ZPass, I-PASS, FastTrack, or SunPass. This allows use of the toll road/bridge transponders to pay for airport parking. The transponder is read upon the customer entering the parking facility, usually through designated lanes, and then read upon exiting the parking facility. Rates are calculated, and the credit card on file is charged with the parking fee. In most cases, airport parking must be enabled through the ETC operator, which serves as the clearinghouse and may charge a fee for this service.

Apple Pay, Android Pay, and other near-field communication (NFC) systems that use smart phones also have potential for making expedited payments for exits from parking facilities, offering both convenience and security. NFC payment systems are expected to become commonplace as companies adopt them and the newer generations of smart phones have the technology to accommodate them. United Airlines is accepting Apple Pay, for example, for payment of food and beverages on board its flights, and SSP, a major airport food and beverage concessionaire, is incorporating Apple Pay into its airport locations. While no airport is currently using NFC systems for parking payments, the expanding use of these systems at other points of payment for travelers makes adoption of this technology at parking facilities likely.

8.9 Ground Transportation and Curbside

8.9.1 Customer Service Representatives/Airport Ambassadors

Customer service representatives, sometimes called "airport ambassadors" among other titles at airports, are available at the airport to assist customers who want information regarding available ground transportation options, who need directions, or who have other questions regarding ground transportation. Rather than being assigned to an information booth, the passenger service agents are often mobile, intercepting passengers at the curbside or inside the baggage claim area. They may also be stationed in welcome centers in baggage claim areas, as is the case at New York Kennedy, LaGuardia, and Newark Liberty airports. These agents are trained in customer service and are knowledgeable about the available ground transportation options and their destinations served, schedules, and fares.

Customers appreciate having an approachable person who can provide guidance on ground transportation fares and pickup locations and can answer their questions. Having passenger service agents readily available to answer questions and direct passengers to their desired ground transportation options can leave a lasting good impression on the customer and help reduce solicitation and hustling by unauthorized ground transportation providers. Fort Lauderdale-Hollywood International Airport is an example of an airport with customer service representatives staffed at dedicated counters to answer ground transportation questions.

Customer service representatives and their roles and training are more fully discussed in Chapter 9.

8.10 Check-in/Ticketing/Bag Drop

A fundamental change in the check-in and ticketing process has been underway for some time. This change is reducing the requirements for terminal space and the number of airline employees needed to handle these functions.

Online check-in through airline websites or mobile apps is now commonplace. J.D. Power reported that in 2013, 36% of passengers checked in online, up 2% from the prior year (J.D. Power and Associates 2013). Those who used online check-in had much higher customer satisfaction than those who used staffed check-in positions.

The 2015 SITA/Air Transport World annual global survey (2015) predicted that more than 70% of passengers worldwide will use automated check-in—using mobile devices, computers, or airport kiosks—by 2018, with nearly 56% performing check-in away from the airport (i.e., without using kiosks).

Automating the baggage check-in process is more challenging. Alaska Airlines, a long-time innovator in airline use of technology, became in 2014 the first U.S. airline to initiate self-tagging from remote locations. Passengers print out baggage tags at home or work and slide them into airline-supplied reusable clear plastic envelopes. The passengers using this process then use a dedicated baggage drop lane at the airport. United Airlines is testing a similar program at Boston Logan airport.

The adoption of automated check-in, self-tagging, and dedicated baggage drops is expected to continue with greater adoption by airlines. Over time, it is expected that the infrequent or occasional passenger will learn how to use these systems, increasing the pace of adoption.

In North America, common-use self-service kiosks were pioneered by Las Vegas McCarran and Vancouver airports. CUSS kiosks allow passengers to check in at the parking garage or rental car center, reducing congestion in the terminal check-in areas. Both ARINC and SITA have automated kiosks that can be programmed for single-airline or multiple-airline use.

Airports with airlines using common-use ticket counters and gates may find that installing common-use equipment will improve customer service for this segment of passengers and reduce the area required to support the check-in function.

8.11 Security

While security inspection operation and oversight of private contractors remain the responsibility of the TSA, airports have an interest in monitoring queue lengths and wait time at security, which, for most passengers, is the most stressful part of the visit to the airport. Airports are also looking to improve the experience of passengers while waiting for inspection. Airports hope that this will make the time seem like it is going faster and make the inspection process less objectionable.

Dallas/Fort Worth International Airport has tested its checkpoint of the future, developed in conjunction with hotel operator Springhill Suites, a Marriott subsidiary. The checkpoint in the airport's Terminal E provides soft lighting and soothing music. Comfortable couches and seating are available for passengers to use while taking off shoes or pulling out their laptops. Video monitors keep passengers apprised of current wait times. Colored lights shine on the walls, and nature scenes provide calming scenery. Airport management believes the atmosphere, which has been described as "Zen-like," results in calmer, less-stressed passengers, and that the installation has queues moving about 25% faster. Springhill Suites paid the $500,000 cost of the test project in return for advertising and sponsorship opportunities. The company has also sponsored and renovated checkpoints at the Charlotte-Douglas and Oakland airports.

San Francisco airport has received favorable reviews for its "recomposure area" in recently redeveloped Terminal 2, which includes padded bench seating, flight information, nearby restrooms, high ceilings, artwork, and plenty of room for passengers to collect their personal belongings and others in their party. The airport believes this has contributed to an increase in concession spending as passengers have a chance to recompose before walking past the retail concessions.

Another technique for reducing passenger stress and perceived wait times at security checkpoints is by providing entertainment. This can take the form of:

- Process-related media, which informs the passengers about the inspection process and what lies ahead;
- Other media, such as advertisements, tourism or cultural information, or video art displays; and
- Non-media, including live performances, cultural or museum displays, and other displays that distract passengers from the boredom of the queue.

8.12 Concessions

Concessions are an important part of the passenger experience, with roughly one-half of all passengers using food and beverage or retail concessions at most airports. The longer the dwell time and the more highly satisfied the passenger, the more concessions are likely to be used. Concession patronage is largely related to the overall quality of the offer and how well it meets the needs of the customer segments that use the airport. Concession programs with fair pricing, a great concession mix, lots of choices, and good service will outperform those at other airports with similar customer profiles and customer satisfaction levels.

Two excellent resources on airport terminal concessions are *ACRP Report 54: Resource Manual for Airport In-Terminal Concessions* (LeighFisher 2011) and *ACRP Report 109: Improving Terminal Design to Increase Revenue Generation Related to Customer Satisfaction* (Landrum & Brown et al. 2014).

Recent innovations and trends in concessions that have proven popular with customers include the following sections.

8.12.1 Airport Pay Lounges

Pay lounges are standard at major international hub airports around the world. In the United States, a few airports have developed pay lounges for passengers as an alternative to airline club rooms open to member or premium (first- or business-class) passengers.

- **Airspace,** a lounge operator, currently operates pay lounges at Baltimore/Washington (D Terminal), Cleveland Hopkins (Main Terminal), John F. Kennedy (Terminal 5), and San Diego (Terminal 2) airports. The lounge at Baltimore/Washington has a $20 entrance fee and offers departing passengers complimentary soft drinks, coffee, snacks, Wi-Fi, private restrooms, in-house computers, printers and scanners, and a $7 credit toward food and drink purchases. An arrivals pass is offered for $16.50 and is targeted toward red-eye arriving passengers. The pass also includes clothes pressing and an amenity kit. A boarding pass showing the arriving flight is required. Military members in uniform pay $13.50.
- **Priority Pass.** Priority Pass sells access to more than 600 airline lounges in 300 cities around the world. The company offers three levels of membership, from $99 to $349 per year.
- **The Club,** another lounge concessionaire, operates lounges at Hartsfield-Jackson Atlanta, Cincinnati, Dallas/Fort Worth, Las Vegas, Phoenix, Seattle, and San Jose airports. The Club lounges offer drinks and snacks similar to the Airspace lounges but also include shower

facilities and, subject to an additional fee, private meeting rooms. Access to The Club lounges is $35 per use. The Club has a tie-in with and welcomes members of club programs run by Diners Club and Priority Pass.

- **Credit card club programs.** American Express provides platinum cardholders free access to Delta Sky Clubs, Airspace lounges, and its own Centurion lounges, located in the Dallas/Fort Worth, Las Vegas McCarran, Miami, New York LaGuardia, and San Francisco airports. Diners Club provides members with access to lounges at 16 large U.S. airports. For example, Diners Club members can use the Air France Lounge at Boston Logan International Airport.

Airport customer service managers considering implementing a pay lounge should be aware that a pay lounge may be subject to considerable competition from existing airline lounges. Several third-party websites sell 1-day passes to airline membership-only lounges at airports in the United States and around the world. U.S. airlines also sell 1-day passes online and at the clubs. Day passes for Red Carpet Clubs, American Airlines' Admiral's Clubs, and Delta's Sky Clubs can be purchased for about $50.

8.12.2 Ordering Through Touch-Screen Devices

Several major concessionaires are embracing mobile technology to enhance the customer experience at food and beverage concessions. OTG Management, a food and beverage concessionaire, has installed thousands of iPads in its food and beverage locations at Newark Liberty, New York Kennedy, Minneapolis–St. Paul, and Toronto Pearson airports.

The iPads allow for online ordering of food using a visual menu, which also makes recommendations. The iPads are loaded with games, news and entertainment apps, a flight tracker app, Google maps, and other features to entertain the customer before and after the meal. The visual menu is available in multiple languages, making it useful in international terminals.

It is likely that online ordering will be integrated into future airport apps and mobile websites, offering flexibility for online ordering for pickup or delivery at the gate without the attendant cost of installing touch-screen tablets.

Aside from the technology, gate delivery can be a challenge at airports with high labor costs, where there are multiple food and beverage concessionaires that may lack the scale to afford gate delivery, and where product packaging may be a challenge. Still, remote ordering is expected to grow as point-of-sale systems used by restaurant operators increasingly have the capability to support online ordering and payment. Touch-screen ordering is also expected to increase as an extension of point-of-sale systems at busy food and beverage concessions.

8.12.3 Healthy Foods

Healthy food options are increasingly important to many consumers but are sometimes hard to find at airports. Many airport concessionaires offer popular, but not necessarily healthy, food choices that sell well but leave a growing segment of health-conscious passengers with little choice.

Airport managers who take a proactive approach and choose to provide healthy options as part of their concession mix can earn the loyalty of health-conscious travelers. Some airports require concessionaires to offer healthy options, such as fresh fruit, on their menus, and even relatively unhealthy fast-food operators have learned to adapt. Some airports will designate locations for healthy food outlets and conduct separate selection processes so that these healthy

choices will not be competing for locations directly with less healthy choices that may produce higher volume and revenue for the airport. This will provide a clearer choice for many health-conscious customers.

8.12.4 Local Foods

Bringing local restaurants to the airport provides variety and a sense of place and creates a dining option for passengers that is unique to that airport. Local restaurants can be brought to the airport by direct leasing, by subleasing under a larger prime concessionaire, or through a national concessionaire via a license arrangement with the local restaurant. The first approach can have the best outcome and provide the most authentic experience. On the other hand, local restaurants usually know little about operating at an airport, and the transition and risks may not be manageable. Licensing of popular restaurants by national companies is a proven strategy that many airports consider successful. Some airports, such as those in Denver, Dallas/Fort Worth, Portland, San Francisco, and Seattle, encourage locally owned businesses to operate at the airport and are prepared to provide the outreach, education, and staffing to support local operators through an unfamiliar public procurement process.

Local food and beverage concepts are also discussed in Section 8.2—Sense of Place. The terminal design architects interviewed for this guidebook noted that local restaurants and local design elements were sought after in most new terminal projects.

8.13 Consumer Services

8.13.1 Free Wi-Fi

When Wi-Fi became a virtual necessity for frequent travelers, airports turned to companies with experience in wiring Wi-Fi for large facilities such as campuses, office buildings, and convention centers. Airports entered into concession agreements where the Wi-Fi concessionaire charged customers and shared the revenue with the airport. Over time, however, many airports realized that the revenue from Wi-Fi was offset by negative comments from passengers who have come to expect free Wi-Fi at coffee shops, fast-food restaurants, and other public venues, or who preferred using cellular data services through their phone company's data plan.

However, as free Wi-Fi became more common, and cellular data systems became more congested and expensive, some airports began offering free or tiered Wi-Fi with advertising or sponsorships to offset the first free tier of service. Free services typically provide reasonable service for emails and web browsing, and faster services are offered on a paid basis with speeds suitable for video and audio streaming and downloads, Skype, or FaceTime. Passengers have come to see free Wi-Fi as being on a par with restrooms and drinking fountains. A majority of large airports have shifted from a paid to a free basic Wi-Fi model, or plan to do so on the expiration of their current concession agreements.

Depending on the contract terms with the Wi-Fi provider, the free period typically ranges from 15 minutes to 1 hour and is in some cases renewable for an additional period. The cost of providing the free service is offset by sponsorship or advertising featured on the splash screen that the customer sees on accessing the Wi-Fi system. In some cases, the customer is required to take a short survey, download a smart-phone app from a short list of choices, or watch a short commercial advertisement or promotion. The Wi-Fi provider earns revenue from the sponsorship or promotions, from roaming fees assessed to cellular phone companies, and from sale of access to the faster tier of services.

Airports can also use the Wi-Fi splash screen to gather customer satisfaction data. Instead of displaying a survey from a sponsor, the airport can personalize the page to ask customers about their experiences at the airport, measure their preferences, or provide important information about construction or other changes occurring at the airport. At Tampa International Airport, for example, customers must respond to a brief customer satisfaction survey to activate the free Wi-Fi connection.

A 2014 study by technology consultant Wefi found that Wi-Fi connection speeds at the seven busiest U.S. airports were, with one exception (Denver International), about the same speed as data transmission speeds on wireless cellular networks (Wefi 2014). Denver's Wi-Fi speed averaged 4.73 mbps, the highest of the airports studied. The lowest was about 3 mbps. A similar study from 2015 by the Los Angeles Times found download speeds at seven large hub airports offering free Wi-Fi ranged from a high of 10 mbps to a low of 3 mbps (Sumers 2015). Free time limits began with a low of 30 minutes, with four of the airports offering no limit or offering 24 hours of free access. Wi-Fi at four of the seven airports was advertising supported.

While customer expectations for airport Wi-Fi are increasing with respect to both price (free) and download speed (fast), the systems themselves are subject to interference from other types of equipment routinely found at airports, including microwave ovens, Bluetooth devices, cordless phones, and other Wi-Fi devices. *ACRP Report 127: A Guidebook for Mitigating Disruptive Wi-Fi Interference at Airports* (Carroll et al. 2015) provides practical assistance in mitigating the effects of interference and improving Wi-Fi network performance and covers both technical and business matters.

8.14 Amenities

8.14.1 Lactation Rooms

Traveling with children is always a challenge. For nursing mothers traveling with children, nursing or using a breast pump can be trying and stressful. Many mothers are uncomfortable nursing in a busy airport, even with cover-ups. For mothers traveling alone with their infants, it is especially stressful. For these nursing mothers, lactation rooms are welcome and are a necessity.

A study conducted in late 2014 by Michael Haight and Joan Ortiz for the journal *Breastfeeding Medicine* determined whether airports were "breastfeeding friendly" based on a telephone survey of 100 airports. While 62% of the respondents claimed to be breastfeeding friendly, only 8% of the surveyed airports offered private rooms with the minimum facilities (private room, table, electrical outlet, chair) that qualified as breastfeeding friendly. The airports that met all the requirements of a lactation room were Akron–Canton, Baltimore/Washington, Dane County Regional, Indianapolis, Minneapolis–St. Paul, Pensacola, San Francisco, and Mineta San Jose airports. This group includes large, medium, and small hubs. The other airports considered family restrooms as the equivalent of nursing rooms; however, the study noted that these fall short of providing an acceptable level of service because they are essentially private toilets and lack the minimum breastfeeding-friendly facilities such as a table and chair.

Since the study was completed, Dallas Love Field, as part of its new terminal project, opened a nursing room near a kids' play area. Phoenix Sky Harbor added pre-security nursing stations in each terminal at a reported cost of $8,000 to $12,000 each. Each room has a sink and countertop, soap and paper towel dispensers, electrical outlets, comfortable seating, and a baby changing station. The Port Authority of New York and New Jersey has purchased prefabricated lactation pods for New York area airports. The pods are self-contained and include all the required amenities of a lactation station.

Legislation has been proposed in Congress and in some states that would mandate that airports provide lactation rooms.

8.15 Restrooms

Survey research on customer satisfaction has established a direct link between the quality and cleanliness of restrooms and the overall customer experience. Recent common practices in restroom design include:

- **Removing doors at entrances to restrooms.** Most airports have created doorless entries to restrooms. Doors are an impediment to travelers burdened with carry-on baggage or children.
- **Brightening up entrances.** Restroom entryways do not have to look institutional and serious. Entrances, like restroom interiors, are being upgraded to include art, graphics, and use of color and lighting.
- **Hotel-style restrooms.** When San Francisco International Airport was designing its completely redeveloped Terminal 2, it conducted considerable research into what makes a good restroom and developed what it calls hotel-style restrooms. SFO's restrooms are bright and have lots of indirect lighting, which appears less harsh than direct lighting. Lighting is placed around mirrors to improve visibility, and women's restrooms include seating so women can apply makeup and take advantage of the mirrored lighting. High-speed air dryers are mounted between sinks to reduce water dripping on the floor. Light materials are used, but dark materials are used on countertops to downplay the look of water on counters around sinks. Toilet partitions are larger to accommodate carry-on bags. The reactions were so positive that SFO now includes its upgraded restroom program in all future terminal projects. Other airports with hotel-quality restrooms are perennial leaders Singapore Changi, Seoul Incheon, and Hong Kong.
- **Using quality materials.** As restrooms age, materials tend to crack and discolor. These materials look dirty, and no amount of cleaning can brighten them. Use of long-lasting materials will keep the restrooms looking good for longer. Cheap fixtures, particularly those with sensors, are more likely to leak or fail.

Some airports have adopted standards designed to ensure that restrooms remain open to meet demand. Portland International Airport designs its new restrooms with two entrances so that one part can be blocked for cleaning without closing the entire restroom. This is particularly important where larger restrooms are used and the next nearest restroom is far away.

Adequate storage closets and sinks for janitorial staff are a necessity. If the cleaning staff cannot readily access the buckets, mops, and cleaning materials they need, there will be less time to clean the restrooms.

ACRP has published a report on this subject. *ACRP Report 130: Guidebook for Airport Terminal Restroom Planning and Design* (Rothausen-Vange et al. 2015) notes the focus on good restroom design and touch-free environments, which mitigate user concerns about cleanliness. Touch-free elements include open, doorless entryways; large-format materials with few joints; energy-saving flush valves and faucets; energy-efficient lighting, concealed trash containers, and alternative drying options (paper or air, with touchless sensors).

Customer feedback on how well restrooms are meeting their needs can be obtained through a variety of means, including:

- **Comment cards** and drop boxes.
- **Touch-screen ratings.** Singapore Changi has installed touch screens where passengers can rate the restroom using a five-point scale. Geneva Airport has a mechanized feedback counter where passengers push a red, yellow, or green button to indicate their satisfaction with the visit to the restroom.
- **Customer surveys,** including ASQ and local periodic customer surveys, can solicit overall ratings of restrooms.

- **Twitter or text.** A number of airports post a Twitter address or a number where customers can text their reactions to restroom conditions. This can also allow for quick reaction to pressing cleaning needs.

According to ACI, one in three airports in the world has instant feedback tools in washrooms to measure satisfaction with cleanliness. In North America, this statistic is one in five. Seven of 10 airports worldwide collect real-time feedback on specific items such as availability of soap and toilet paper. Three out of four airports with real-time feedback tools dispatch cleaning staff once they receive alerts of a bad customer experience with restrooms. According to ACI, cleanliness of washrooms/toilets is very important across all passenger profiles (personal communication with ACI).

8.15.1 Restroom Attendants

Charlotte-Douglas International Airport (CLT) initiated a program in 2006 to improve customer service by adding restroom attendants. The airport hires employees using a local company that specializes in job placement for workers with disabilities. The attendants are responsible for keeping the restrooms clean and provide optional amenities such as tissues, mouthwash and paper cups, and mints. A tip tray is visible, but tipping is optional. The airport tried the restroom attendant program on a trial basis and continued the program after receiving many positive comments about the cleanliness of the restrooms.

The restrooms at CLT are clean and stocked, especially during busy periods. Some passengers, however, are put off by the presence of the attendant and by the tip tray since it is unusual to find attendants in restrooms in all but the most exclusive restaurants and private clubs. Nevertheless, the complaints about restroom conditions dropped, and the program is considered successful by the airport. As a connecting hub with heavy traffic during peaks, keeping the restrooms tidy and in order is no longer a major issue.

8.15.2 Restrooms for Pets (Pet Relief Areas)

Beginning in 2009, the Department of Transportation (14 CFR Part 582) required airlines to make available animal relief areas at airports for the use of passengers traveling with service animals. Typically, these relief areas are outside of the secure area of terminals, usually on the ground level outside the baggage claim areas. The regulation requires airports to consult with one or more service animal training organizations regarding the design, materials, and maintenance of service animal relief areas. TSA regulations allow passengers with service animals needing to use relief areas to return to the front of the check-in lines.

The website PetFriendlyTravel.com notes that there are a number of airports with relief areas inside the secure areas of terminals. These airports include San Diego, Palm Springs, Fresno–Yosemite, Seattle–Tacoma, Minneapolis–St. Paul, Washington Dulles, Pittsburgh, Dallas/Fort Worth, Detroit, Asheville, Fayetteville, and Memphis. The website includes an extensive list of airports and the locations of their pet relief areas.

The number of pets on flights has grown significantly due to a federal law, the Air Carrier Access Act, which allows passengers to bring emotional support animals (ESAs) into the aircraft cabin. For an animal to be designated as an ESA, a letter is required from a physician along with a one-time $150 fee for certification. Once certified, the ESA is entitled to fly without payment of the standard airline fee, which is usually $125 to $150 each way. There are no rules defining an ESA, so increasing numbers of pet owners are using the law to avoid costs and guarantee access to the cabin for their pets. This is expected to increase the demand for pet relief areas at airports unless rules are adopted limiting the designation of ESAs.

8.16 Flight Information and Passenger Information

Flight information is the most basic and important type of information for passengers. The standard approach is to use monitors or flat-panel screens showing departing flights, gate numbers, and current status. With mobile technology, other options for receiving flight information are supplementing flight information displays. These include:

- Text messages or emails from the airline notifying the passenger of departure time, gate number, and any flight status changes.
- Flight status on airline apps, usually through push notifications.
- Flight status available through third-party apps, airport apps, or mobile websites. These approaches usually require the passenger to seek out the information.

It is likely that the use of mobile devices to receive flight status information will continue to grow.

In busy terminals, airline boarding announcements, paging, background music, and security announcements can create a cacophony that does nothing to soothe passengers. Overhead televisions in holdrooms can add a competing layer of noise, which can be made worse when airline employees use the wrong circuit for announcements, sending their gate announcements throughout the entire terminal. Add crowd noise, the occasional warning beeps of a backing golf cart, and the sound of carry-on luggage wheels on certain flooring, and the aggregate noise levels can be annoying. For terminals with poor acoustics, the sound quality can make the noise levels worse.

8.16.1 Visual Paging

Increased use of visual paging—that is, video screens that show messages for passengers as an alternative to voice announcements—can help minimize the acoustic clutter in busy terminals. Persons calling the airport can have their messages posted on screens placed throughout the terminal rather than through a voice announcement. An example of a visual paging screen at San Francisco International Airport is shown in Figure 8-3.

8.16.2 Silent Terminals

With the increasing use of smart phones, email, text messaging, and visual paging, some airports are questioning the need for traditional voice announcements at all. Many airports have

Figure 8-3.   Visual paging screen, San Francisco International Airport.

adopted a silent terminal philosophy where airport noise is minimized or mitigated. By eliminating paging and background music as well as restricting announcements to gate areas, noise levels can be reduced.

London City Airport has established a silent airport policy that restricts announcements to emergencies and those made during bad weather. Helsinki Airport has also adopted a silent airport policy, where the only announcements are made at the departure gate. No terminal-wide announcements are permitted. Many other airports in Europe have reportedly initiated similar policies.

Minneapolis–St. Paul International Airport (MSP) has designated a quiet area in its terminal. The upper-level space, which overlooks the central atrium, includes tables and chairs with power outlets at each table and complimentary Wi-Fi. For passengers seeking some rest, Delta Airlines provides pillows and blankets. The area fulfills a need by providing a place for those seeking peace and quiet, without paging and other airport announcements.

8.17 Holdrooms

The distinctions between holdrooms, public spaces, and concession areas are blurring. Newer terminals provide a range of seating options rather than traditional rows of holdroom seating.

Concession seating is being integrated into holdrooms, with tables, chairs, and counter-style seating available in or near them. Some airports, such as Washington Dulles, are putting tables and chairs in the center of the circulation space, allowing passengers to bring their food and beverage purchases closer to the departure gate. Minneapolis–St. Paul International Airport's Concourse G blurs the line by putting concessions and some concession seating near the gates rather than in a strictly defined food court area. Both instances are popular with passengers since seating closer to departure gates reduces the stress and worry of passengers with limited time before boarding, and, according to the airports, contributes to higher concession spend rates.

8.18 Domestic Arrivals and Baggage Claim

Waiting for checked baggage in the baggage claim area is an unpleasant experience for most passengers. The wait can be long, little information is provided, and there is anxiety as to whether the bag will actually appear.

Indicating the estimated waiting times is one way of reducing anxiety. By informing passengers about the expected time for the first bag to arrive, they will have an understanding of the wait time and can use the time to visit the restroom or patronize concessions. New technologies are capable of providing real-time bag tracking and are discussed in Chapter 10.

8.18.1 Arrivals Concessions

Arrivals concessions are seen at many larger airports. Typical concessions include coffee kiosks, carts, or small in-line shops, often co-located with a small convenience retail unit offering newsstand items and sundries.

A key determinant of success of arrivals concessions is the concentration of passengers as they reach the baggage claim area. Successful arrivals concessions will take advantage of the congregation of meeters and greeters and locate the concessions near potential customers.

Several factors are involved in the success of arrivals concessions. Assuming the baggage claim area is on the lower level of the terminal, passengers may be greeted by friends and relatives at the exit from the secure area on the upper level. In this case, the meeters and greeters will be

concentrating on the upper, departures level. Therefore, the arrival concessions would be better located in this area than in the lower-level baggage claim area.

At San Francisco International Airport's Terminal 2, a dedicated meeter/greeter area is located to the side of the exit from the secure area on the upper (departures) level. Also located in this area is a Starbucks in-line unit, which serves the needs of meeters and greeters as well as employees and pre-security passengers. This results in an ideal combination in terms of an arrivals location, in that it is adjacent to the exit from the secure area, there is comfortable seating with coffee tables nearby, and the arrivals concession has the maximum exposure to all customer segments.

Alternatively, arriving passengers may access the baggage claim area directly from the secure area via escalators and stairs. In this instance, the meeters and greeters will generally congregate around the escalators serving the exit from the secure area, which is the closest place they can wait for their parties. This provides opportunities for concessions nearby.

Another factor is the number of entrances to the baggage claim from the secure area. If the baggage claim area is spread out, with multiple entrances from the secure area, it may be difficult to locate the arrivals concessions where they would be exposed to a significant flow of arriving passengers and their meeters.

This contrasts with the typical international arrivals facility where all passengers are funneled through a single flow from the inspection areas, thereby creating concession opportunities at the exit from the inspections area.

8.18.2 International Arrivals Facilities

At most international terminals, there is a single flow out of the inspection area, and meeters congregate in this area. FIDs showing arriving flight status are important in this area. Dynamic signage indicating current inspection times is also helpful in managing the expectations of the meeters and greeters, who are also airport customers. Because inspection times for arriving non-citizens are greater than for U.S. citizens, showing both processing times will reduce confusion and provide better information.

Locating arrivals concessions around the periphery of these congregating meeters and in sight of arriving international passengers will provide maximum opportunity to stimulate demand. Ground transportation employees and drivers will also be numerous in this area and are part of the market for concessions as well.

Typical concessions in an international arrivals area, depending on passenger volumes, include:

- ATMs;
- Currency exchange booths;
- Left luggage counters (baggage check);
- Coffee shops or kiosks;
- Fast-food or quick-serve units;
- Flower kiosks;
- A small bar with food, or an all-purpose unit offering coffee, snacks, and alcoholic beverages;
- Ground transportation counters; and
- Rental car counters.

A good strategy for food and beverage concessions is to locate them with dedicated seating for customers only with a view of the exit from the inspection area. Meeters and greeters will be more likely to use the concessions if they can obtain use of a prime seating area where they will be sure to meet their passengers.

International arrivals areas are stronger concession locations than domestic arrivals areas for several reasons. First, the international passenger is typically coming off a longer trip and

is in need of concessions. Second, the number of meeters and greeters is typically higher than for domestic passengers, offering opportunities to sell to this customer segment. Third, certain services, such as currency exchange and ATMs, are in high demand by arriving passengers.

Use of video displays showing passengers as they approach the exit from the secure area is also a way to reduce crowding around the exit from the inspection area.

8.19 Other Innovations

8.19.1 Yoga Rooms

Four U.S. airports now offer yoga rooms. San Francisco International Airport put the world's first yoga room in its new Terminal 2 in 2012. Since then, Dallas/Fort Worth; Burlington, Vermont; and Chicago O'Hare airports have added yoga rooms, as has Helsinki Airport in Finland. London Heathrow is adding one, although it will be inside a pay lounge. Yoga rooms may be a relatively low-cost customer service improvement where there is available out-of-the-way space in the post-security area.

8.19.2 Hydration Stations

Carrying bottled liquids through security is not permitted. The cost of bottled water in many airport concessions is well above street prices and is unpopular with many passengers. Some environmental groups are advocating the elimination of single-use water bottles because of their carbon footprint. Plastic water bottles are constructed of polyethylene terephthalate, can take up to 1,000 years to biodegrade, and require use of more water to make than they contain when filled. The type of plastic used in typical bottled water sold in airports is porous and not safe for refilling.

A hydration station (see Figure 8-4) offers an opportunity to provide the airport's customers with a cost-effective, environmentally sound alternative to purchasing bottled water.

Figure 8-4.   Hydration station, San Francisco International Airport Terminal 2.

The hydration station disperses chilled water over a small sink, allowing passengers with reusable water bottles to refill them before or after their flights. San Francisco International Airport has installed them in all of its boarding areas/concourses, and Chicago O'Hare and Midway, Boston Logan, Hartsfield-Jackson Atlanta, and Portland airports have done the same. Portland makes sure its concessionaires offer refillable water bottles. In Atlanta, the water dispensers are retrofitted drinking fountains, with the installation cost paid by Coca-Cola, which is headquartered in Atlanta. Coca-Cola sells a popular brand of filtered bottled water and is testing the program in return for assurances that bottled water sales will not be banned.

CHAPTER 9

Improving the Customer Experience—People

In his book *The Customer Comes Second*, Hal Rosenbluth, CEO of the travel management company Rosenbluth International, writes about the importance of focusing on employees first because engaged employees will take care of customers. The airport is a particularly problematic workplace as most airport employees do not work for the same employer; indeed, they tend to work for many companies that often do not have a shared agenda for the airport as a whole. Customers are unlikely to experience excellent customer service that resonates with the airport's brand or service delivery strategy unless the airport's employers and employees are fully engaged and aligned with the airport's vision and brand.

In spite of all the technology in today's airports, sooner or later customers will need to interact with a person. The more that technology and self-service shape the airport customer experience, the more likely it becomes that interactions with airport employees will be related to service failure or service recovery.

This chapter is intended to provide the customer service manager with strategies for improving customer satisfaction by enhancing the customer service provided by three main types of employees: (1) those employed directly by the airport; (2) those employed by service companies, concessionaires, and others that are present at the airport through contracts and agreements; (3) employees of federal inspection service and security agencies whose presence at the airport is largely due to federal law or regulations, as well as airline employees, over which the airport operator has only limited control.

WOW service (discussed in Chapter 2) relies on the effectiveness and value of frontline, customer-facing staff, regardless of the employer. Two customer service programs that exemplify successful alignment of airport service standards and employee engagement are the PANYNJ Customer Care service representatives and Airports Company South Africa's (ACSA) iHELP agents. Both of these programs deploy highly trained and personable staff within the airport terminals (and on the APM platforms in the case of the PANYNJ). Figure 9-1 shows uniformed customer service ambassadors at PANYNJ and ACSA airports. Both programs provide customer assistance, operational support, security awareness, and assistance with quality audits. Both programs are aligned with a service vision and have customer service standards for behavior, knowledge, and grooming. The customer service standards guide employee recruitment and training and form the basis for reward and recognition. Although the service delivery methods differ (the PANYNJ program is outsourced and the ACSA program is provided in-house), both programs have received rave reviews and testimonials from customers and airport business partners alike.

From a customer's point of view, it does not matter who provides the employee's paycheck. What does matter is that all airport staff feel valued, engaged, and energized as important members of the airport team. Well-rated airports are successful because of the talent and contributions of those who work there; they cannot be successful without them.
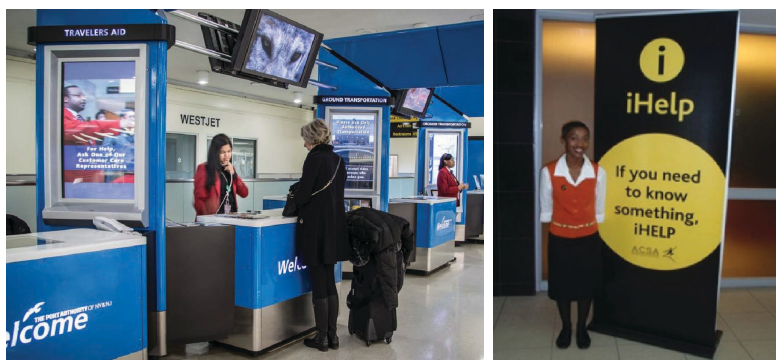
Figure 9-1.   Customer service ambassadors at PANYNJ (left)
and Airport Company of South Africa (right).

As a result, airports are adopting strategic airport customer service brands and service standards that support their brands. Service standards include guidelines that address the knowledge, professionalism, and courteous behavior expected of all airport employees, regardless of their job function or employer of record. Together, the brand and the standards form the basis of airport customer service training programs, airport orientation programs, performance management, and employee and employer reward and recognition programs.

Additionally, effective and regular employee communications that are usually managed by the airport operator are also essential. They ensure that airport employees are the first to know about upcoming events, operational changes, construction, and so forth so that they not only feel that they are valued members of the airport family but so that they, in turn, can better anticipate customer needs, answer customer questions, and participate in promoting the airport's image. Well-rated airports recognize and value airport employees as airport customers.

This service philosophy paves the way for communicating with these employees in the same way as the airport communicates with its other customers (such as passengers and meeters/greeters) in a way that resonates with the employees and provides them with the information they need and want when they need and want it using the employees' preferred channels of communication.

Many airports, including Boston Logan, San Francisco, and London Heathrow, and concessionaires such as Hudson Group, the Paradies Shops, and HDS Retail, also put in place discounts and targeted retail offerings designed especially for airport employees. They recognize that airport employees are valuable airport contributors that increase non-aeronautical revenues. As customers, they shop and eat at the airport on a frequent basis, and it has been documented that highly satisfied customers spend more time and money at the airport than dissatisfied customers. Airport employees have a tremendous impact on the states of mind and stress levels of passengers and meeters and greeters.

9.1 Educating and Training

The U.S. Census Bureau projected that the millennial generation (aged 18 to 34 as of 2015) would surpass the baby boomer generation as the nation's largest living generation by the end of 2015 (U.S. Census Bureau 2015). As the baby boomers leave the workforce, airports and companies doing business at airports will be in competition with other industries for talent. Progressive companies and airports are putting transition plans in place to ensure that they are not left insufficiently or inadequately staffed.

For airport operators, the problem is compounded. Airport employers need to compete for talented staff to provide services at places of work that may not be conveniently located or that

require long commutes from the places of residence of potential employees. Once new staff have been recruited, the airport operator strives to have them identify themselves as valued members of the airport's team as well as valued members of the employer's team. In effect, airports attempt to act as if all of the airport's employers and all of the airport's employees were as one by:

- Providing seamless and satisfying services that exceed customer expectations, and
- Aligning with one vision, one mission, and one customer service airport brand for the entire airport.

To support this goal and working in collaboration with the entire airport community, well-rated airports have embraced airport employees as valuable customer service ambassadors for the entire airport by:

- Educating them about the airport—past, present, and future;
- Providing opportunities to enhance their skills;
- Communicating job advancement prospects at the airport; and
- Providing customer service training that supports the airport's service delivery strategy.

To do this, airports use several tools:

1. **Service standards,** which provide written guidelines setting out the airport's expectations for all airport staff;
2. **Airport orientation programs,** which educate all employees at the airport on matters of importance that extend beyond the relatively narrow scope of their jobs; and
3. **Customer service training programs,** which ensure that the service provided by airport employees is consistent with the airport's brand and in adherence with its service standards.

9.1.1 Service Standards for All Airport Staff

As discussed in Section 3.3—The Role of Airport Customer Service Standards, published airport service standards adopted with the collaboration of the airport community shape an airport's customer service brand and define minimally acceptable levels of customer service for the airport. Standards relating to people define the airport's expectations regarding the attitude, knowledge, awareness, and appearance for all airport employees and guide staff interactions with customers and with each other and also guide employee recruitment, training, and rewards. Once having a standard for people, well-rated airports often provide customer service training programs to all frontline airport employees and their supervisors that are aligned with the standards. Figure 9-2 shows an example of the Houston Airport System's Houston Friendly Standards for all airport community employees. These standards are used as one of the bases for the Houston airport's Reward and Recognition Roundup.

9.1.2 Airport Orientation Programs

Orientation programs typically include the history of the airport; a tour of the airport, both landside and airside; a discussion of the airport's master plan and capital improvement program and what lies ahead for the airport; the airport's physical landscape and layout; regional travel and tourism information; and an opportunity to meet and hear from key managers in the airport community.

Airport orientations are especially helpful to engage airport employees at large airports where the employee may never get the opportunity to see the entire airport firsthand or understand the airport from the passenger's perspective.

Perhaps most importantly, airport orientation programs provide a forum for the airport to demonstrate just how much it values airport staff by treating them respectfully and in the

Courtesy of Houston Airport System.

Figure 9-2.   Houston Friendly Standards.

manner that the airport expects the employee to treat the airport's customers. Orientation programs also make airport employees aware of the history and the dynamic nature of the airport and its importance to the community.

9.1.3 Customer Service Training

Most airport operators provide customer service training to their own frontline staff and frontline supervisors. Far fewer provide customer service training to the frontline staff who work for others in the airport community. Among airports that are well-rated for customer service, however, the airport operators typically offer customer service training to all frontline staff and supervisors. These airports recognize the significant impact that training makes on the airport's customer experience overall.

A good example is London Gatwick Airport, which has a staff of approximately 2,600 made up of approximately 40 nationalities. This diverse workforce serves an even greater number of nationalities that use the airport, so it is important for the airport to recognize and respect cultural differences. Customer service is also important from a larger, competitive perspective. After the 2009 government-mandated sale of the airport by BAA to Global Infrastructure Partners (GIP), London Gatwick has focused on staff training and human resource issues as it competes with London Heathrow and Stansted airports for passengers and air service.

GIP's results-driven approach has seen London Gatwick develop a stronger corporate culture and adopt a new, more customer-focused philosophy. Gatwick airport management has introduced new staff training and a new look and has defined its vision and ambitions for the future. The airport's Turn It Up staff training program is focused on helping staff recognize the individual differences of customers. The program was first rolled out to frontline security teams with a view to making the journey through security less stressful and more humane. Turn It Up proved so successful that the airport is now rolling it out elsewhere, including to those that work with passengers with reduced mobility, the car park staff, and third-party service providers. Gatwick airport staff report that when GIP first took over, the focus was on operational excellence. Now that operational excellence is established as a bedrock principle, management is looking more at the passenger experience.

By and large, every airport provides the same essential functions, processes, and services that other airports provide, either with its own staff or through contracts with others. Yet every airport is unique and has its own style, personality, and brand. Therefore, it should be no surprise that airports develop and deliver different customer service training programs that reflect the diversity of the industry, including:

1. **Classroom training.** Many airports offer a 1.5- to 4-hour training class, developed either in-house or outsourced. An in-house staff member or an outsourced trainer typically facilitates the class. Sometimes it is offered by select members of the airport community on a rotating basis. The Minneapolis–St. Paul International Airport's MSP Nice program was initially developed in-house in collaboration with its Customer Service Action Council, which represents the MSP airport community. If development of the customer service training program is outsourced, it is not uncommon for the airport operator to require that the program be developed as a train-the-trainer program so the airport has flexibility to offer the course using more cost-effective options.

2. **Different approaches.** The airport's customer service training may be contained in a video, as is the case with Jacksonville Airport Authority's customer service training video [see YouTube—"Customer Service at Jacksonville International Airport (JAX)"]. Alternatively, it may entail some combination of video, class facilitator, customized course content, role playing, and final exam. Sometimes the customer service training video includes aspects of airport orientation programs, such as at Washington Dulles International Airport, which includes a brief history of the airport.

3. **Training as part of the badging process.** There is a trend of offering customer service training as one of the requirements for obtaining a SIDA badge. This training often takes the form of a video that is customized for the airport and may combine facilitated customer service training along with information about the airport.

4. **Refresher training.** Some airports offer a customer service training refresher video at the time of SIDA badging and a more robust customer service training course separately on a scheduled basis for customer-facing staff.

5. **Training in appropriate languages.** In the U.S., customer service training is sometimes provided in several languages, most often English and Spanish. Some airports offer additional training in English as a second language or in other languages spoken by the airport's customers.

6. **Use of external training resources.** An emerging practice is for airports to pursue customer service certification either through in-house training or through an outside customer service accreditation entity. This training may, in some cases, be conducted online.

7. **Multilevel training.** San Francisco International Airport's Serve Well guest services training program, offered in conjunction with its Travel Well guest services program, is a creative approach to propel SFO to become a top-rated airport for service excellence. This program offers expert techniques at no cost that will heighten guest satisfaction and loyalty and benefit all employees working at SFO. The training curriculum is designed to allow airport employees to enroll for progressively more in-depth courses, starting with Travel Well ambassador training with prerequisites to proceed to each of the next two levels. Information on the training curriculum is shown in Figure 9-3. Employees are encouraged to complete the more advanced courses to hone their customer service skills and expertise.

8. **Training curriculum.** Based on the training programs performed at a number of major U.S. and non-U.S. airports, a representative customer service training curriculum would typically include topics such as:
   a. Knowledge of airport history, layout, services, amenities, and so forth;
   b. Knowledge of airport customer service brand and service standards;

SFO *Serve Well* Guest Services Training Program

In concert with SFO's Travel Well program, the Serve Well Guest Services training program is a smart and creative approach to propel SFO to become the top-rated airport for service excellence. This program offers expert techniques that will heighten guest satisfaction and loyalty and benefit all employees who directly work with the public. These courses are available to all employees working at SFO at no cost.

Serve Well Schedule & Registration

For general inquiries, email SFO *Serve Well* Program.

Course Description (90 minutes each)

- **INTRODUCTORY COURSE: TRAVEL WELL AMBASSADOR** - Understand and perform the Travel Ambassador role at SFO with confidence, enthusiasm and pride (see overview video).
- **WELCOME** - Learn how to welcome our guests in a friendly and helpful manner to provide an exceptional airport experience.
- **ENGAGE** - Engage our guests to ensure the traveler's journey in a seamless way that enables you to serve well.
- **LEAD** - Strive to be the best and lead from every position through knowledge and professionalism to create an innovative experience like no other in the world.
- **LIFT** - Elevate our guest's spirits with by surprising them with exceptional experiences and creating positive memories for them.
- **IMPROV** - Learn how to thrive in a fast-paced environment that is constantly changing. This session focuses on listening, problem solving and adaptability.

All courses are available in two versions – one for ALL EMPLOYEES and the other for TEAMLEADERS.

Training Location – unless otherwise noted in the registration, courses are held in the SFO Training Room, 4th Floor, International Terminal.

Benefits

- Professional customer service training and experience.
- Familiarization with the airport, its vision, mission promise and most importantly, its guests.
- Improved confidence level.
- Practical skills.
- Relevant topics.
- Recognition and certification upon course completion.

Schedule & Registration

- Visit the *Serve Well* Schedule & Registration page and select the session you wish to attend. Current and following month training dates are posted.
- Click on the corresponding RSVP FOR THIS EVENT button.
- Complete the requested information.
- Click the ADD button to complete your registration.
- Once registered, you will receive a confirmation email and directions to the location before the actual training day.

For technical difficulties with registration, email us here.

Courtesy San Francisco International Airport.

Figure 9-3.   San Francisco International Airport Serve Well guest services training program outline.

    c. Understanding the passenger's journey door-to-door and the employee's role in enhancing the customer's experience;

    d. How to handle customers who are frustrated or angry;

    e. How to handle stress and boredom while on the job;

    f. How to handle people with disabilities or reduced mobility;

    g. How to handle customers who do not speak English;

    h. How to handle the aged and aging; and

    i. Security awareness—"See Something, Say Something."

9. **Providing training tools for business partners and stakeholders.** Some airports fund, develop, and offer customer service training to all airport staff, while others share all or some of those duties with the airport's business partners and stakeholders, as is the case at MSP. The Metropolitan Airport Commission, the airport operator for MSP, developed a customer service video that airport businesses can use in their employee orientation processes. The video highlights the airport community's employee brand promise to be "MSP Nice: one experience at a time."

10. **Providing answers to frequently asked questions.** The more informed and knowledgeable the airport employee is about the airport, the more likely he/she will be able to delight the customer. Employees need to have answers to customers' frequently asked questions, especially if that is specified as an airport service standard. In addition, information about interesting airport facts or upcoming events at the airport or in the city also provide conversation starters for employees to use with customers. To assist airport employees with this, customer service training often includes important information to help them assist and delight their customers. This information is often provided through a communications channel such as an intranet, mobile access to the airport website, or an airport app accessible on a smart phone. Otherwise, this valuable resource information is provided in a convenient low-tech manner such as a Z-card, which is credit-card sized when folded and opens to approximately 18 inches by 18 inches and contains important phone numbers, maps, and other airport information on both sides. The decision to use high-tech versus low-tech tools should be based on cost, the employees' skill sets, and the equipment at the employees' disposal on the job.

One of earliest and largest customer service training programs is conducted by PANYNJ, which developed its customer service training in-house. The training is based on PANYNJ's customer care service standards and is delivered in the classroom using:

1. A trainer provided through a third-party service contract;
2. Videos that communicate the history of the airport, a welcome from a PANYNJ executive, and customer service do's and don'ts;
3. Customer service training content discussion;
4. Role playing of typical airport customer interactions; and
5. Familiarization with the PANYNJ customer care standards for attitude, knowledge, awareness, and appearance of airport staff as well as the customer care reward and recognition program and a sign-off that the employee is familiar with the information.

Generally, a 4-hour training session is given at the time of airport badging; however, longer sessions are available at the request of individual employers.

9.2 Monitoring and Managing Performance of Airport Staff

Because an airport's customer service brand is the essence or promise of what will be consistently delivered or experienced at the airport regardless of who is responsible for providing the service, it is important that the airport operator monitor and manage the performance of the drivers of

customer satisfaction at the airport (i.e., key performance indicators). The performance of airport staff is a key performance indicator that drives overall customer satisfaction at all airports and has an indirect impact on non-aeronautical revenues. As a result, operators of well-rated airports put in place airport-wide performance management systems to monitor and continuously improve the performance of airport staff.

The performance of concessionaires' staff, however, has a direct impact on non-aeronautical revenues attributable to concessions spending. That is why leading concessionaires and concession developers and the brands they operate at airports have sophisticated customer service training programs. This is in addition to the customer service training and performance monitoring and management that may be performed by the airport operator.

Tools that airport operators use to monitor and enhance the performance of airport staff include:

1. **Customer satisfaction surveys.** These are useful for assessing overall customer satisfaction results and soliciting responses to specific questions concerning attitude, knowledge, appearance, and awareness of airport staff. Survey questions can be organized by process, such as check-in staff, security staff, FIS staff, concessions staff, custodial staff, and customer service representatives/ambassadors. Questions may also be structured to solicit indirect responses to questions concerning ambience or wayfinding, for example.
2. **Compliments and complaints, social media feedback, and airport comment cards.** These provide important customer feedback regarding the performance of airport staff. Feedback from these sources is generally attended to quickly, and customers receive timely responses from the airport consistent with the customers' expected norms for each feedback mechanism. For example, use of social media carries expectations of almost instantaneous response. Employers and employees cited in compliments and complaints receive feedback (praise or counseling), and the airport tracks and analyzes all customer feedback to identify trends, assess the performance of airport staff, and identify needed service enhancements as well as adjustments required to customer service training.
3. **Mystery shopping.** Often conducted to measure and track the performance of airport staff, mystery shoppers are unknown to the airport employees. They are usually given a script for each of their visits, and they evaluate the service provided in light of the airport's published people service standards or some other expected performance guideline. Open-ended observations about the interaction and the facilities are also noted. The result of each mystery shopper's visit is usually reported back to the employer quickly so that the behavior can be immediately corrected or celebrated, as appropriate, with appropriate feedback given to the employee. Mystery shopping results are summarized, tracked, and analyzed to identify trends, assess the performance of airport staff, and identify needed service enhancements and adjustments required to customer service training. A key advantage of mystery shopping is that it is done by independent third parties whose findings are considered objective.

Airports that monitor performance generally summarize, analyze, and share the results with the relevant airport employers so that they have an independent assessment of how their staffs are performing, especially in light of the airport's service standards (assuming these exist). The goal is to put in place a collaborative action plan between the airport operator and the airport employers to continuously improve the performance of all airport staff.

In addition to the airport-wide performance management system, many airports are now requiring concessionaires and other service providers to put in place their own performance management systems. These companies are required as a condition of their concession agreements or contracts to share with the airport operator the performance of their staffs along with other key performance indicators that affect the customer experience.

Some airports have established a customer service council, which is made up of key members of the airport community. This council serves as the forum for working collaboratively with the airport's performance management program and for monitoring key performance indicators related to customer satisfaction. It is also a forum where discussions regarding airport-wide rewards and incentives can be held.

9.3 Rewards and Incentives for Airport Staff

Many successful companies of all kinds use rewards, recognition, and incentives to motivate, energize, and engage their employees. Their use is a good business practice, especially when combined with other management strategies described throughout this guidebook. The programs serve to:

- Improve customer satisfaction,
- Improve employee job satisfaction,
- Provide a management tool for improving employee performance,
- Reduce employee turnover due to poor performance,
- Improve retention of quality employees,
- Increase concession revenue, and
- Improve survey and mystery shopping performance scores for airport employees.

The reward and recognition programs used by airports generally have the following characteristics:

- **Performance monitoring.** The results of performance monitoring such as survey and mystery shopping, compliments, and social media are used to determine worthy recipients.
- **Different timeframes.** Awards are made on a regular basis from on the spot to monthly, quarterly, and annually. Recognition can also be cumulative—for example, award winners are entered into a raffle for an annual award every time they receive an on-the-spot, monthly, or quarterly award.
- **Basis for the awards.** Different types of awards are presented, such as to employees with perfect mystery shopping scores for the period, those who go above and beyond to assist customers, those awarded for a particular exceptional event or performance on a consistent basis, or the employee with the most compliments received.
- **Transparency.** Guidelines regarding the awards are communicated in advance and shared with employers and employees. These include description of awards; nominations process, which may include peer or supervisory nominations in addition to customer feedback and mystery shops; eligibility criteria, such as that the employee is in good standing with the employer; selection criteria; and awards committee representation.
- **Objective criteria.** Awards are often determined by a committee representing the airport community using agreed upon criteria that are aligned with the airport's brand and people standards
- **Individual or team awards.** Awards can be for individual performance or for team performance to encourage collaboration and teamwork, especially across different links in the service delivery chain.
- **Value of the awards.** Awards could be monetary or consist of prizes such as dinners, theater tickets, airline tickets, or electronics.
- **Source of the awards.** Awards may be funded by the airport operator, donated or funded by the airport community, or both. For example, one airport uses donated gift certificates from airport concessionaires in addition to the recognition that comes with their selection for an award.
- **Publicity.** Employees respond well to recognition of good performance. Posting of awards and recipients in break rooms or communicated through airport newsletters, airport websites or intranet sites, or local new outlets, provides broader recognition among peers.

Courtesy of Houston Airport System.

Figure 9-4.   Program for Rewards and Recognition Roundup at Houston Bush Intercontinental Airport.

- **Timeframes for awards.** Awards are usually presented based on type of award. On-the-spot awards may be presented on the job in front of fellow employees, and sometimes customers, at monthly or quarterly key meetings such as airport board meetings or station manager meetings or at special events. Annual awards are often presented at a year-end function or gala event.

Airport managers interviewed for this guidebook reported positive feedback regarding employee engagement attributable to their rewards, recognition, and incentive programs. These programs help foster an identification with and loyalty to the airport as a whole on the part of airport employees throughout the airport.

Most airports that use incentives and reward and recognition programs do not implement them in a vacuum. They are typically part of a strategic, integrated approach to service excellence.

Figure 9-4 illustrates the Houston Airport System's customer service rewards and recognition program event for all airport community employees.

9.4 The Information Function

Information is power. Studies indicate that customers want better information at the airport, and an increasing number of customers want information available directly on their smart phones (for most customers, that is now their preference). Armed with accurate and timely information, customers are empowered to chart a more pleasurable journey for themselves and make informed decisions about the use of their time. Informed customers feel they are more in control of their

experiences and are happier customers, translating into less stress for them, and, by extension, the airport and its staff.

Notwithstanding the airport community's best efforts to keep its customers informed using both high-tech and more traditional channels of communication, there are still times when the customer needs to interact with someone who works at the airport. When those times occur, any airport employee wearing a badge is a magnet. In these instances, employees wear two hats—one for their daily job functions and one for airport ambassador.

In addition to the random encounter, most airports provide staff to assist customers on a regular basis. They include:

- Staff at information booths and call centers, and
- Roving ambassadors.

9.4.1 Information Booths and Call Centers

Many airport operators provide staff at information booths located throughout terminals pre- or post-security to assist customers with questions and concerns regarding directions, airline services, concessions, ground transportation, special needs such as TTY services, and the like. They also provide or arrange interpreting and translating service for a variety of languages.

In addition to staff, some information booths contain touch-screen kiosks for customers to help themselves by accessing designated airport, airline, hotel, ground transportation, or travel and tourism information or links directly. Travel and tourism collateral information as well as hotel and ground transportation telephone boards are often found at or near information booths on the arrivals level. These additional information sources, particularly customer service agents, provide a high level of service to passengers needing assistance while also protecting less informed customers from unauthorized ground transportation providers.

Many airports also provide a general telephone number for customers to call regarding a variety of airport inquiries as well as special-purpose telephone numbers for specific inquiries such as for parking and ground transportation options. These telephone lines can be handled by staff employed by the airport operator and staff provided as part of a third-party service provider under contract to the airport operator. Either way, customers expect excellent service, and the airport manages this customer touch point to align it with its brand and customer service standards.

9.4.2 Roving Ambassadors

In addition to the customer service staff at information booths, many airports also provide roving ambassadors or customer service representatives who move about the terminal or rail platforms during the airport's peak travel times. Often these customer service representatives wear distinctive uniforms, such as cowboy hats and red vests at Denver International Airport, to facilitate their identification by customers.

Roving ambassadors improve customer service by:

- Helping to manage queues,
- Responding to inquiries,
- Assisting with wayfinding,
- Acting as the airport's eyes and ears in the event of operational issues,
- Conducting audits of the airport facilities and operations, such as checking the condition of restrooms or the cleanliness of the terminal, and
- Responding to requests for assistance during irregular operations.

Figure 9-5. Edmonton International Airport robot.

New types of roving ambassadors, such as roving customer service robots, are emerging at airports. Indianapolis International Airport (IND) was the first U.S. airport to debut a roving robot. It uses a standard iPad running FaceTime mounted on a stick figure wearing an IND polo shirt. IND staff remotely operate the robot and can be seen by and interact with the customer directly. The technology and costs of this type of robot are discussed in Chapter 10.

Edmonton International Airport (EIA) has also been testing a robot that is fully automated and has a touch screen with icons indicating how the robot can assist passengers, including leading passengers to their chosen destination. They have the potential to communicate in 30 different languages. "The cool part about the robot is it is mobile so it can actually move to you. We have info booths, which are great. We have wonderful volunteers, who walk around and help folks a lot. But the robot would extend our reach," said EIA spokesperson Heather Hamilton (personal communication). The EIA robot is shown in Figure 9-5.

To date, although a few customers are wary of the robots, the response to them has been positive. Most customers see them as a valuable and enjoyable service addition, and many have been seen taking a selfie with the robots.

9.4.3 Reducing Stress Through the Use of Dogs

In addition to robots, so-called pup ambassadors at some airports move about the terminals with their handlers to the delight of many customers. Pup ambassadors are quite popular with young and old customers alike. Dogs from LAX's PUP program and San Antonio International Airport's Pups and Planes program bring smiles and calm to the airport, for those who pet the dogs and those who are happy to just watch. They are particularly helpful with customers who have a fear of flying. Figure 9-6 shows human and animal participants in LAX's PUP program.

Figure 9-6.   LAX's PUP program.

9.4.4 Paid Ambassadors and Airport Volunteer Programs

Many highly regarded airports identify all airport employees as airport ambassadors. However, the customer service staff stationed at information booths or roving the terminals with the sole purpose of assisting customers and answering their questions are often referred to as airport ambassadors. They are either paid staff or trained volunteers. Two examples of well-established volunteer programs are shown in Figure 9-7.

9.4.4.1 Paid Ambassadors (Customer Service Representatives)

Paid ambassadors stationed at information booths and roving ambassadors are typically employed by the airport operator or a third-party service provider under contract to the airport operator. Paid ambassadors work regular daily schedules and often speak a second language. Airports often try to recruit ambassadors that speak multiple languages that match up with the

Figure 9-7.   Volunteer programs at Jacksonville International (left) *and Minneapolis–St. Paul International airports* (right).

languages spoken by their customers. In some airports, the languages spoken by ambassadors are indicated on their nametags using national flags.

9.4.4.2 Airport Volunteer Programs

At some U.S. airports, individuals willing to volunteer their time are scarce. However, many communities, particularly those with a larger portion of older residents, have highly motivated people who are no longer in the active workforce, have much to contribute, and enjoy serving others. Airports with access to such volunteers train them to provide the same services as paid ambassadors, and they are under the supervision of airport staff. In addition, some volunteers may conduct airport tours for schools and civic groups. Many volunteers are former employees of airlines, airports, or other companies in the aviation industry.

Volunteers typically work a more limited schedule than paid ambassadors, with schedules such as 4 hours a day, 2 or 3 days a week. Airport operators usually provide uniforms to volunteers. If the airport has mystery shopping or reward and recognition programs in place, volunteers often are eligible for both programs. Many airports also fund an annual appreciation event to acknowledge volunteers for their service. Some examples of airport volunteer ambassador programs are Nashville's Flying Aces, Los Angeles' VIPs, and Phoenix Sky Harbor's Airport Navigators. Well-established and successful airport volunteer programs also operate at the airports serving Atlanta, Austin, Baltimore/Washington, Charlotte, Houston, Jacksonville, and Minneapolis–St. Paul (managed through the MSP Airport Foundation).

In addition to assisting with the information function, Travelers Aid International operates the Travelers Aid programs at 21 airports in the U.S. and Puerto Rico, including the Washington and New York area airports. Some 2,700 Travelers Aid volunteers work at airports and train stations; they typically supplement the customer service function at most airports at which they provide service. According to the Travelers Aid International website, volunteers accomplish their mission in the following ways:

- Provide travel courtesy, hospitality, and engage travelers to ensure a more pleasant travel experience at the facilities.
- Provide information on cultural activities, sightseeing, ground transportation, accommodations, and local points of interest.
- Meet-and-greet services for youth, seniors, disabled persons, and international visitors when requested, including the ability to provide companion care while the passenger is waiting in the transportation facilities within the specified hours of operation.
- Facilitate contacts in the event that passengers arrive at the wrong airport and need assistance to travel to another airport to reunite with family/friends.
- Provide information on check cashing, use of credit cards, ATMs, and other options available when money is lost or stolen (e.g., prepaid tickets, contact with friends or relatives, alternative travel, wiring money, emergency housing, and food resources) (Travelers Aid International, no date).

9.5 Improving Customer Service Through Tenants and Contractors

Tens of thousands of people may work at a large airport, with only a small fraction employed directly by the airport operator. However, customers expect to be treated well by all airport employees regardless of who the employee works for. The best-rated airports, especially those that take a strategic and holistic approach to service excellence, are successful at engaging their business partners, stakeholders, contractors, federal agencies, and all the employees who work at the airport and having them support the airport's service delivery strategy. In using the strategies and tools outlined throughout this guidebook to do so, all employees throughout the airport are aligned, trained, and rewarded using the same programs and service standards.

9.5.1 Service Employees

As airports strive to provide service excellence, employees of companies under contract to the airport operator or under contract to other businesses providing services at the airport often have the airport's service delivery strategy and service standards included in their contracts. While they may participate in airport-wide programs for customer service training, performance management, and reward and recognition, their employers are contractually obligated to provide service in compliance with the airport's service standards and brand.

9.5.2 Concessionaire Employees

Large concessionaires such as Westfield Concessions Management, Hudson Group, HMSHost Concessions, HDS Retail, the Paradies Shops, World Duty Free Group, and DFS Airport understand the important role that concessions employees play in providing an outstanding concessions experience as well as the impact of outstanding customer satisfaction on their revenues. These airport concession partners have programs to recruit, train, manage, and reward their employees. The airport's customer service improvement programs often supplement and complement the concessionaire's training programs. Working together helps ensure that service is at its best in the concessions locations and that the airport brand and each of the individual brands co-existing at the airport support each other.

9.5.3 Parking and Ground Transportation Employees

Parking may be operated directly by airport staff or through a contract with a specialist parking operator. The same is true of on-airport ground transportation providers such as intra-airport shuttle bus operators. These employees, like other third-party service employees, often have the airport's service delivery strategy and service standards included in their contracts and often participate in programs for airport-wide customer service training, performance management, and reward and recognition. Other ground transportation providers who do not have a contract with the airport can also be required to participate in a training program to operate at the airport, and can be eligible for reward and recognition programs.

9.5.4 Improving Customer Service Through Airline Employees, Security Employees, and FIS Employees

Most airport managers report that they have good relationships with local management of the airlines that serve their airports and with directors of federal agencies (such as the local Federal Security Director and the CBP director) present at their airports. Managing relationships with these organizations and their employees is more problematic in that they are not under the contractual control of the airport operator. Federal agencies are present at the airport under federal law and serve a security role. Airlines may choose to serve the airport and are subject to terms and conditions that are similar to those of all other airlines, and those terms and conditions must comply with federal laws and regulations. Therefore, the airport operator has less direct leverage over these organizations and their employees. Many airports have been successful, however, in using close, collaborative relationships with these organizations to achieve enhanced customer experiences.

For these groups and their local management, successful strategies include:

1. **Collaboration.** It is important to collaborate and build trust with these groups at the local level (as outlined throughout Chapter 3).
2. **Customer service councils.** Local management should be given an open, standing invitation to join and be active participants in the airport's customer service council. Some may not

join initially, but as the customer service improvement program evolves and starts to achieve results, they should be encouraged to participate.

3. **Input.** Local management should have the opportunity to review and comment on the airport's brand, service standards, performance management system, customer service programs, and communications plan.

4. **Sharing of information.** The airport should share with local management all of the customer service performance management information it is gathering about these groups. Any plans developed for other business partners and stakeholders should be monitored using the same follow-up and escalation procedures. Long-term results are best achieved by sharing of information in a collaborative manner.

5. **Benchmarking.** Benchmarking data that reveal a higher level of satisfaction at other airports should be analyzed, reviewed, and understood, along with performance at each airport that might affect perceived performance in collaboration with local management of these groups. If opportunities to improve performance can be identified, an action plan should be developed that includes implementation recommendations.

6. **Reward and recognition programs.** The employees of these groups should be eligible for reward and recognition, just as other airport employees are. Discussions should be held with local management to participate in mystery shopping, where appropriate.

7. **Service standards.** Management and employees of federal agencies, security companies, and police often prefer that customers perceive their services and their people as professional rather than friendly or courteous. Consideration should be given to adjusting the airport's service standard for employees involved in policing, enforcement, and security to emphasize the professional treatment of all airport customers and how officers should make customers feel.

Improving customer service among airlines and federal agencies can prove challenging but is important since these organizations have direct contact with customers. Persistence, good relationships, a strategic programmatic approach, and consistency are the keys to enhanced customer experiences with these airport processes.

CHAPTER 10

Improving the Customer Experience—New and Innovative Technologies

The rapid growth of mobile technology is changing the way people interact with society and the world around them. Airports are moving quickly to leverage this change and take advantage of the smart phone and other mobile technologies as a means of improving the customer experience, building customer relationships, and communicating with stakeholders.

This chapter looks at recent innovations and trends in technology and how airports are using new technologies to improve the customer experience. Most, but not all, of the new technologies are centered on the ubiquitous smart phone. In many cases, new technologies are improving, rather than replacing, the way customer service is delivered, and are supplementing existing practices described in earlier chapters.

The introduction of the personal computer in the late 1970s was the beginning of a computing and information revolution whose present outcome could not be foreseen. The introduction of the smart phone has led to a similar mobile computing revolution and access to information virtually anywhere and at any time. The range of potential applications for smart phones has significant implications for airports.

However, the pace of development of new applications and the lack of industry standards bring uncertainty about the future and, for some airports, a hesitancy to invest in technologies that may be obsolete in a few years and for which there is no clear road map available. Nevertheless, smart phones, social media, near-location technologies, mobile websites, and instant connectivity with businesses that use the airport provide the building blocks to improve the customer experience.

10.1 Information Technology and the Smart Phone

The smart phone offers a number of ways for providing information to customers, with the two most important platforms being the mobile website and the airport-specific app. Airport apps also compete with third-party apps provided by airlines, concessionaires, commercial app developers, and other companies responding to a need in the marketplace.

Many of the commercial and airline apps offer the advantage of providing information on multiple airports, although the information is generally not as comprehensive as that from an app designed for a specific airport. On the other hand, airport-specific apps may not be able to compete with airline apps that can provide schedule and departure and arrival information related to the customer's specific trip—for example, flight information and boarding passes for connecting flights.

10.1.1 The Airport Website

The primary tool for communicating with passengers and other customers remains the airport website.

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The World Travel Awards, an organization that recognizes airport, airline, and tourism industry excellence, conducts a poll of travel industry executives each year and recognizes the World's Leading Airport Website. In 2014, the award went to Zurich Airport. Nominees included the airports at Abu Dhabi, Amsterdam Schiphol, Hong Kong, London Heathrow, Munich, San Francisco, and Seoul Incheon. All of these airports are major international connecting hubs, and San Francisco is the leading airport serving Silicon Valley and the software and multimedia industry.

Airport websites serve a purpose that goes beyond passenger/customer communication and service. The information on a well-developed airport website can be classified in several categories.

- **Passenger information.** The information of value to the largest group of airport users includes flight departures and arrivals, airline locations, parking and ground transportation information, concession information, terminal maps, and advice on using the airport.
- **Business-to-business (B2B) information.** Airports use their websites for B2B communications, offering information on upcoming business opportunities; explanations of how the airports contract for purchase of goods, services, design, consulting, and construction services; advice for small and minority-owned businesses; and other procurement information.
- **General airport information.** As important economic drivers of the local community, there is always a high level of interest in airports. Most airport websites offer information on governance and ownership, annual financial reports and passenger and cargo statistics, media information, fact sheets, press releases, and information about tours and educational opportunities.
- **Community involvement.** Airports need to stress their relationships to the communities they serve; they will typically provide information on sustainability initiatives, economic impact of the airport, noise abatement efforts, and social responsibility initiatives, and they will give links to local organizations with which they work, such as convention and visitors' bureaus and special event sponsors.

Table 10-1 presents a listing of common elements found in a sampling of large hub airport websites. Passenger information, the first grouping of elements shown in Table 10-1, is the information most likely to be adapted to airport-specific apps and mobile websites and to be used by third-party commercial app developers.

An airport's website is an important vehicle for communicating the airport's brand. Therefore, a successful website will:

- Express the airport brand,
- Convey the personality of the airport,
- Differentiate the airport from others,
- Avoid looking generic,
- Emphasize strengths,
- Provide news of interest,
- Load quickly, and
- Incorporate the airport's logo and brand identity in a consistent and complementary manner.

On the other hand, a lack of commitment to the website can give negative connotations to users and negatively affect their perceptions of the brand identity of the airport. A lack of maintenance attention, failure to update information, poor grammar and spelling, non-working or out-of-date links, and a cluttered, confusing layout are all attributes to be avoided.

10.1.2 Airport Apps

A mobile app is a dedicated application designed for a smart phone or tablet. Unlike a mobile website accessed through a web browser, a user must download and install an app. Most apps are downloaded from major app markets, like Apple's App Store or Android's Google Play store. An

Table 10-1.   Common airport website content.

Passenger Information	Community Involvement	General Airport Information
Accessibility	Convention and Visitors Links	Airport Board and Management
Airline Information	Economic Impacts	Airport Tours
Art Program	Noise Abatement	Airport History
Car Rentals	Social Responsibility	Annual Reports
Cell Phone Waiting Lots	Sustainability Initiatives	Calendar of Events
Concessions Information	Environmental Studies	Delays and Flight Impacts
Directions to and from Airport	Master Plan Updates	Education
Flight Arrivals and Departures		Facts and Statistics
Ground Transportation		FBOs
Hotel Information		Film Permits
Lost & Found	**Airport Business**	Governing Board Agendas
Medical Services		Images and Video
Meeting Arriving Passengers	Business Ethics Code	Media Information
Parking Products and Prices	Construction Updates	Press Releases
Public Transportation	Employee Parking	Social Media Links
Security Checkpoint Information	Employee Security Badging	Traffic Statistics
Services and Amenities	Employment Opportunities	Weather Reports
Terminal Maps	Forms and How to Do Business Information	
Travel Tips - Business Travelers		
Travel Tips - Families with Children	Minority and ACDBE Initiatives	
Travel Tips - Groups	Upcoming Bids and RFPs	
Travel Tips - Military Personnel		
Travel Tips - Travelers with Pets		

Note: ACDBE = Airport Concessions Disadvantaged Business Enterprises; RFPs = requests for proposals.

app offers greater control over the user experience and is better for building customer loyalty and a personal relationship. Mobile apps can send push notifications that appear on the smart-phone screen and, when permitted by the user, push notifications can be sent based on location. Mobile apps offer the best opportunity to employ loyalty programs and learn about the preferences of the user. An app offers greater ease of use and functionality than a mobile website but requires the customer to download it and allocate storage capacity that is sometimes scarce on the device.

Multiple App Providers

Airport managers have plenty of competition when it comes to apps providing information about their airports. They compete with airline apps, third-party apps covering multiple airports, and narrowly focused apps that concentrate on one category of information, like flight arrivals and departures, flight tracking, or concession information.

Most airports lack the economies of scale to launch a well-tailored app. Major hub airports may have the scale to provide an app for their local originating passengers and regular connecting passengers, but passengers making a one-time visit would be unlikely to download a specific airport app. Frequent travelers may prefer to use an app provided by their preferred airline for information about the important airports in the airline's network. For passengers not originating at a local airport, a mobile website would be easier to find and use.

One airport that has chosen to work closely with its major airline is London Gatwick Airport, which has entered into a collaborative arrangement with easyJet, its largest airline tenant, to support easyJet's Mobile Host app. Gatwick has invested in providing data platforms that provide Internet-based real-time information to airlines. The Mobile Host app provides an alert and a welcome when the passenger reaches the airport and provides information on getting to the check-in and bag-drop area if the passenger has a bag to check, or to the entrance to the departures area if there is no bag to check. In the departure lounge, the app receives a push notification with the gate number and a map to guide the passenger to the departure gate. On arrival, the app receives a push notification if the customer has checked a bag along with a map to the baggage claim belt. The app also supports car rentals, hotel booking, flight tracking, and boarding pass storage.

Despite the airport/airline collaboration, the app does not provide airport information on parking, concessions, services, and amenities. According to Gatwick airport, the sharing of data is intended to provide a service to the passengers and their airline partners and not serve as a branding, marketing, or information vehicle for airport services. Versions of the app are available for iPhone, Android, and the Apple Watch.

Airport Apps

The following is an overview of the types of apps available:

- **Airline apps.** Delta, American, United, and Southwest airlines, among others, offer their own apps with flight booking, flight status, boarding pass, and maps featuring gate locations. These apps offer little information about the airports they fly from, and often restrict information to their own flights and those of alliance members. For many frequent travelers with a strong loyalty to a single carrier, the airline app may provide most of the functionality they require.
- **Reservations apps.** Travel companies offer apps with booking and flight information but with limited airport information. Expedia, Kayak, Orbitz, Hotwire, Marriott, Hilton, Cheap Tickets, and most other major travel booking sites and hotel chains have dedicated apps that have highly variable functionality.

Airport apps vary widely in information content and functionality. Perhaps unsurprisingly, some of the best airport-specific apps are offered by major international connecting hubs. Some outstanding airport-specific apps include:

- **DFW mobile app** (free, iOS and Android). DFW's app, shown in Figure 10-1, is colorful, well organized, and offers one-touch access to information on flight arrivals and departures, weather, parking options, concessions and services, and airline contact information. The app also has a "voice concierge" feature, allowing the app to be searched verbally. Links to Facebook and a feedback interface are also present. The app is available in Spanish, Portuguese, Simplified Chinese, Traditional Chinese, and Korean.
- **MIA Airport Official** (free, iOS and Android). Miami International's mobile app contains flight information, shopping, dining, parking, ground transportation and flight information, airline links, and an "around me" feature that tells the user what shops and services are nearby. It also includes social media interfaces for Facebook and Twitter, a comments section, and links to the MIA e-magazine. It is available in English and Spanish.
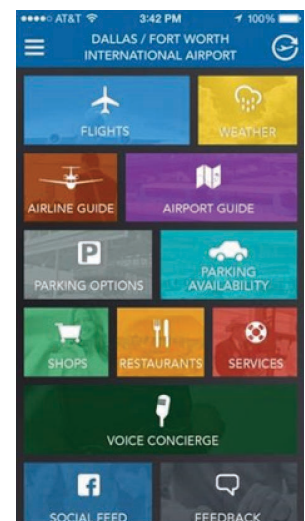
Figure 10-1.   DFW mobile app.

- **FRA app** (free, Android, iPhone, iPad). The Frankfurt Airport app provides extensive information on the airport, real-time flight arrival and departure information, local traffic information, interactive terminal maps, and information on airport parking and shopping. Airport services are organized by category, with colorful photographs and hours of operation listed for each location and type of service. Terminal maps are supplemented by step-by-step instructions for navigating the terminals using an extensive list of locations. Passengers may also scan airport location codes displayed throughout the terminals or can mark their current location on a multilevel terminal map.
- **Schiphol app** (free, Android, iPhone). The Amsterdam Schiphol Airport app, like the FRA app, provides extensive and easy-to-use information about the airport, plus taxi reservations, parking reservations, social media check-ins, terminal maps, discount vouchers, airport news and events, a personal travel planner, and real-time flight information with push notification options.
- **Incheon airport app.** Similar to the FRA and Schiphol apps, the Incheon airport app provides real-time arrival and departure information, real-time ground transportation information, car parking location assistance, terminal directions, concession information, and airport news and events information. Its unique feature, however, is its augmented reality function, which allows the user to point the smart phone's camera at a portion of the terminal and see what concessions and services are within the field of view.

Other Apps

Other app providers offer a different slant, depending on their core business.

- **GateGuru** (free for Android and iPhone). GateGuru is a product of TripAdvisor. The app shows the day's itinerary, information on major airports the passenger will be visiting, including concessions in the relevant terminal, and travel statistics by month and year. It also provides an interface for car rentals, including last-minute discounted offers and hotel booking. Passengers can email their itineraries to the app provider, which uses software to consolidate their itinerary from different sources and also provides airport-specific information. According to the company, GateGuru has more than 1 million users.
- **iFly Airport Guide** (free for Android and iPhone). iFly is a website that attempts to serve as an alternative to individual airport websites. The iFly app provides information on 700 airports and generates revenue from travel booking and providing links to the websites of ground transportation providers, hotels, and off-airport parking providers. Terminal maps are static. The app provides a mobile interface with the website's user forum, which provides airport-specific reviews and tips.
- **FlightBoard** ($3.99 for Android, iPhone, and iPad). FlightBoard provides real-time flight information for airline flights around the world, along with a flight tracking feature. No airport information is provided.

In addition to general third-party apps, there are some specialist apps available that meet the needs of some passengers. These include:

- **My TSA** (free, Android, iPhone). My TSA offers weather and airport flight delay information, but its main feature is showing the estimated wait times at TSA checkpoints around the country. Standard TSA information on what can be taken through checkpoints, TSA videos, and travel tips are also provided.
- **Ground transportation provider applications.** Many ground transportation providers have apps that let customers get price quotes as well as book and modify trips to and from airports. Many also have a locator to allow customers to see where their vehicles are prior to pickup.

For most airports, the cost of development and the distribution challenges of competing with the many commercial apps on the market make mobile websites a more cost-effective alternative

that is also easier for customers to find than a dedicated airport app. Further, the differences in the Android and iOS operating systems are so great that it requires two separate versions of each app, thereby increasing development costs. Mobile apps also consume smart-phone memory, which is an issue for many users.

10.1.3 Mobile Websites

Mobile websites are designed to use the information on existing airport websites and repackage it for smaller screens, which provides for easier navigation than websites designed to be viewed on computers. Mobile websites will typically contain only essential information needed by travelers, so much of the information on airport websites [traffic statistics, requests for proposals (RFPs), board agendas, press releases] can be left out. The emphasis is on displaying real-time flight information and information on concessions and services. Terminal maps can also be displayed, such as those showing directions from one place in the terminal to another, but without the functionality of the app-based maps.

According to Forbes magazine, the time spent using smart phones is heavily tilting toward apps over browsers. Users are spending an average of 2 hours and 42 minutes a day on their smart phones, but only 22 minutes are spent using the browser, or about 14% of the time using the phone (Spence 2014). Both iOS and Android offer developers the tools to build a better user experience compared with mobile browsers. However, mobile websites are more easily found and used and do not require a download. The increasing availability of free airport Wi-Fi also makes it easy to make the customer aware of the airport's mobile website when the customer first accesses the Wi-Fi service.

Indianapolis International Airport offers both a mobile website and a dedicated airport app. The website offers much of the same functionality as the airport's app, although the app offers real-time parking shuttle information based on current location, links to the airport's Facebook and Twitter accounts, and links to Yelp reviews.

The DFW mobile website also offers many of the features of the DFW app described previously, but without the voice concierge, social media links, and customer feed.

10.2 Information Technology and Facilitation

As described in Chapter 7, automation is changing the way airport terminals are used and designed. Online check-in and boarding pass printing combined with automated check-in kiosks and dedicated baggage drops in the ticketing area have changed the way terminals are designed. Many existing terminals now have surplus airline ticket counters and back offices as airlines have been able to aggressively reduce labor costs while speeding passenger processing and enhancing the customer experience through automation.

This has brought about considerable discussion of further uses of technology and the airport of the future, which would be designed around technology to speed passenger processing and inspection. There are varying views on just how far technology will change airline and airport processes. One view is from the travel think tank Future Travel Experience (FTE). FTE predicts that, in the near future (2025), airports will commonly see a range of technological innovations (Future Travel Experience 2013):

1. **Self-boarding.** FTE predicts that, by 2025, a large majority of airlines and airports will have adopted self-boarding, where the passenger scans his boarding pass and is admitted through a turnstile or gate. Las Vegas McCarran airport has installed self-boarding machines at 14 gates

in Terminal 3, with reported good results. Two are installed at each gate. The self-boarding gate speeds up the boarding process and allows airline personnel to spend more time resolving issues with passengers. The gates are also common use. Automated self-boarding is capable of filling the loading bridge faster than passengers can find seats on the aircraft. The machines are also being tested at Mineta San Jose airport.

Self-boarding may have broader application in domestic operations where there is no need to check passports and visas as there is with international flights. Outside the United States, Lufthansa and British Airways have been using automated boarding gates for several years. Reportedly, frequent flyers find the system preferable to gate agents.

2. **Premium check-in and departure areas.** Domestically, the major airlines have long had separate check-in counters for premium passengers and top-tier loyalty program members. Airlines are now taking it one step further.

   Separate, lounge-style check-in areas are being installed by U.S. carriers in their major terminals. For example, at Los Angeles International, American Airlines has separated both ticketing and security inspection by class of service. Passengers do not mix until they have completed security inspection. American offers separate Flagship Check-in areas for its premium first-class and top-tier frequent passengers; these areas include a dedicated doorway into a separate check-in lounge. United has installed new lounge-style Global Services/First-Class check-in lounges at Newark Liberty, San Francisco, and Chicago O'Hare airports.

   Going one step further, American also offers a premium Five-Star Service for departing, arriving, and connecting passengers featuring concierge service, curbside meet and greet, expedited security inspection, escort through immigration and customs inspection, assistance with luggage, Admiral's Club or first-class lounge access, and personal escort to or from the gate. Service is $250 within the United States and $300 outside the United States, where available. These premium add-on services have long been available at major European airports where the service is often provided by the airport rather than the airline.

   The Abu Dhabi airport terminal includes a separate level for use of first- and business-class passengers, separating them from the coach passengers on the main level. Premium passengers have use of separate retail concessions as well as access to first- and business-class airline lounges. This may be feasible for Abu Dhabi, which has a high proportion of long-haul international premium passengers, but few airports have the passenger volumes necessary to afford such vertical segregation and to support separate concessions.

3. **Permanent baggage tags.** FTE also predicts wide adoption of permanent baggage tags using RFID or other technology that would allow sensors to send a message via an app or text message to let the passenger know the bag has arrived. This would allow passengers to manage their time on the way to the baggage claim device and avoid some of the congestion where passengers are all waiting for bags. Air France-KLM, with input from Delta Air Lines and luggage manufacturer Samsonite, has introduced a permanent bag tag called an eTag, which allows continuous real-time tracking using GSM cellular, GPS, and Bluetooth technology and for the bag to be tracked by smart phones with an app.

4. **Self-service kiosks.** FTE predicts customer service agents will "retreat to the airplane" as automation handles the vast majority of check-in and boarding work. Instead, tablet-equipped agents will roam the terminal to provide assistance.

5. **Virtual assistants.** Robots, holographic images, and off-site agents using video links are already assisting passengers in resolving issues or acquiring needed information at several airports.

6. **Common-use facilities.** FTE also predicts greater use of common-use gates and equipment, allowing better use of scarce resources.

Biometric technology also has the potential to both improve the reliability of passenger screening functions and make the process faster. Passive facial recognition systems, iris scanning, and gait recognition systems can make sure that the passenger who checked in for a flight, went through security screening, and is attempting to board the flight is the same person.

London Gatwick Airport uses iris scanners at the baggage drops in the check-in area to register the biometric identity of the passenger and then compare it to the person using automated self-service departure gates. This provides a high degree of assurance that the passenger who checked the bag is also the passenger on the flight.

10.2.1 Queue Monitoring and Predictive Software

New technologies are also able to monitor queues and make predictions of wait times, allowing airport and security staff to adjust staffing levels or open additional check-in positions. SITA did a mobile tracking study of North American airports and concluded that an extra 10 minutes spent in a security line reduced the average customer's retail spending by 30%.

Queue Monitoring Examples

One new technology for managing queues is from CrowdVision, a UK-based company that has developed software and hardware that analyzes groups of people (crowds) and how they are moving, how they are distributed, the time they are spending in a given place, and how many people there are, then predicts movements and flows. Originally developed for the London Olympics, the technology uses overhead cameras and software to monitor persons without the use of facial recognition systems. The predictive software can monitor the status of queues at, say, airline check-in or security, and then provide counts, densities, travel times, and predictions based on movements. A mobile app can inform airport managers of current conditions and issue alerts that allow them to make decisions about staffing and opening new counters or checkpoint lanes, and can inform other decisions. It can also monitor the movements in and out of concessions and, combined with transaction data, provide insight into the usage and penetration rates of passengers using individual concessions. The technology is now being tested at a UK airport.

Cincinnati/Northern Kentucky International Airport and the TSA worked with Blip Systems, a Danish company that is partnered with Lockheed Martin, to develop a real-time Bluetooth-based system for monitoring queues at the airport. The airport had earlier partnered with Purdue University to develop a technology-based concept to measure the improvement in security processing times with the construction of new checkpoints in its reconfigured terminal. Like other Bluetooth-based systems, this approach uses the unique Media Access Control (MAC) address of phones and mobile tablets when Bluetooth is enabled to monitor the time it takes passengers to go through the checkpoints using sensors on predetermined paths. Blip Systems believes this technology can also be useful for monitoring and managing wait times at check-in, in taxi queues, at retail concessions, in baggage claim, and in immigration and customs queues, and can provide an overall picture of how terminal facilities are actually being used on any given day.

Facial Recognition

Another new technology is facial recognition software applications for airports. The MFlow system developed by Human Recognition Systems, also a UK company, is installed at London City and Gatwick airports and is an example of a state-of-the-art queue management system. The MFlow system uses overhead cameras throughout the airport to measure and monitor the number of persons in queues, times their processing to identify current or predicted bottlenecks, and provides guidance on real-time staffing to manage current and projected queue lengths. The benefit to the airport is passengers spending less time in queues and more time in the retail concessions.

Unlike a Bluetooth-based system, which relies on passengers having their smart phones' Bluetooth function switched on, the MFlow system uses facial recognition to identify passengers and time their movements through the system. According to the company, the system does not

identify individuals, but it does track an individual anonymously throughout the airport. The system creates a biometric, numerically coded identifier for the passenger upon the passenger entering the terminal. At each waypoint, the customer's face is matched to existing identifiers. The cumulative data of many passengers is used to develop average, minimum, and maximum wait times, which are communicated to airport staff at a desktop computer showing the MFlow dashboard, which includes current and predictive reporting, or through a mobile app. Airport staff can respond by opening additional lanes, adding staff, or diverting passengers to another queuing area. The system can also be used to match biometric identities with airport ID badges.

The airports are also able to use the software to analyze concession usage. For example, where an individual passenger is identified and tracked through the airport, the system can measure the time a passenger spends in a duty-free shop. Aggregate data for each flight can be developed that matches time spent in the shops, timing relative to departure, and retail spending and penetration per flight.

This type of queue management software has perhaps wider applications at airports abroad, which typically operate security checkpoints and manage common-use check-in counters and departure gates. It may also be useful at some large U.S. airports.

10.2.2 Impediments to Technological Improvements in Passenger Processing

While the promise of using technology to keep the passenger fully informed while moving through a terminal without delay is high, the impediments are real.

- Airports and airlines often have different visions of how such technology should be delivered. In Europe and Asia, many large airports have greater control over their facilities and are able to implement common-use solutions rather than single-airline (or alliance-based) proprietary solutions.
- The major airline organizations (A4A and IATA), airport organizations (ACI and AAAE), and civil aviation organizations have not always worked together in developing common standards and approaches.
- There is resistance to sharing customer information that is considered proprietary.
- Competing technology innovators are incentivized to deploy proprietary technology as quickly as possible in hopes of becoming, or influencing, future standards. However, standards in the airport industry are not industry-driven but are supplier-driven. As FTE points out, "the problem with common use is that it is not based on common specifications" (Future Travel Experience 2013).

10.3 Digital Media and Signage

Advances in light-emitting diode (LED) technology are creating opportunities to create large-scale high-definition (HD) displays of unlimited size, similar to the HD replay screens used in major sports stadiums. Large-format LEDs offer an affordable means of display for advertising, sponsorship information, local tourism promotions, public art, and other messaging.

The most extensive and elaborate use of this technology in the United States is in the expanded Tom Bradley Terminal at Los Angeles International Airport, where the installation serves as the public art component of the terminal project. Video art was chosen because the moving image is the medium for which Los Angeles is best known around the world. Two views of the Great Hall in the departures area are shown in Figures 10-2 and 10-3.

The installation, dubbed the "Wow Project," includes 3 hours of custom video imagery, including a Busby-Berkeley–inspired dance performance on the 72-foot tall "Time Tower" in the

*Figure 10-2.   LAX Bradley International Terminal
video art display.*

terminal's Great Hall, along with a 120-foot long array of screens termed the "Story Board" suspended over one side of the Great Hall. The original video production, according to its producer, Moment Factory, is "focused on the passenger experience, the iconography of Los Angeles, and the destinations served by the Tom Bradley International Terminal" (Art Future 2014). Besides its enormous entertainment value, the video walls also give passengers another reason to stay in the terminal's Great Hall, which also features an extensive array of duty-free luxury shops and boutiques and a variety of dining options.

On either side of the Great Hall at the entrances to the north and south concourses, ten 28-ft. tall columns of stacked LED displays provide a series of interactive experiences based on the destination cities of flights departing from the concourse and serve as a transition from the Los Angeles–themed Great Hall to the departure concourses and the commencement of travel.

An 80-foot tall Welcome Wall greets arriving international passengers on the way to the immigration and customs halls. In the lobby outside the international arrivals area, meeters

*Figure 10-3.   LAX Bradley International Terminal
video art display—elevator tower.*

and greeters are entertained by an undulating 58-screen video wall titled "Filmstrip" displaying digital artwork created by 17 visual artists.

Other airports are embracing this new technology for revenue-producing purposes—mainly advertising. At Denver airport, advertising concessionaire Clear Channel has installed four 26-foot-tall LED video towers in the airport's Great Hall. The towers have exposure to all of Denver's originating and arriving passengers. The concessionaire and the airport plan to introduce an additional 118 LED screens throughout the airport. London Stansted Airport has a 39-foot-wide curved LED screen that shows HD advertisements and serves as a departure board. The installation was made by UK advertising concessionaire Eye Airports.

Digital signage can be easily updated with essential passenger information from a centralized control center or can be automated using sensors or links to other applications or information.

Boston Logan airport is investing heavily in digital signage throughout its terminals and curbsides. At Boston, 27 signs are being installed along the curbsides to provide countdown information for the next scheduled ground transportation departures, allowing the passenger to make choices among available modes and ground transportation options. Some 20 screens will be installed in baggage claim areas, and interactive touch-screen displays are being tested in terminals and the international arrivals re-check area where arriving international passengers can get information on how to get to their next flight. Displays will also be placed near security checkpoints to show current wait times. According to Massport, the airport operator, the signs were the result of focus groups and on-airport interviews to find out what kinds of information customers valued the most.

Boston Logan airport is also investing in infobars (see Figure 10-4), which are kiosks with interactive touch-screen devices that provide information to passengers, including automated maps showing how the customer can reach a desired location; concession information; and information on airline, concessions, and other services. Passengers can enter their mobile telephone number or scan a QR code to sign up for flight information updates using text messages. The infobars are attractive, have four interactive stations, and have lighted signage with an "*i*," the commonly used symbol for information.

10.4 Virtual Assistants and Robots

Virtual assistants and robots are a way of providing customized information to customers without the necessity of posting a staff member (or volunteer) at a fixed location. The approaches to providing virtual assistance can vary from inexpensive off-the-shelf robotics to elaborate holographic imagery.

10.4.1 Robots

The use of robots as a supplement to airport information staff is discussed in Chapter 9. The technology and costs are discussed here.

The technology that Indianapolis International Airport uses for its information robots is an off-the-shelf Double Robotics Telepresence robot that serves as a virtual assistant that roams the terminal and responds to questions from passengers. The robot, which is shown in Figure 10-5, costs $2,600 equipped with an audio kit accessory that includes an amplified speaker and directional microphone, plus the cost of an iPad that serves as the video screen mounted at the top of the unit. The robot is capable of remote operation using a remote app that can run on iPhone, iPad, Mac, and Windows programs.

The robot, which resembles a smaller version of the Segway transporter, is controlled via Wi-Fi connection, with the iPad showing a live video image of the operator, also carried by

Courtesy of Massachusetts Port Authority.

Figure 10-4.   Boston Logan infobar interactive kiosks.
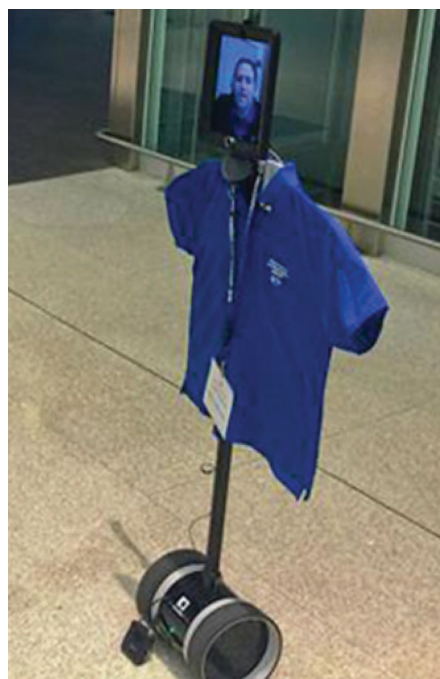
Figure 10-5.   Indianapolis International Airport's personal airport consultant.

Figure 10-6.   Holographic virtual assistant at Manchester Airport.

Wi-Fi, who can maneuver the robot and conduct conversations with passengers. IND staff equip their robots with a polo shirt with the airport logo and a nametag to give it a human touch, as shown in Figure 10-5. The robot is called a "personal airport consultant" and is popular with airport users and creates a human connection with passengers. It combines functionality with novelty, personalization, and a dash of humor. The robot and its operation are considered by airport managers as wholly consistent with the airport brand.

10.4.2 Virtual Assistants

Other airports are experimenting with virtual agents or assistants, although in a less dynamic manner than the use of robots.

At Orly Airport, Paris, virtual boarding agents are used in common holdrooms to announce flights that are ready for boarding. The virtual boarding agents were the idea of Aeroports de Paris and are actually video images projected onto a human-shaped silhouette constructed of Plexiglas. The announcements are recorded, and there is no human interaction. The concept allows for remote announcements to be made while maintaining the suggestion of a human presence.

Similar virtual assistants, made by Tensator, are used at Manchester, London Luton, and Birmingham airports. The virtual assistants use holographic imaging technology and make the standard information announcements on prohibited items and inspection procedures to passengers entering the security checkpoint. The virtual assistants are attention grabbers and are cheaper than using staff. The airports reported that the number of items confiscated since their introduction has declined 5%. The holograms at Luton airport were recorded using actors, while Manchester used members of their customer service team. The Manchester airport virtual assistant is shown in Figure 10-6.

10.5 Concession Information

As airports expand their concessions and service programs, customers have more choices. Finding their preferences is often a challenge, particularly in larger terminals, but customers have a number of choices available to assist them.

The most common model was the analog terminal directory showing the location of various services. Technology now provides more options to assist customers in locating preferred choices:

- **Interactive terminal directories** provide quick access to detailed information about the concession offerings. Hartsfield-Jackson Atlanta International Airport, for example, is spending $2.1 million to replace 46 static directories with touch-screen directories that allow passengers to zoom into specific areas in the north and south terminals and six concourses. Minneapolis–St. Paul airport was an early adopter of touch-screen directories; it installed 55-inch screens that provide information about shops, restaurants, and services, including menus for the full-service restaurants; current flight information; ground transportation options; terminal maps and walk times; and weather information. The touch-screen interface is built off an interface that also powers MSP's FlySmart mobile app, providing similar functionality and consistent information regardless of whether the mobile device or interactive display is used.
- **Airport and third-party smart-phone apps** with concession information (see Section 10.1.2).
- **Mobile airport and third-party mobile websites** with concession information (see Section 10.1.3).
- **Review sites,** such as Yelp and TripAdvisor, which are already downloaded on many travelers' smart phones or are easily accessed via the Internet. Yelp's users tend to be locally focused, while TripAdvisor's users are mostly leisure travelers.

10.6 Arrival Information

Unlike departure information, arrival information is mostly used by those meeting flights, including family, friends, and ground transportation providers. Arrival information is predominately provided by flight information displays showing the status of individual flights. Other means of disseminating arrival information are:

- **Text messages** from the airline to individuals designated by the passenger at the time of booking or thereafter. These messages usually consist of a standard confirmation notification plus notifications for any change in schedule.
- **Email notifications** to designated individuals named by the passenger, similar to the text message notification.
- **Push notifications** to airline app users.
- **Passive flight information** on airport apps or mobile websites, where the individual must look up the information.
- **Passive flight information from flight tracking websites or apps,** such as flighstats.com or flightview.com.

10.7 Ground Transportation

The proliferation of the smart phone has led to new ground transportation options for customers traveling to or from the airport. Smart-phone–based transportation applications allow customers to reserve a ride in real-time, with the ability to see the driver, vehicle, driver rating, and how far away the driver is at the time of booking. Many of the services provided through these smart-phone applications cost less than a similar trip made using conventional transportation services. At the conclusion of the ride, the customer exits the vehicle and uses his or her smart phone to authorize payment via credit card and rates the driver, eliminating the time a customer typically requires to pay the driver and receive a receipt. Instead, a receipt is automatically sent via email to the address saved in the customer's profile. This technology can be used by new providers such as transportation network companies and legacy providers such as limousine, taxicab, and shared-ride van operators.

10.8 Parking Technologies

There are several technologies available that enhance the customer experience in selecting, finding, and paying for parking at the airport. These include parking guidance systems, credit card in-and-out systems, and automated toll systems.

10.8.1 Parking Guidance Systems

Parking guidance systems indicate the number of available spaces in a parking facility. The guidance system may identify open spaces by facility, level, row, or on a per-space basis. Signage indicates the number of available spaces on each level to inform customers of the most likely location to find open spaces.

The need for a parking guidance system may depend on the size and layout of the parking facility. Parking guidance systems are most effective in large structures with helical ramps, allowing customers to bypass floors that have few or no remaining spaces. Guidance systems may have limited impacts on the customer experience in parking lots or parking structures with sloping floors because customers will need to drive by many spaces regardless of the availability on that level.

With a single-space detection system, red or green lights above each individual space and at the end of each row indicate whether that specific space is open or whether there are spaces available in that row. This information can also be displayed on the airport's website, allowing customers to see which facilities have the most available parking prior to arriving at the airport.

Dallas/Fort Worth airport has a single-space parking guidance system in its Terminal A parking structure. The system has an LED light above each space that shows green when unoccupied, red when full or occupied, and blue for a handicap space. For the short-term parking area for pickups and drop-offs, which has a 1-hour limit, there are lights that also blink pink when there is a car parked that has exceeded the 1-hour limit. The different colors have varying degrees of brightness so that color-blind customers can differentiate the status of each space. Baltimore/Washington and Portland (OR) airports also have a single-space system, and Fort Lauderdale-Hollywood airport is installing one as well.

10.8.2 Credit Card In-and-Out Systems

Credit card in-and-out systems allow customers to use their credit cards as the parking ticket. Instead of pulling a ticket when entering the parking facility, the customer inserts his or her credit card. Upon returning, the customer does not need to locate a ticket, pay at a pay-on-foot station, or wait in line for a cashier. Instead, the customer can use any lane, insert the same credit card used when entering, and immediately pay and be issued a receipt.

10.8.3 Automated Toll Systems

Similarly, technology allows for the use of toll tags (e.g., E-ZPass, FasTrak, or SunPass) to enter, exit, and pay for parking at airports. A number of airports in Florida, California, and the New York metropolitan area accept toll tags, as does the Minneapolis–St. Paul airport. The system is practical where a significant proportion of airport customers have toll tags. A challenge found when accepting toll tags is that the parking fee may exceed the balance on the customer's toll tag account, resulting in delays. A second challenge is the amount of the clearinghouse fee toll agencies may charge airports for processing parking payments.

10.9 Social Media

The development of social media platforms such as Facebook, Twitter, and YouTube has changed the way people interact with each other. Real-time information from social media is also changing the way airports communicate with their customers, resolve complaints, and respond to changing conditions. Social media platforms provide a means for airports to build a positive relationship with passengers and other customers by communicating with them directly and individually. Popular social media platforms are shown in Figure 10-7.

10.9.1 Facebook

Along with Twitter, Facebook is the social media platform most used by airport opera-tors, according to *ACRP Synthesis 56: Understanding the Value of Social Media at Airports for Customer Engagement* (Perry et al. 2014). In the first quarter of 2015, Facebook had 1.25 bil-lion average monthly users, by far the largest among social media platforms. Facebook is the

FACEBOOK
Social networking site with 1.25 billion average monthly users

TWITTER
Instant communication social network; 140 character limit; 300 million average monthly users

YOU TUBE
World's largest shared video site with over 1 billion average monthly users; 300 hours of video uploaded each minute

FOURSQUARE
Location-based social network site with 55 million registered users

INSTAGRAM
Photo-based short-message network with 300 million monthly average users

YELP
User-generated review site with local focus and nearly 80 million mobile and 80 million desktop average monthly users

GOOGLE+
Social media platform that overlays various Google applications into a single customized and personalized web page

TRIPADVISOR
World's largest travel review site with user-generated reviews with an estimated 375 million unique monthly visitors; it began reviewing airports in 2015

Figure 10-7.   Popular social media platforms used by airports.

preferred platform for customer engagement, offering a broader experience and the ability to link related organizations, businesses, and individuals.

10.9.2 Twitter

Twitter is the preferred platform for current communications, with over 300 million average monthly users worldwide as of the first quarter of 2015. Twitter has a 140-character limit so is used for short messages, and has the ability to provide links to documents, stories, pictures, and Instagram photos. Because of its immediacy, airlines have begun monitoring their Twitter feeds for rapid response to customer complaints and problems. A number of airports, including Miami International Airport, monitor their Twitter accounts throughout the day, while others, like Sacramento airport, check their accounts during the day as staff workload permits. Miami airport has a full-time social media person assigned to monitor and engage customers through the social media platforms.

Figure 10-8 shows the number of Twitter followers for a selected group of airports, including the top 20 U.S. airports, the five major international hub airports reviewed in Chapter 5, and a sampling of other representative U.S. and international airports.

10.9.3 YouTube

YouTube, owned by Google, is the leading social media platform for posting videos. Although it has fewer users than Facebook or Twitter, YouTube can be a low-cost way of distributing video related to an airport's operations, construction, development, and events. Hartsfield-Jackson Atlanta, Atlantic City, Austin-Bergstrom, Charleston, Miami, Dallas/Fort Worth, Denver, Grand Rapids, Louisville, Oakland, Pensacola, San Diego, Sarasota-Bradenton, San Francisco, Washington Dulles, Washington National, and Wilmington airports are just some of the U.S. airports with active YouTube channels, where the airport's videos can be grouped and users have the option of subscribing to the channel. The subscription shows up when subscribers come to the site, and recent videos are highlighted. The limitation on use of YouTube is the airport's ability to produce videos that are of a sufficient quality to support the desired brand image of the airport.

10.9.4 Foursquare

A location-based social network site, Foursquare works on mobile devices and allows users to check in at airport concessions using the mobile app or text messages and share experiences with friends. Foursquare claims it has 55 million worldwide users who have checked in more than 7 billion times. Users receive points for each check-in.

10.9.5 Instagram

Instagram allows users to take photos with their smart phones and overlay a short message, title, or caption. Instagram was bought by Facebook in 2012. Instagram had 400 million average monthly users as of September 2015.

10.9.6 Yelp

Yelp is a user-generated review site with a local focus. Users can look up commercial entities, including airports and the concessions within, and read or post reviews and star ratings. As of May 2015, Yelp had about 100 million unique users each month, divided about evenly between
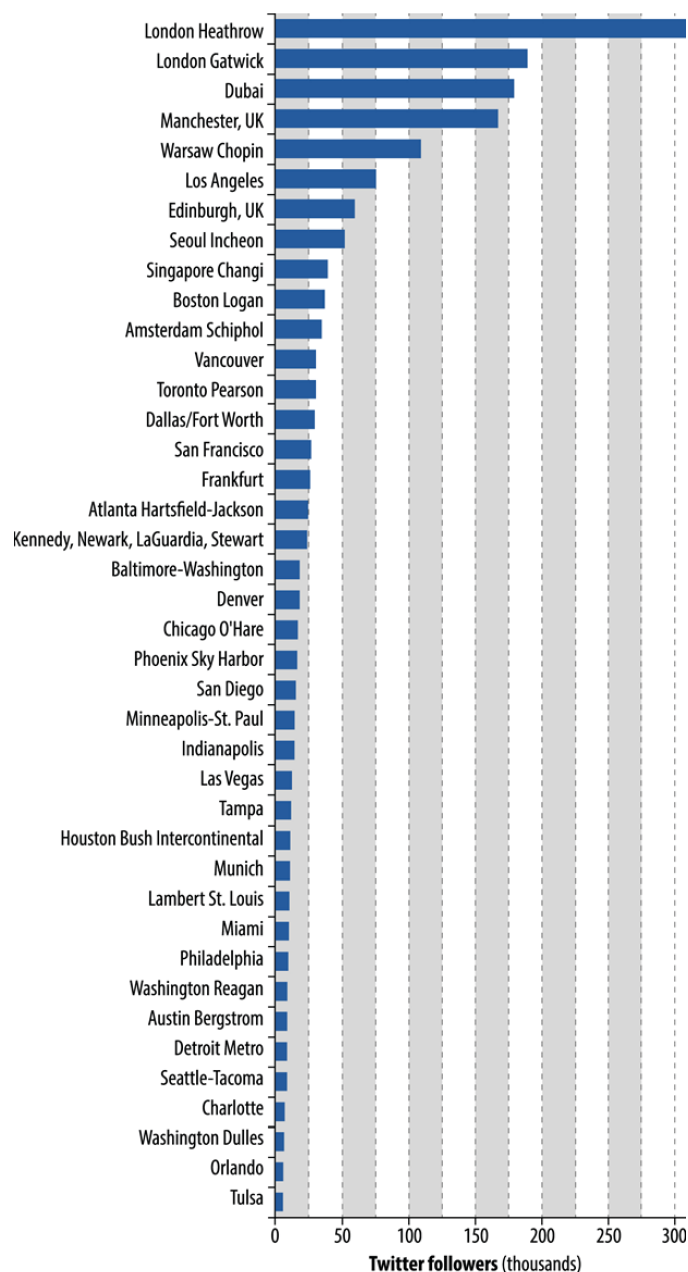
Figure 10-8.   Twitter followers for selected airports.

mobile and desktop users. As a local review site, Yelp frequently hosts reviews of airport restaurants and other services.

10.9.7 TripAdvisor

Like Yelp, TripAdvisor is a user-generated review site with a focus on travel destinations. It is a subsidiary of Expedia. While not currently a factor in terms of airport reviews and perceptions, the company announced in 2015 that it would begin hosting reviews of about 200 airports around the world. Singapore Changi, New York Kennedy, Las Vegas McCarran, London Heathrow, and Doha airports are among the first to have their own pages.

The TripAdvisor reviews will focus on three topics: stay near the airport, eat before you board, and inside the terminal. TripAdvisor currently hosts over 250 million individual reviews, operates in 45 countries, and generates an average of 375 million unique monthly visitors as of September 2014.

10.9.8 Tools for Managing Social Media Platforms

There are a number of tools available to airport customer service staff for managing social media across platforms. Two of the more popular and versatile tools are:

- **Hootsuite,** a web-based tool that allows users to manage multiple social networks from a single dashboard and includes bulk message scheduling, monitoring conversations' analytics reporting, and content curation. It also allows for a team of individuals to share responsibilities and set permission for various users—for example, airport operations or marketing. Hootsuite is relatively inexpensive; it is free for the first two users and is about $10 per month for each additional user.
- **Tweetdeck,** a Twitter account management system with team management features that allows users to track timelines, monitor activity, and track topics and hashtags. The system is free.

10.10 Bluetooth Monitoring/Beacons and Tracking

One of the most promising technologies is the beacon, a low-energy transmitter that first used Apple's iBeacons protocol and Bluetooth low energy (BLE), a technology built into iPhones since 2010 and higher-end Android devices since 2013.

Made by a growing number of manufacturers, beacons are inexpensive hardware transmitters that broadcast a unique identifier to nearby portable electronic devices such as smart phones and tablets. The identifier is used to determine a physical location or to initiate an action such as a push notification or a check-in on social media applications. Beacons are more effective at identifying the user's position than GPS, which is not as effective indoors. While GPS and use of triangulation between cellular antennas can also provide location identification, beacons are more accurate and more readily available.

The low energy consumption of the BLE beacons is particularly important for large venues like airports. The low energy levels used allow these devices to be powered by small, coin-sized batteries for several years. The cost of beacons can be as low as $20. With their low initial costs and low energy consumption, beacons have the potential for widespread and rapid introduction.

Beacons are one-way devices, issuing a simple coded signal that requires an application on the mobile device. The application determines the location and can initiate notifications. Beacons require an app and for the user to have Bluetooth turned on and for the relevant application to opt into receiving push notifications. (Many users leave Bluetooth switched off as it drains battery power.)

If the passenger has a specific airport's app on his or her phone, a beacon located near one of the airport's art exhibits could, for example, trigger the app to pull up pictures, descriptions, and videos about the art exhibit. Some other examples of how beacons can be used in conjunction with an airport's app include:

- Showing a map with the user's current location and destination, such as a departure gate, and displaying the required route to the destination. The customer would know how much time is available to reach the destination and how much is available for other pursuits such as shopping or dining.

- Updating the passenger on gate changes and departure times.
- Marketing of nearby shops and services, showing special offers or coupons.
- Informing passengers about the documents they need to have ready at the security checkpoint, passport control, and customs.

Beacons can form a common infrastructure system that can be used by others without the need for duplication, thus avoiding tenants and airlines installing their own beacons in common-use areas and avoiding the risks of too many beacons causing disruptions to other wireless systems.

SITA offers to set up a transportation-specific common-use beacon registry so that a number of companies can use the same set of beacons in an airport. The registry allows app developers to use the existing beacons in the registry.

An approach that is being used by Miami International Airport is to deploy the beacons and make the data sets available to airlines and third parties. Airlines could also deploy their own beacons in exclusively leased areas and make the registry information available to the airport and others. American Airlines, as an example, is installing beacons in its major hub terminals.

CHAPTER 11

Improving the Customer Experience—Summary and Implementation

In an industry as diverse as the airport industry, it is difficult to identify best practices suitable for all airports, domestic and international, large and small. It is even more difficult to define intangibles such as ambience—a combination of aesthetic, architectural, environmental, cultural, and practical considerations that cannot be reduced to a checklist or formula but that is an important contributor to customer satisfaction.

This chapter presents a summary of two sets of practices, innovations, and strategies: (1) notable practices found at many leading airports, both in the United States and abroad, that may be appropriate for individual airports; and (2) emerging practices, seen at some leading airports, that may not be feasible at some airports due to costs, technology limitations, the scale of the airport, the nature of the passenger market, consistency with the airport brand, or other reasons.

This chapter is intended to provide the airport customer service manager with an overview of notable and emerging practices that are found at many leading airports and referenced elsewhere in this guidebook.

11.1 Notable Practices for Managing and Improving Customer Service

Presented in this chapter are summaries of notable practices for managing and improving the customer experience identified in the research for this guidebook. The summaries include the following information:

1. Name of the practice.
2. A general indicator of cost.
   $ represents relative ease of implementation that can be facilitated if the airport has adopted an airport-wide customer experience improvement program.
   $$ represents a greater degree of difficulty, requiring planning, investment in special equipment, or staffing as a precondition to implementation.
   $$$ represents a significant cost to implement that may be prohibitive on a stand-alone basis but may be more affordable as part of a larger project such as a new terminal, terminal expansion, or terminal refurbishment.
3. Implementation degree of difficulty.
   ★ represents relative ease of implementation, likely to be accomplished without a high level of involvement across the organization.
   ★★ represents more difficult implementation, likely requiring cooperation from more than one airport department or other member of the airport community or stakeholders.

★★★ represents very difficult implementation, likely requiring major effort across the airport organization and with collaboration of multiple members of the airport community or stakeholders.

4. Applicability by general airport passenger activity level–large, medium, small.
5. Whether a pilot program is suggested or indicated, based on experience of other airports.
6. A description of the notable practice.
7. The benefits to customers.
8. References to where the notable practice is discussed in this guidebook.
9. Examples of airports that have notably and successfully implemented the practice.
10. Key considerations for airports considering implementation.

Following are the 28 management approaches, tools, techniques, and service improvements considered notable practices for managing and improving the customer experience at most U.S. airports:

1. Comprehensive Top-Down Approach to Customer Service Management
2. Establishing the Airport Brand
3. Formal Customer Service Improvement Program
4. Use of Customer Feedback Systems
5. Published Airport Service Standards
6. Customer Service Performance Management Programs
7. Customer Service Councils
8. Volunteer Programs to Assist with Customer Service
9. Ambience, Including Emphasizing a Unique Sense of Place
10. Live Music Programs
11. Digital Signs, Directories, and Interactive Kiosks
12. Customer Loyalty Programs
13. Silent Terminals—Visual Paging, Reduced Announcements, and Noise-Level Checks
14. Credit Card In-and-Out/Fast-Pass Parking Payment Systems
15. Premium Add-On Parking Services
16. Cell Phone Lots
17. Ground Transportation on Website, Mobile Website, and Airport Apps
18. Integration of Concessions and Services with Holdrooms
19. Sense of Place—Local Food
20. Healthy Food
21. Free Basic Wi-Fi
22. Children's Play Areas
23. Electrical Outlets or Charging Stations in Seating Areas
24. Desks/Workstations
25. Concessions for Meeters and Greeters
26. Automated Passport Readers
27. Social Media Strategy
28. Mobile Websites

1		Comprehensive Top-Down Approach to Customer Service Management		
Cost $	**Implementation** ★★	**Applicability** Large, medium, small		**Pilot Program** No

Description	**References**
Often includes the airport operator's top management establishing a customer-driven vision for the airport or system of airports and leveraging the relationship between airport vision, the airport brand (some airports call their airport brand their customer service charter), and the airport's customer service delivery strategy.	3.1

Benefits to Customer

Over the long run, customer satisfaction improves as a result of the airport having defined its brand and aligned its service offerings and performance management and communications plans; its use of information technology, policies, and procedures; employee engagement and education programs; reward and recognition programs; and other aspects of the relationship between the airport and its customers.

Airport Examples

Austin-Bergstrom, Denver, San Francisco, Cincinnati/Northern Kentucky, Los Angeles International, Munich, Seoul Incheon, Singapore Changi.

Key Considerations

Understanding the customer through surveys, feedback, social media, market research, and other mechanisms. Identifying key drivers of customer satisfaction. Collaboration and coordination with stakeholders. Developing customer service standards and integrating standards within the current culture. Managing performance airport-side to ensure excellent customer experiences at all customer touch points and implementing a robust communications plan.

2	Establish the Airport Brand		
Cost $	**Implementation** ★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
The airport brand is the essence or promise of what will be consistently delivered or experienced. It is usually represented by a set of attributes, perceptions, and images that represent the airport, its products, and services. The brand includes the defined personality of the airport. An airport brand may be ad hoc (in the minds of its customers) or strategic (defined and managed by the airport operator to an end). The brand definition should encapsulate what the airport stands for, how it is different, and its promises to customers. The brand definition provides the road map for outlining the customer service delivery strategy that guides business decisions. An airport brand is a vital strategic tool for differentiating customer experiences, improving customer satisfaction, and ultimately, delivering financial returns. It is an airport's service delivery strategy, which some airports communicate as their customer service charter.	3.1.1

Benefits to Customer

The customer benefit is indirect but, over time, substantial. Development of the airport brand is a key step in defining what will be consistently delivered to, or experienced by, the customer, and for making the airport organization customer-centric rather than hierarchical.

Airport Examples

Singapore Changi, San Francisco, Los Angeles (newly developed).

Key Considerations

An airport's brand definition should encapsulate what the airport stands for, how it differs from other airports, and what it promises to deliver. It is most effective when it is customer-centric (i.e., shaped by understanding customers' wants, needs, expectations, and priorities, and their satisfaction levels with and perceptions of the airport). After adopting the brand, airports are best positioned to implement design and service standards that reflect the brand and align the airport's services, amenities, performance management and communications plans, use of information technology, operations and maintenance protocols, policies and procedures, employee engagement and education programs, and reward and recognition programs with the airport brand. The brand must be realistic—that is, the airport must be capable of delivering on the promises, whether expressed or implied.

3	Formal Customer Service Improvement Program		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$$	★★★	Large, medium, small	No

Description	**References**
Airport operators have come to understand that if airport management takes a strategic and holistic approach to customer service and adopts an airport-wide customer service brand, customer satisfaction with the airport experience can be significantly improved, and non-aeronautical net revenues can be tracked to show a direct relationship with the increases achieved in customer satisfaction. Improving the customer experience brings improvements to the airport that reflect favorably on the community, can assist in bringing in additional airline service, and increase concessions spending and revenue.	3.6 12.1 12.2 12.3

Benefits to Customer

The customer benefits from use of an airport that has made a commitment to service excellence and taken a long-term view with a holistic approach to improving customer service.

Airport Examples

Austin-Bergstrom, Cincinnati/Northern Kentucky, Las Vegas, San Antonio, Tampa, JFK, Newark Liberty, LaGuardia.

Key Considerations

Cost versus benefits. Organizational commitment. Cost of tools to manage and measure customer service.

4	Use of Customer Feedback Systems		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$$	★★	Large, medium, small	No

Description	**References**
There are many tools available for airports to use in assessing their customer service. The most common customer feedback tools are surveys, focus groups, social media, comment cards, website-based feedback, emails, complaints presented at information counters, and polling or surveying employees on what they are being asked or hearing with respect to customer service. Specific tools include structured passenger surveys, such as the ACI-ASQ program, which allows for comparison with other airports by using a standardized methodology and intercept surveys, and the Skytrax airport audit program, which uses an online survey approach that provides comparisons and ranking. Some airports use their own periodic surveys, which can identify same-airport satisfaction levels but are not as useful in comparisons with peers.	3.2.1 3.6.2

Benefits to Customer

Airports that actively monitor and collect customer feedback are in a better position to manage their overall airport customer experience.

Airport Examples

Austin, Dallas/Fort Worth, Indianapolis, Jacksonville, San Antonio, Salt Lake City, Tampa, JFK, Newark Liberty, LaGuardia.

Key Considerations

Feedback mechanisms and survey data are most useful to increase customer satisfaction when they identify the key drivers of the customer experience.

5	Published Airport Service Standards		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$	★★	Large, medium, small	No

Description	**References**
Airport service standards define more specifically the interaction between the airport and its customers as well as establish guidelines for all who provide service to airport customers (internally and externally). Published customer service standards facilitate the delivery of consistently excellent service by providing generally accepted guidelines for all service providers. They also provide clear written communications with the airport's business partners, stakeholders, and employees; support airport-wide performance management; and help manage customer expectations. Service standards can also be developed for individual contracts, such as those for parking management or concessions. However, an airport-wide set of standards can provide the foundation for all contracts and agreements, with only specific language needed in individual contracts and agreements.	3.3 9.1.1 12.2.1

Benefits to Customer

An airport's customer service standards define the service the airport customer is entitled to receive. Once developed with the collaboration and buy-in of the airport community and adopted, they assist the airport community as it acts as if all who provide service at the airport work for the same entity that has a shared vision, a coalescing brand promise, and service standards to consistently guide them.

Airport Examples

Cincinnati, JFK, LaGuardia, and Tampa, whose customer service standards are incorporated into airport leases, contracts, and permits.

Key Considerations

Service standards are developed in collaboration with the airport community to obtain their buy-in and are subsequently adopted and shared. Over time they are also included in the instruments by which the airport does business, such as airport permits, leases, service-level agreements, contracts, concessions agreements, policies, processes, procedures, and systems. They are most effective when integrated with the airport's culture and the way the airport does business.

6	Customer Service Performance Management Programs		
Cost $	**Implementation** ★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Performance management involves monitoring and managing the airport's collective performance on a regular basis through published airport service standards and identifying key performance measures that indicate that the airport is moving in the right direction to address drivers of customer satisfaction. Performance management tools include customer feedback mechanisms such as customer satisfaction surveys that measure changes from one period to the next; benchmarking with other airports; mystery shopping; inspections; process measures; scorecards or dashboards that are shared with service providers providing performance at a glance; action plans developed with business partners, stakeholders, and service providers; incentives, rewards, and recognition programs; and education programs to engage, educate, and energize airport employees.	3.6 9.2

Benefits to Customer
Over the long term, the customer receives the greatest benefit from a performance management program because the tools and techniques described here are applied to raise the performance of all airport employees, service providers, and stakeholders.

Airport Examples
Austin, Cincinnati, Denver, Dallas/Fort Worth, San Antonio, Jacksonville, JFK, Newark Liberty, LaGuardia.

Key Considerations
Staff capability to manage the program. Fixing responsibilities within the organization. Communications with the airport community. Costs for each available measuring tool. Selection of appropriate metrics for benchmarking, dashboards, and sharing.

7	Customer Service Councils		
Cost $	**Implementation** ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Customer service councils provide a regular forum for participants (the airport operator, airlines, terminal operators, service contractors, concessionaires, governmental agencies, including customs and immigration) to identify, develop, and implement creative approaches to improve airport service delivery, especially delivery that cuts across organizational or functional lines. Customer service councils foster an environment of cooperation and accountability, facilitate the implementation of customer service improvement programs, and provide for the exchange of best practices among the members of the airport community. Participants can align with the airport brand or customer service charter; develop a shared agenda; adopt service standards; solve problems; manage, reward, and benchmark performance; develop cooperative marketing and communications programs; and implement programs to elevate customer satisfaction, increase employee engagement, and increase net revenues.	3.1.3 9.5.4

Benefits to Customer
The customer benefits from an improved commitment to customer service over time because all members of the airport community align to fulfill the commitments inherent in the airport's brand.

Airport Examples
Austin-Bergstrom, San Francisco, Cincinnati/Northern Kentucky, JFK, Newark Liberty, LaGuardia.

Key Considerations
Leadership. Membership. Transparency.

8	Volunteer Programs to Assist with Customer Service		
Cost $	**Implementation** ★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Many communities have highly motivated people who are no longer in the active workforce, have much to contribute, and enjoy serving others. Many airports have capitalized on this important and dedicated asset to shape customer experiences by fulfilling many of the same duties as paid ambassadors as well as conducting airport tours. The airport operator usually recruits and trains volunteers and manages the airport volunteer program. Volunteers are typically located at the airport information booth but can be stationed throughout the airport or rove through it, depending on their ability to stand for long periods or walk long distances. Volunteers generally work a more limited schedule than paid ambassadors, such as 2 to 3 days a week averaging 4 hours a day. Airport operators provide volunteers with their uniforms. If the airport has mystery shopping or reward and recognition programs in place, volunteers usually participate in both programs. Most airports also fund an annual appreciation event to acknowledge and thank their volunteers for their service. The range of information provided by volunteers is dependent on the training program provided by the airport.	9.4.4

Benefits to Customer

Customers receive access to trained staff who are experienced in handling questions and complaints. Customers have access to a human interface for information dissemination and problem solving.

Airport Examples

Nashville (Flying Aces), Los Angeles (VIPs), Phoenix (Airport Navigators). Also, Austin, Atlanta, Baltimore/Washington, Charlotte, Jacksonville, Miami, Minneapolis–St. Paul (managed by the MSP Airport Foundation), Houston Bush Intercontinental, Houston Hobby.

Key Considerations

Availability of local volunteers. Distance and transportation required. Supervision by airport staff, including scheduling and training. Design of training program. Uniforms for volunteers. Appreciation event to thank volunteers.

9	Ambience, Including Emphasizing a Unique Sense of Place		
Cost $$$	**Implementation** ★★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	References
Third-party market research companies have identified ambience as a key driver of customer satisfaction at many airports worldwide. The overall look and feel of a place that evokes a unique mood or atmosphere is referred to as ambience. Many of the clues that influence the ambience of a place are subliminal, emotional, and compelling. Ambience greatly influences the customers' experiences anywhere, and airports are no different. Ambience includes a wide variety of attributes that can include emphasizing a unique sense of place, natural lighting, open spaces, natural features, art, music, sense of place features, services and amenities, clear wayfinding, clean and attractive surfaces and finishes, polite and attentive staff, special events, and other attributes that collectively define the customer experience.	3.4.1 3.4.2 3.4.3 7.4 8.3

Benefits to Customer
Designing customer experiences that integrate the airport's design; service and product offerings; décor; operational, maintenance, and custodial procedures; passenger processes; and airport staff with the airport's brand (the promise of the experience that the airport's customer will consistently receive) generally creates an airport with a more positive and holistic ambience as well as a more enjoyable overall airport experience.

Airport Examples
Austin, Denver, San Francisco, Singapore Changi, Vancouver.

Key Considerations
Requires an overarching vision and airport brand, stakeholder coordination, and understanding of the current design, service, and product offerings. Should not be limited to the current architecture of the terminal; rather, it requires a bottom-up understanding of all the things that contribute to the airport's ambience. A key element of ambience is differentiation from other airports the customer may know and experience. Learning from other airports that have created a unique sense of place as part of their ambience should be considered as a means of finding local opportunities to offer customers unique, novel, educational, calming, valued, and memorable experiences that can be seen, heard, touched, and enjoyed.

10	Live Music Programs		
Cost $$	**Implementation** ★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	References
Live music in airports is popular with customers. A component of airport ambience, live music, particularly where there is local music identified with community, can create a sense of place and add an entertainment and cultural element to the terminal. An ACI-NA survey noted 20 airports with music programs as of 2012.	8.2.2

Benefits to Customer
Customers appreciate the entertainment value, the contribution to a sense of place, and that the music is something special intended for them.

Airport Examples
Austin-Bergstrom, Portland International.

Key Considerations
The venue for music is best where there is room for people to stand or sit and listen. Locations can include small stages or risers in pre-security areas, plazas or open areas post-security, and larger food and beverage units.

11	Digital Signs, Directories, and Interactive Kiosks		
Cost $$$	**Implementation** ★ ★ ★	**Applicability** Large, medium, small	**Pilot Program** No
Description			**References**
Interactive kiosks (i.e., video screens with a touch screen or other interface) can provide up-to-date information to passengers without human interaction. They can be linked to a single computer server so that all interactive screens can be updated easily and simultaneously with directions, maps, or concession, weather, ground transportation, or other information, ensuring consistent information throughout the terminal.			10.3
Benefits to Customer			
Reliable information specific to the customers' needs; no need to interface with humans; adaptable for passengers with special language requirements.			
Airport Examples			
Minneapolis–St. Paul, Boston Logan.			
Key Considerations			
Cost of buying and installing the devices; updating the information. Once installed, upkeep is relatively low and requires no staff for day-to-day operation, only updating. Cost of the technology is declining over time.			

12	Customer Loyalty Programs		
Cost $$	**Implementation** ★ ★	**Applicability** Large, medium, small	**Pilot Program** No
Description			**References**
Customer loyalty programs provide a means for airports to learn about their customers, build a relationship, and offer incentives and rewards based on usage and spending volumes. Rewards may include gift cards, discounts, airline miles or hotel points, and promotion to a higher program tier. About 100 U.S. airports participate in the Thanks Again rewards program, which links a credit or bank card to a reward account. Participants can earn airline miles or points in hotel programs. Optional analytical programs allow airports to learn about their most frequent users and highest-spending customers. Because it is a national program, participants can earn points at other participating airports, all of which are in addition to any rewards program offered by the credit card company or affiliated sponsor, such as an airline.			8.6
Benefits to Customer			
Discounts, rewards, and special offers are attractive to many passengers. Special perks help make the customer feel special and strengthen the relationship with the airport.			
Airport Examples			
Colorado Springs, Dallas/Fort Worth, Los Angeles, Lubbock, Miami, Newark Liberty, Pittsburgh, Seattle, Santa Barbara, and Wichita Mid-Continent. Small airports examples are the Gainesville (FL) Regional Airport Ultimate Road Warrior Club and the Atlantic City iFlyACY program. Both airports compete for passengers with much larger airports.			
Key Considerations			
Cost of participation; scalable features; recruiting or requiring concessionaire participation; application to parking operations; analytical programs available; using customer data to learn about customers as part of a broader customer relationship-building and marketing program.			

13	Silent Terminals – Visual Paging, Reduced Announcements, and Noise-Level Checks		
Cost $$	**Implementation** ★★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Terminal noise levels may create an anxious, stressful environment due to unnecessary announcements, constant paging, poor acoustics, background noise, and other noise pollution. The term "quiet terminal" has been used to describe terminals that attempt to eliminate announcements through better paging discipline, use of visual paging, and improved loudspeaker placement. Future applications may include noise cancelling software and speakers, which are currently used in restaurants. The need for paging announcements should diminish with greater smart-phone penetration among the public.	8.16.2

Benefits to Customer
Fewer announcements means less noise, reduced stress levels, less anxiety, and greater focus on other activities.

Airport Examples
Boise, Chicago Midway, Dallas/Fort Worth, Las Vegas, Minneapolis–St. Paul, San Diego, San Francisco, Tucson.

Key Considerations
Most announcements are made by airlines, so stakeholder participation is important in minimizing announcements, particularly unnecessary terminal-wide announcements. In future terminals, closer speaker placement above holdrooms can decrease the level of sound required to make announcements audible. The capital cost of visual paging systems and finding locations where they are visible yet not intrusive.

14	Credit Card In-and-Out/Fast-Pass Parking Payment Systems		
Cost $$	**Implementation** ★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Credit card in-and-out systems allow customers to use their credit cards as the parking tickets. Instead of pulling a ticket when entering the parking facility, the customer inserts his or her credit card. Upon returning, the customer does not need to locate a ticket, pay at a pay-on-foot station, or wait in line for a cashier. Instead, the customer can use any lane, insert the same credit card to pay that he/she used when entering, and be issued a receipt. Similarly, technology allows for the use of toll tags (e.g., E-ZPass, FasTrak, and SunPass) to enter, exit, and pay for parking at airports.	10.8

Benefits to Customer
Faster transaction times for customers, particularly reduced wait times at pay booths; no need to store ticket in vehicle or carry it on the trip; no need to use pay-on-foot machines. Overall increased convenience and ease of payment. Electronic receipt preferred by many business travelers for expense reporting. Integration with toll tag systems offers even greater convenience, with no need to stop at designated entrances and exits.

Airport Examples
Credit card in and out: Boston, Detroit, Harrisburg, New Orleans, Oakland, Philadelphia, Phoenix. Toll tag integration (and credit card in and out): Dallas/Fort Worth, Fort Lauderdale/Hollywood, Miami, Orlando, Palm Beach, San Francisco, Tampa.

Key Considerations
Toll tag may require a business agreement and clearinghouse fees paid to the toll tag issuer (e.g., SunPass, E-ZPass, and FasTrak). Depends on use of toll tags in the local market; not practical as an airport-only payment system.

15	Premium Add-On Parking Services		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$	★	Large, medium, small	No

Description	**References**
Premium products may provide additional security for the customer's vehicle, reduced anxiety about finding a place to park, and added convenience and proximity to the terminal building. • Guaranteed parking space – Membership program where an annual fee guarantees a space in a preferred parking area at standard rates or, where a monthly fee guarantees unlimited parking, either on an individual or shared-use basis. • Valet parking – Valet parking service may be provided at the curbside or in a parking facility. Customers can leave their cars with an attendant and have them waiting for them when they land. • Vehicle washing and detailing – Car wash and detail service in an airport parking facility occurs in whichever parking space the customer chooses to park.	8.8

Benefits to Customer

Guaranteed parking – Convenience, assurance that desired space is available during peaks.

Valet parking – Time saving and convenience.

Vehicle washing and detailing – Convenience, time saving, optional value-added service.

Airport Examples

Newark Liberty, Atlanta, Denver (car washing).

Key Considerations

Local labor costs may make these services unprofitable. New access and equipment may be required for guaranteed parking areas. Parking revenue control system may require modification to handle differential fee structures. Market research and cost versus benefit analysis suggested.

16	Cell Phone Lots		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$ to $$$	★ to ★★★	Large, medium, small	No

Description	**References**
A cell phone lot is a remote parking area where meeters and greeters can park and stay in or near the car until they receive a call or text message from the party they are meeting. The cell phone lot benefits the airport by limiting vehicle occupancy at curbsides during peak periods. Curbside enforcement is supported by the availability of a free waiting area, and conflicts with local visitors to the airport are reduced. May also eliminate the need for grace periods in airport short-term parking.	4.3.1

Benefits to Customer

Avoids having to pay to park near the terminal; no need to enter the terminal to find their party; no risk of a parking ticket or being forced to move on by parking enforcement officer.

Airport Examples

Austin, Indianapolis, Orlando. Denver International has integrated its cell phone lot with a service plaza along the airport roadway, offering concessions such as Subway, Dunkin Donuts, Baja Fresh, a gas station, and flight information displays showing arriving flights.

Key Considerations

Security in the lots; lighting and visual surveillance suggested. Signage needed to direct visitors. Location (preferably before entering the terminal area). Extent of amenities (e.g., toilets, water fountains, flight information). Refer to *ACRP Synthesis 62: Cell Phone Lots at Airports* (Kramer and Mandel 2015).

17	Ground Transportation on Website, Mobile Website, and Airport Apps			
Cost $$	**Implementation** ★ ★ ★	**Applicability** Large, medium, small		**Pilot Program** No
Description				**References**
Direct links on airport apps or mobile websites make it easier for smart-phone equipped passengers to access ground transportation information. Many ground transportation providers have their own apps and reservation systems, which could be linked via the airport website, mobile website, or airport app.				10.1.1 10.1.2 10.7
Benefits to Customer				
Easy access to ground transportation in advance of arriving in baggage claim or curbside. Links to ground transportation providers can provide easy access to schedules, fares, and frequency of service. Bringing as many important services to the airport app or website as possible is important in making the app or website valuable and worth downloading or bookmarking.				
Airport Examples				
Multiple ground transportation providers operating at airports across the country have their own applications.				
Key Considerations				
For ease of use, linking to ground transportation providers in a manner that does not require entering data for the referring airport.				

18	Integration of Concessions and Services with Holdrooms			
Cost $$$	**Implementation** ★ ★ ★	**Applicability** Large, medium, small		**Pilot Program** No
Description				**References**
Several recent terminal projects have broken the formal line separating concession areas and holdroom seating areas and, in the process, have made the concessions more visible and accessible, have made the holdroom areas less linear and predictable, and have allowed for mixing in a variety of seating types to meet customer needs rather than having the rows of armchairs some describe as "bus station" seating. Passengers have responded well with higher spend rates, and they enjoy the more creative designs of both concession areas and terminal spaces, which are more integrated, original, and interesting to them.				7.3.3 8.12.2 8.17
Benefits to Customer				
Better visibility of the concessions. Concession seating close to holdrooms, allowing customers to eat or drink while staying close to the gate, reducing anxiety about missing the boarding. More interesting and dynamic terminals compared with typical linear concourses.				
Airport Examples				
San Francisco International Airport's Terminal 2 and Terminal 3, Boarding Area E; JetBlue Airways Terminal 5 at New York John F. Kennedy International Airport.				
Key Considerations				
Terminal configuration and concourse width. Need to design more robust concession enclosures and, in some cases, design some concessions as integrated with the terminal. Concession servicing routes and entrances to concessions, given that they may be surrounded by space used by passengers.				

19	Sense of Place – Local Food		
Cost $	**Implementation** ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Bringing local restaurants to the airport provides variety and a sense of place, creating a dining option for passengers that is unique to that airport. Local restaurants can be brought to the airport by direct leasing, by subleasing under a larger prime concessionaire, or by a national concessionaire via a license arrangement with the local restaurant.	8.12.4

Benefits to Customer

For many passengers, all airport food looks the same. Integrating local cuisines gives airports a way to show off local specialties and local cultures, differentiate the airport from others, and stimulate incremental sales from customers tired of the usual fare.

Airport Examples

Dallas/Fort Worth, San Francisco, Denver, Cincinnati, New Orleans.

Key Considerations

Local restaurants brought to the airport by direct leasing, by subleasing under a larger prime concessionaire, or by a national concessionaire via a license arrangement with the local restaurant, or popular restaurants brought to the airport by national companies.

20	Healthy Food		
Cost $	**Implementation** ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
There is a clear national trend toward healthy foods (i.e., foods that are unprocessed, without unnecessary additives, prepared fresh, and low in added fats and sugars). Many branded airport restaurants have no healthy offerings (e.g., only fast food) or offer the brand's national menu with little in the way of healthy offerings. Consumer groups are monitoring airport food.	8.12.3

Benefits to Customer

Additional choices improve the customer's sense of control and empowerment. Customers who are healthy eaters are more likely to spend rather than wait, so healthy choices can drive additional sales that would otherwise be lost, raising the average spending rates and revenue per enplanement.

Airport Examples

Baltimore/Washington, Seattle–Tacoma, Los Angeles, Newark Liberty, New York LaGuardia, Detroit, Denver, San Francisco.

Key Considerations

Airport management may ensure that healthy food is available by changing the concession mix to include healthy concepts, by encouraging brands to offer additional healthy offerings as supplements to standard menus, and by adding fresh fruit, veggies, and other healthy offerings as part of grab-and-go offerings.

21	Free Basic Wi-Fi		
Cost $$	**Implementation** ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
With the high penetration of mobile devices, demand for wireless services is steadily increasing. Further, high-bandwidth applications such as music streaming, Skype and FaceTime, video streaming, movie downloads, and VPN put a strain on cellular telephone systems and may be expensive for some travelers (particularly international visitors) due to roaming charges. There is a clear trend toward offering tiered Wi-Fi services, with free basic services for low-bandwidth applications such as web browsing, email, and texting. Due to the concentration of users, Wi-Fi service providers may also offer distributed antenna systems that offload cellular data to the Wi-Fi system, at fees paid by the cellular carriers. Larger airports with updated Wi-Fi contracts are providing 5 mbps free service for 30, 45, 60 minutes, typically renewable by logging in again.	8.13.1 10.1.3

Benefits to Customer

Convenience to passengers; guaranteed connectivity within the terminals; lower cellular data usage saves money or preserves monthly capacity without payment of overcharges; reduced costs for international visitors by avoiding roaming charges.

Airport Examples

Dallas/Fort Worth, Las Vegas, Portland (OR), San Francisco, Seattle, Tampa.

Key Considerations

Existing contracts may limit ability to implement a tiered system with free basic service. Sponsorships and advertising on the opening pages may offset the cost of the free service. Revenue may decrease compared to previous years, but free basic Wi-Fi creates goodwill and avoids bad will for what is increasingly an expected service.

22	Children's Play Areas		
Cost $$	**Implementation** ★ ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Designated children's play areas are valued by adults traveling with children. Designated play areas can include things for children to climb on, explore, play with, or interact with. The types of things that can be offered in a children's play area are limited only by the imagination.	3.4.3 3.4.7 4.4

Benefits to Customer

They allow children to get some play time and expend energy before being confined on a flight.

Airport Examples

Chicago O'Hare has a Kids on the Fly playground in Terminal 2, with aviation-themed exhibits designed by the Children's Museum of Chicago. Boston Logan has two play areas called Kidport designed by the Children's Museum of Boston and featuring a baggage claim slide and an airplane to climb on. Detroit Metro airport has seven play areas, while Seattle–Tacoma airport has a 1,400-ft^2 play area with soft foam aviation-themed equipment.

Key Considerations

Requires dedicating some space in the terminal. Adjacent uses and compatibility should be considered due to potential noise levels and the need to keep children safe and secure. Sponsorship may be an option for offsetting capital costs.

23	Electrical Outlets or Charging Stations in Seating Areas		
Cost $$	**Implementation** ★ ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
As passengers become increasingly reliant on mobile communications devices, their need for power outlets increases, particularly toward the end of the day when many customers are low or out of battery power. Approaches for providing opportunities to charge devices include: • Power outlets located on holdroom seating; • Power stations, small towers, or pedestals, often sponsored, with multiple outlets, located between rows or in a stand-alone area; and • Power outlets integrated with counter-style seating in concession areas.	7.1

Benefits to Customer
Customers appreciate the ability to continue to work; stay in touch with business associates, friends, and family; and obtain information about the airport, their flights, concessions, and other services. Customers can retain control over their experiences, reducing stress and increasing their satisfaction.

Airport Examples
Many airports have integrated power outlets in seats or sponsored power stations.

Key Considerations
Retrofitting older seats may not be cost-effective. New seating can be ordered with both AC and USB power outlets. Outlets integrated with concession seating, such as at counters, can provide a service to customers as well as draw individual travelers who might otherwise occupy a table without power. Sponsored towers provide electricity, but their locations may be inconvenient, requiring customers to sit on the floor in order to use or maintain the security of their devices.

24	Desks/Workstations		
Cost $$	**Implementation** ★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Business travelers and leisure travelers with laptops appreciate having a desk at which to sit and work using their computers. Power plugs at the desks add convenience. Providing workstations can improve turnover in concession areas, allowing more passengers to use concessions during peak periods.	7.1

Benefits to Customer
A place to work or use computer; access to power source; does not require camping out in concession seating areas.

Airport Examples
Chicago O'Hare, San Francisco.

Key Considerations
Having space to locate the desks. May go in between holdrooms, in the center or edge of wide circulation corridors on concourses, or, with signage, in terminal dead spaces.

25	Concessions for Meeters and Greeters		
Cost $$$	**Implementation** ★★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Meeters and greeters form a small but built-in market for basic concessions, starting with a coffee kiosk that also offers packaged sandwiches, salads, baked goods, and sweets. Seating with a clear view of the exit of the secure area can provide a premium experience that encourages patronage (compared with standing). Depending on passenger volumes, other concessions may be viable, such as quick-serve food, newsstands or news kiosks, and flower kiosks. Passenger volumes and the number of entrances into the area where meeters and greeters congregate are airport-specific. Works best where there is a single flow (e.g., from a busy concourse), which may be on the first or second level.	8.18

Benefits to Customer
While waiting, meeters and greeters have the option of using concessions. These concessions may also be used by arriving passengers.

Airport Examples
Atlanta, Denver, San Francisco.

Key Considerations
Visibility to the place where meeters and greeters congregate, where there is the greatest potential demand. Number of entrances into the meeter/greeter area, which may dilute or spread out arriving passenger flows to an extent that there is insufficient density to support concessions. Overall number of meeters and greeters, which varies by airport and typical stage lengths of scheduled arrivals.

26	Automated Passport Readers		
Cost $$	**Implementation** ★★	**Applicability** Large, medium, small	**Pilot Program** No

Description	**References**
Automated passport readers provide an automated process for customs clearance. Arriving international passengers use kiosks to submit their customs declaration forms and biographical information. Travelers scan their passports, have a photo taken, fill out their declaration forms on the kiosk's screen, and answer a series of questions verifying the biographical information and flight arrival information. When completed, the passenger receives a receipt that is presented at the inspection booth for final approval of entry into the United States. People residing at the same address can be processed together.	7.3.2

Benefits to Customer
Faster processing time (estimated at 30% faster), which is important during peak periods. Readers work in multiple languages. The number of kiosks can be expanded to handle increased demand or heavier peaks.

Airport Examples
Austin-Bergstrom, Boston Logan, Chicago O'Hare, Detroit Metro, Houston Bush Intercontinental, New York Kennedy, Newark Liberty, Orlando, Vancouver.

Key Considerations
Cost of purchase and installation. Los Angeles International purchased kiosks at a cost of $36,000 each, plus installation. Chicago O'Hare spent $2 million installing 32 kiosks, an average of $62,500 each. There are numerous vendors, including one (developed by Vancouver airport) sold by Innovative Travel Solutions.

27	Social Media Strategy		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$	★	Large, medium, small	No

Description	**References**
The development of social media platforms such as Facebook, Twitter, and YouTube has changed the way people interact with each other and with institutions such as airports. Real-time information from social media is changing the way airports communicate with their customers, resolve complaints, and respond to changing conditions. Further, social media provides an opportunity to build relationships with airport users via the networking features of different social media sites. Social media platforms also provide a means for airports to build a positive relationship with passengers by communication with them directly and individually. Some airlines monitor Twitter continuously to handle complaints quickly, and some airports are monitoring daily, or several times a day, to stay on top of notifications and reports from customers. Twitter can also be used as an internal communications channel for airport announcements and sharing of information.	10.9

Benefits to Customer
Customers can stay informed on developments at the airport that may affect their visits. Media such as Twitter can provide quick, simple formats for registering complaints or compliments and allow for fast resolution. YouTube is capable of hosting a variety of video at the airport, such as for how to use the airport, new developments, and public relations, and can also be imbedded on the airport's website.

Airport Examples
Miami, Indianapolis, Los Angeles, Boston, Dallas/Fort Worth, San Francisco, and Atlanta. Sacramento airport monitors Twitter intermittently as staff availability allows. Miami is building a significant social media capability.

Key Considerations
Accessing existing social media platforms is free but does require staffing to maintain a presence and respond to comments, complaints, and compliments. There are software tools for maintaining multiple accounts, and these tools can be shared by different parts of the organization through permissions.

28	Mobile Websites		
Cost	**Implementation**	**Applicability**	**Pilot Program**
$$	★★	Large, medium, small	No

Description	**References**
Nearly all commercial airports have websites, which can go beyond just providing information and be a vehicle for conveying the airport's brand attributes. Mobile websites offer the passenger-related information on a website, such as information on flights, concessions, terminal maps, ground transportation, and parking rates and availability. Can include links to external sites for booking (e.g., SuperShuttle) or reservations (on-airport hotel). Mobile websites offer much of the functionality of dedicated airport apps but do not require the customer to download an app and allocate storage space on a mobile device.	10.1.3

Benefits to Customer
Much of the essential information on the website can be accessed via the mobile browser, although not with the degree of sophistication of a dedicated app. Visits to the airport's main website can be redirected to the mobile site automatically.

Airport Examples
Indianapolis, Dallas/Fort Worth, O. R. Tambo International Airport (Johannesburg).

Key Considerations
Not as functional as a dedicated app, but lower in cost. May require signage to provide URL. Does not have beacon functionality.

11.2 Prioritizing and Evaluating the Range of Services

The range of customer service notable practices described in Section 11.1 may be beyond the reach of some airports. Larger airports may have the scale to implement most customer service notable practices, although factors such as number of terminals and number of passenger flows can have a direct effect on the suitability of any customer service improvement.

11.2.1 Implementation Costs and Challenges

Implementation costs vary widely by airport. In the course of the research team's interviews with representatives of leading airports, most could not define the costs associated with a specific improvement or were reluctant to identify individual salary costs where dedicated staff were responsible for a single notable practice candidate. Austin-Bergstrom airport, which has possibly the most extensive music program of any airport in the country, indicated that one full-time person is dedicated to the music program. That staff person handles identifying talent, contracting, and scheduling.

In most cases, the costs of implementing specific improvements are shared by several departments within the airport organization, usually involving the marketing, terminal operations, senior management, and properties and concessions staff members. Some airports appoint a customer service manager responsible for spearheading or coordinating the airport operator's customer service enhancement efforts. The customer service manager may have dedicated staff assigned. Where there is a shared responsibility, the response typically was that a number of people in each organization share responsibility, but each devotes only a fraction of his or her time to this activity.

In fact, few airports could identify a full-time individual with overall responsibility for the airport-wide customer service program. It was, for the most part, a shared responsibility between one or more mid-level staff members and a senior staff member, usually the airport's director or chief executive. As discussed in Chapter 6, airports categorized as strategic customer service airports are not only well-rated but are most likely to identify an individual, typically an executive/senior staff member, with overall responsibility for the airport-wide customer service program. This individual may be called the chief customer experience officer or director of customer service.

11.2.2 Contractual Considerations

As noted in earlier chapters, U.S. airports have a high degree of private-sector involvement, with many airports outsourcing key responsibilities such as car park operations, janitorial and cleaning, and ground transportation assistants and starters, in addition to concessions and other functions that are uniformly outsourced.

Depending on the term of the contract, airport managers may not have the ability to reopen contracts to implement customer service programs (including training) that are contractually binding. However, once an airport-wide program is planned, it is easier to approach a contractor and lay out what needs to be done.

In other cases, such as janitorial contracts or parking management contracts, the contractor's budget and schedule may be subject to annual review or quarterly review, so the airport would have the ability to adjust schedules to improve customer service or schedule employee customer service training.

11.2.3 Cultural Considerations

Changing the organizational culture to improve the customer experience may not be an easy task. It will likely take time, training, and the appointment of champions to oversee and take responsibility for customer service throughout the airport.

Support from the top of the organization is critical in effecting organizational change. In the course of interviewing representatives at some 22 leading airports, the responses to questions about changing the culture to embrace customer service yielded some very different answers. One airport attributed its customer service culture change to a mandate laid down many years ago by a long-time and widely respected airport director, who explained to the entire staff that customer service means revenue, and revenue is how the bills are paid and how to make the place better. This airport director was able to get his entire employee team to buy into his vision of customer service being the responsibility of everyone in the organization. As a result, customer service became a standing agenda item at all meetings, and everyone in the organization, whether they had interaction with the public or not, understood how they contributed to providing superior customer service.

In other cases, changing the culture was difficult. One large airport, a city department without the flexibility and latitude of an airport authority, found it very difficult to change the culture. Union employees, territorial possessiveness among some managers, and a workload that was more focused on getting through the week than providing excellent customer service contributed to this difficulty.

In most cases, however, the culture was changed by leadership from the top through assigning one individual the responsibility to spearhead customer satisfaction increases and advise on what needed to be done to implement an airport-wide customer service management and improvement program. It was important that the organization understood the importance of changing the culture rather than implementing a series of one-off improvements without the broader context of a holistic, customer-centric approach.

11.2.4 Near-Term Improvements

Near-term improvements are those that can be accomplished with relative ease by procuring a service, improving existing services (for example, upgrading janitorial services under an existing contract), or installing equipment. These types of one-off improvements, while beneficial to the customer, would have greater impact as part of an airport-wide customer service management program.

11.2.5 Medium-Term Improvements

Medium-term improvements include those that require working with external stakeholders, business partners, tenants, and others. Use of customer service forums, customer service councils, station manager meetings, and other airport community forums will require shifts in organizational thinking and buy-in.

11.2.6 Long-Term Improvements

Long-term improvements are likely to include those that require significant capital investment throughout the terminal.

Implementing practices such as providing hotel-style restrooms, providing security checkpoint recompose areas, and integrating holdrooms and concessions would cost considerably more on a stand-alone basis than as a terminal refurbishment program involving upgrade and redevelopment of existing terminal spaces. These improvements will have high impact when completed, but attempting to do this work under individual contracts would cost considerably higher than as part of a terminal refurbishment.

The design and development of a new terminal is a once-in-a-generation opportunity to have an impact on the airport. New terminals should reflect the airport brand and its attributes and incorporate the specific customer service improvements that are needed.

11.3 Emerging Practices and Technologies

There are a number of other practices and technologies that are emerging or in use at leading airports around the world. These emerging practices do not, in the view of the research team, rise to the level of a notable practice at this time, but should be watched and perhaps considered. For example, new technologies involving large-format digital signs or queue management systems may not yet rise to the level of a notable practice but have the potential do so as the technology improves and the concepts are proven at more than one or two airports.

Similarly, there are emerging practices that are largely dependent on adoption by individual airlines or airline alliances or as an industry standard. There are today several different technologies for smart baggage tags with the potential to offer real-time baggage tracking. Alternative and competing technologies are bag-based—that is, tags permanently assigned to a piece of luggage, or tags attached to bags using RFID chips or programmable baggage tags. These technologies will shape the way airports' ticketing and baggage drop areas are used but are not directly in the control of U.S. airports.

Table 11-1 presents a list of 30 practices and technologies that may be considered or monitored by airports wishing to improve customer service.

Table 11-1.   Emerging customer service practices.

	TITLE	DESCRIPTION	POTENTIAL BENEFITS	SECTION REFERENCE
1	Digital signs	Large-scale LED signs capable of high-definition images	Public art, advertisement, sense of place, entertainment	10.3
2	Robots	Robotic devices that interact with customers and are remotely operated by a human	Customer information, directions, personalized information, novelty	10.4
3	Virtual assistants	Holographic or video projections on mannequins to provide standardized information, such as at security checkpoints, immigration, and customs	Takes place of staff person; works 24 hours a day, 7 days a week; may draw more attention than an actual human; reprogrammable; consistent	10.4
4	Queue management systems	Systems using technology that measures and tracks movements and predicts queues, flows, and times; several competing technologies	Real-time reporting of queue wait times and projections of future wait times as an aid to real-time management and operational planning	8.4
5	Processing-related media	Use of videos demonstrating processing that passengers will undergo at airport; embedded on website	Passengers will have better understanding of processing steps and requirements and will have less stress.	10.9.3
6	Real-time parking information on website	Linking parking space management systems to website, smart phone, or in-vehicle guidance system	Informs customers of availability of parking, allowing them to choose where to park	10.1.3
7	Guaranteed parking spaces	Membership or frequent parker perk that guarantees space in close-in parking	Provides most frequent and most valuable users with a guaranteed space, ensuring repeat business and customer loyalty	8.8.1
8	Recomposure areas	Comfortable area modeled after hotel-type lobbies immediately after security screening for customers to collect their belongings and regroup with their parties	After stress of security inspection, recomposure areas allow customers to recompose and destress before continuing into the concession areas, thereby increasing customer spending.	8.11
9	Spas	Health spas, massage, personal care	In demand by a segment of customers; popular; profitable; provide incremental revenue	3.4.7

Table 11-1.   (Continued).

	TITLE	DESCRIPTION	POTENTIAL BENEFITS	SECTION REFERENCE
10	Museums	Display of local history, aviation, and airport history collections (distinct from art in terminal)	Museums can provide sense of place, cultural presence in terminal, interest for long-dwell-time passengers.	7.4
11	Yoga rooms	Rooms where yoga fans can exercise during travel; usually unsupervised; sometimes with classes for employees	Offered by five airports currently, but may catch on; requires space accessible to passengers	8.19.1
12	Airport gyms/health clubs	Similar to yoga rooms	Investment may be too much for all but the busiest airports. Airport hotel health club is alternative.	—
13	Remote FIDs in hotels, transit stations	Flight information displays in hotel lobbies, train stations, or transit stations	Link that hotels and transit agencies can connect to for flight information; provides customers convenience and allows better use of time	—
14	Estimated wait times – customs	Use of displays showing current estimated wait times so that meeters and greeters can plan their time	Providing information can allow meeters and greeters to plan their time, spend at concessions, and reduce anxiety.	8.4
15	Self-boarding	Subway-style turnstile or gated entry to loading bridge with boarding pass reader	Future technology expected to become common; airline decision except where airports control common-use gates	10.2
16	Permanent baggage tags	Each piece of baggage has its own unique RFID identifier.	Competing technologies for baggage tags include permanent, programmable, and removable. Different systems in testing by airlines/alliances.	10.2
17	Chief customer service officer	Chief customer service/experience officer to manage the airport-wide customer service improvement program	Customers benefit from improved customer experience over time. Airport has an internal champion to promote and effect change and service improvements.	6.1.2 12.4
18	Walking distances on signs	Maps or signage with walking times to gates lets the passenger plan use of time and can increase dwell time in concession areas. Walking distance signage adjacent to flight information displays is the most common approach.	Allows customers to plan their time in the terminal, which usually allows for more time in concession areas; allows the customer to feel in control and reduces uncertainty and stress; reduces the number of passengers who proceed directly to gate	8.5
19	Dynamic waiting signs at security	Indicators of wait time at security checkpoints show time customers will spend in the queue, and thereby reduce stress and anxiety. Options include static and dynamic indicators and new high-tech queue management systems.	Providing updated wait time information allows passengers to budget their time while at the airport and reduces the uncertainty and stress of the security inspection process.	8.4 10.2.1
20	Airport pay lounges	Airport pay lounges, offering services similar to airline clubs, provide an option for passengers who are not members of an airline club, or are for use when no club is available.	Offers an option for customers seeking a better experience or a place to work or relax; produces incremental revenue for the airport	8.12.1
21	Parking guidance systems	Lights and indicators direct customers to available parking spaces. May include overhead indicators showing if space is occupied.	Allows customers to locate parking spaces in less time; reduces backups; provides fast turnover of spaces and better vehicle circulation within structure overall	10.8.1
22	Automated ordering	Mobile ordering allows passengers to place an order for pickup at the concession unit or for gate delivery, where available. Some airports have concession units with iPads for remote ordering via a visual menu.	Saves time for hurried passengers. Visual remote ordering shows the types of food available. iPad ordering provides entertainment value for passengers without a smart phone or other mobile device.	7.3.3 8.12.1

Table 11-1.   (Continued).

	TITLE	DESCRIPTION	POTENTIAL BENEFITS	SECTION REFERENCE
23	Lactation rooms	A private room equipped for nursing mothers to breast feed or use a breast pump. The minimum requirements for a lactation room are a private room, table, electrical outlet, and chair. A family restroom is not a lactation room; it lacks the right equipment and is not pleasant for the activity.	For nursing mothers, lactation rooms offer privacy, comfort, a place to organize breast pumps and other equipment, and a quiet place in which to nurse a baby.	8.14.1
24	Hotel-quality restrooms	Hotel-style restrooms are bright, with lots of indirect lighting and seating with lighted mirrors for women to apply makeup. High-speed air dryers mounted between sinks reduce dripping. Upgraded surface materials with dark colors minimize appearance of standing water. Toilet partitions are larger to accommodate carry-on bags inside.	Survey research has established a direct link between the quality and cleanliness of restrooms and the overall customer experience. Restrooms are one of the most used and most criticized attributes of airports. A pleasant restroom is appreciated by customers.	8.15
25	Restroom attendants	White-jacketed employees replace towels, keep sinks clean, and offer optional amenities such as mouthwash and mints. The attendants are not janitorial but can summon janitors if needed, avoiding unpleasant conditions. Tipping is optional. CLT and CVG have model programs.	Restrooms are kept stocked and in good order, especially during peaks. Value-added services such as mouthwashes are popular with many passengers after a long flight. Tipping is not required.	8.15.1
26	Restroom customer feedback mechanisms	Tools are available to report the condition of restrooms, including posting a telephone number or providing signage noting a Twitter or short message service address.	Airports that monitor their restroom conditions and rely on customers for feedback are better equipped to make decisions regarding janitorial staffing and maintenance.	8.15
27	Hydration stations	Hydration stations disperse chilled water, allowing passengers with reusable water bottles to refill them before or after flight. Environmental groups are raising awareness of bottled water as wasteful and energy inefficient, with a large carbon footprint that is damaging to the environment.	Passengers can carry their own reusable water bottles and refill as needed and avoid having to pay several dollars at an airport concession. Water sold in plastic bottles is expensive and resented by many passengers.	8.19.2
28	Mix of seating types and styles	Some new terminals are including a mix of seating, including concession seating with tables and chairs; comfortable benches that are easier to access than seats in the center of rows of traditional seating; decorative seating such as bright butterfly chairs; workstations; and counter seating, often with electrical outlets. Low tables can also be mixed in to create a club-like or living-room atmosphere.	Makes for a comfortable, relaxing, and interesting departure area with more choices than seating with rows of standard chairs. Concession seating near or in gates can allow customers peace of mind while they can still enjoy concession purchases. Workstations and bench seats with power outlets are popular with business travelers.	—
29	Smart phones – airport app	A dedicated application designed for a smart phone or tablet and providing airport information. An app offers greater control over the user experience and is better for building customer loyalty and a personal relationship. Mobile apps can send push notifications that appear on the smart-phone screen about concessions, flight status, gate changes, and so forth.	Offers greater ease of use and functionality to the customer. An airport-specific app may compete with airline apps and independent, third-party airport apps that perhaps provide less functionality but broader coverage of airports. Dual platforms required for iOS and Android. Vendors offer a standard app customizable for the airport at lower cost than bottom-up development. Mobile website may be a better and more cost-effective alternative.	10.1.2
30	Beacon technology and registry	Beacons are inexpensive hardware transmitters that broadcast a unique identifier to nearby portable electronic devices such as smart phones and tablets. The identifier is used to determine a physical location and to initiate an action such as a push notification. More effective indoors than GPS. Can be used by airlines and others without a need for duplication of hardware.	This emerging technology can provide customers with specific information such as push notices that inform them of wait times at security, concession specials and promotions, and directions to any point in the terminal. New systems can also use beacon installations to generate passive user data from multiple users to calculate and forecast wait times, passenger volumes, and distance to a certain location, as well as other uses that may not be apparent to the customer.	7.3.1

A Template for Implementing a Customer Satisfaction Improvement Program

Successful management in the airport environment is challenging given the distributed and interdependent nature through which services are delivered to airport customers. Customer service managers are often faced with designing a customer satisfaction improvement program that must concurrently meet internal tests required for program approval while obtaining the collaboration, buy-in, and support of those in the airport community who will participate in or be affected by the program being proposed. This chapter presents a template with supporting checklists for use by airport customer service managers and others for designing and implementing an effective airport-wide customer satisfaction improvement program.

12.1 Overview—Designing a Customer Satisfaction Improvement Program

The type of customer satisfaction improvement program an airport implements often depends on the program organizer's role in the organization (and therefore the organizer's sphere and level of influence) and the breadth of the desired impacts.

The potential impact of a program can range from enhancing the culture of the entire airport to motivating a specific work group to be more customer-centric and results-driven. Regardless of the organizer's position within the organization and the desired breadth of the improvement, it is possible to successfully implement a customer experience improvement program that will significantly enhance satisfaction for customers.

The template that follows is written for the customer service manager. However, when a customer satisfaction improvement program is launched at the highest level of an organization, the results are more compelling since the chief executive's sphere of influence is both broad and deep.

12.1.1 Context

Figure 12-1 shows a strategic, three-phase quality assurance approach to customer experience management that has been successful at multiple U.S. and non-U.S. airports. This approach was first developed at PANYNJ in 1998, a time when U.S. airports believed that the airlines were their sole customer and the passengers were the airlines' customers. At that time, European airports such as London Heathrow and Amsterdam Schiphol were considered customer service pioneers. The commercialization of European airports in the mid-1980s and the direct connection between customer satisfaction and revenue production reset expectations for new levels of customer service. In the Asia-Pacific region, Singapore Changi Airport's Terminal 1 was the catalyst for the airport receiving its first recognition as the world's best airport from Business Traveler (UK) in 1988, 7 years after Changi's opening (Changi Airports International, no date). Although the commercialization of airports in the U.S. evolved differently and later than in

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Figure 12-1.   A strategic, iterative, three-phase approach.

Europe and the Asia-Pacific region, these pioneer non-U.S. airports continue to set the bar for excellence in airport customer experience.

The research conducted to produce this guidebook has confirmed that well-rated airports in the United States and worldwide follow a similar approach to airport customer experience management and have many of the same customer service building blocks in place.

There are three key phases in implementing a strategic customer satisfaction improvement program. The activities in each phase are summarized in the following subsections.

Phase 1. The Airport Brand—Setting the Standard

- Understand the airport's customers, business partners, stakeholders, and airport employees
- Understand customer needs, wants, perceptions, and expectations using market research, including through use of social media
- Determine customer priorities—addressing what is important to customers
- Design and build the airport's brand
- Set and publish airport service and design standards
- Understand the cost versus benefit of service standards adopted and programs established
- Establish branded service programs or major initiatives
  - Implementation plans, including funding and timelines
- Engage, energize, and educate all airport employees
- Get airport community involvement and buy-in

Phase 2. Managing for Results

- Develop a performance management plan
- Use reliable feedback systems for all customers
- Determine baseline measures
- Set realistic targets, such as:
  - Improve customer satisfaction by _____.
  - Increase revenues by _____ . Decrease costs by _____.
- Design and share scorecards

- Develop and monitor action plans
- Implement incentives and reward and recognition programs
- Integrate standards and performance management programs into the fabric of how business is done at the airport (e.g., RFPs, contracts, permits)
- Establish an airport customer service action council
- Get airport community involvement and buy-in

Phase 3. Significantly Improve the Airport's Image

- Differentiate the airport—make the airport unique
- Stay on brand
- Implement a marketing plan
- Develop a communications plan
  - For each audience and each channel of communication
  - Customer communications: help customers make the best use of the airport by giving them the information they need when they need it and using their preferred channels of communication
- Manage customer relationships—know who the airport's customers are and establish a relationship with them to ensure their return and continued satisfaction
- Capitalize on the power of the web
- Leverage social media—available 24 hours a day, 7 days a week; accessible; mobile; human
- Get airport community involvement and buy-in

All of the top-performing U.S. airports and the well-rated, global airports researched for this guidebook use all or most of the components of this framework regardless of the origin of their particular service delivery strategy. The framework for this approach is built on a strategic, continuous improvement, quality assurance, hospitality model that puts the customer at the center of the experience. It may be packaged differently at different airports and the processes called by different names, but the basic concepts and tools are the same.

Figure 12-2 presents a template for implementing a customer satisfaction improvement program. It depicts how important components of an airport customer service plan are defined by the key activities that occur in each phase of the strategic, customer-centric, and iterative three-phase approach. To be successful, the application of this framework needs to be customized to each airport's unique business environment while being sensitive to the baseline service levels, business culture, and relationships already in place at the airport as well as the customer base being served.

Figure 12-3 presents an overview of the important actions that foster airport customer service excellence. It provides a high-level summary of the more detailed checklists (in Section 12.2) for each phase of the strategic and iterative continuous improvement approach to significantly improve customer satisfaction airport-wide. These more detailed checklists can be of considerable service to the customer service manager since they outline the discrete steps an airport operator would take when working with the airport community to implement a new customer satisfaction improvement program.

12.2 Detailed Checklist for a Strategic and Iterative Continuous Improvement Approach to Customer Service Excellence

12.2.1 Phase 1—The Airport Brand

This section identifies the service delivery strategy and level of service the customer service improvement program strives to deliver to its customers through the collaboration and buy-in of the appropriate members of the airport community.

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Figure 12-2.   A template for implementing a customer satisfaction improvement program.

☑ **Build the Airport's Brand** – Define, implement, and sustain the airport's brand (e.g. service delivery strategy or customer service charter) in collaboration with the airport community; alignment and collaboration are key throughout each of the steps that follow

☑ **Determine Customer Priorities** that are or will be (e.g. trends) the drivers of customer satisfaction with the airport experience using credible, reliable market research for all customers

☑ **Adopt and Publish Service Standards** that support the airport's brand and define the guidelines for the minimally acceptable level of service expected of all who provide service at the airport; service standards for the drivers of customer satisfaction should be adopted first

☑ **Develop and Implement Branded Customer Service Programs and/or Major Initiatives** that provide value to the customer such as those that address customer priorities, are highly visible, and support the airport's brand

☑ **Educate, Engage, and Energize All Airport Employees** using proactive, humanistic approaches such as customer service training, airport orientation, innovative and/or technological tools to better serve customers, reward and recognition programs, ongoing communications to keep them informed, and other methods to make them feel like valued members of the airport family

☑ **Implement a Performance Management System** that ensures continuous improvement, compliance with the airport's brand and service standards, and an appropriate response that effectuates positive change

☑ **Collaborate, collaborate, collaborate** with key participants in the airport community

☑ **Communicate, communicate, communicate** with customers; the public; the airport community; internal departments; the airport board; other stakeholders at the city, state, and national levels; the airport's local community; and the media

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Figure 12-3.   Overview checklist of the strategic and iterative continuous improvement approach to service excellence.

1. **Define a total customer experience that is customer-centric and provided in a quality manner on a consistent basis.**

   Key activities of defining a total customer experience include:
   – Build the airport brand (if you are the CEO) or the customer service program brand (if you are a customer service or functional manager);
   – Assess the current customer service culture of the airport operator's organization and the airport community to determine if change is necessary and how to best implement change in the airport's current environment;
   – Establish and analyze the baseline foundation of important information needed to build the airport brand or the customer service program brand, including:
     ▪ Collect relevant information such as the airport operator's published mission, vision, values, capital plan, business plan, and prior customer service initiatives;
     ▪ Collect any relevant travel and tourism or other customer service efforts being sponsored by the nation, state, city, or travel and tourism agencies;
     ▪ Analyze all reliable customer feedback and market research data available about the airport, including surveys, complaints, social media, and website channels of communication to determine customer needs, wants, expectations, perceptions, and priorities, and baseline measures such as overall customer satisfaction;
     ▪ Benchmark with other carefully chosen airports and other related industries or relevant processes;
     ▪ Analyze relevant trends, such as travel trends, industry trends, technology trends, and passenger trends;
     ▪ Consider both the tangible and intangible aspects of the customer's experience and do not lose sight of how the airport experience makes customers feel;

  – If the airport has already implemented an airport brand, ensure that the experience delivered as a result of the customer service program supports and is aligned with the brand;
  – Assemble a core group of team members and key managers from the airport community whose buy-in and support are important to implementing the customer service program:
    ▪ Review the baseline information collected as outlined previously with the core group but with a particular focus on the functional area and the customers who will use the services;
    ▪ Craft a draft brand statement for the total customer experience to be delivered by the customer service program and share it with internal management and the airport community that will be affected by the program to obtain their buy-in and support before proceeding;
    ▪ In effect, act as the CEO of the function and follow the same steps that the CEO would take airport-wide but adjusted for the program level; and
  – Create the airport customer service action council, which represents the interests of the entire airport community:
    ▪ The council is a forum to collaboratively identify, implement, and communicate community approaches for customer service excellence at the airport, set service standards, improve and reward performance, enhance airport image, engage airport employees, and otherwise obtain buy-in and build the airport's brand;
    ▪ Launch the airport customer service council by assembling an expanded core group of key business partners and stakeholders, especially those who are customer service champions; consider including representation from airport employees and share the brand statement for the total customer experience with them;
    ▪ Upon obtaining commitment from the expanded core group to participate in the council and support the airport/program brand, share the brand statement with others in the airport community for subsequent adoption (if the airport brand is new) and issue an open invitation for key representatives from the airport community to join the airport customer service council;
    ▪ Continue to schedule regular/periodic meetings of the customer service action council with appropriate representation from the airport community for the type of customer service program being implemented to continue to design, manage, and communicate other important components of the customer service improvement program.
2. **Address key drivers of customer satisfaction, adopt service standards, and implement branded customer service programs.**
   Once the brand, which is at the heart of the total customer experience, has been defined, identifying and addressing key drivers of customer satisfaction, developing and adopting service/design standards, and implementing customer service programs or major initiatives that are aligned with the airport brand are important next steps to building a well-rated airport brand.
  – Use market research tools to determine who the customers are that will benefit from the customer service program or major initiative and understand their needs, wants, expectations, and perceptions.
  – Identify key drivers of customer satisfaction (i.e., customer priorities for both airport-level brands and program-level brands) using appropriate market research tools such as customer satisfaction surveys to determine the key drivers of customer satisfaction. For many airports, staff courtesy, terminal cleanliness (especially restrooms), ease of finding one's way, sense of place, and airport ambience are often among the drivers of customer satisfaction.
  – Adopt service/design standards that are aligned with the airport brand, starting with key drivers of customer satisfaction.
  – Launch a branded customer service program or a major initiative to address the identified key driver(s) of customer satisfaction.
    ▪ For example, if the attitude and behavior of airport staff is a key driver of customer satisfaction airport-wide, consider adopting airport service standards for the attitude,

appearance, knowledge, and awareness of airport staff working with the customer service action council that collaborated to adopt the airport brand.

  ▪ Introduce an airport-wide customer service training program aligned with the airport brand and the service standards for the behavior of airport staff. This training program may be delivered on a scheduled basis or as part of the airport's badging process for airport employees. A desired outcome of the branded customer service training program is to enhance the services provided by all airport employees. The customer service performance management plan that is implemented in Phase 2 helps monitor that customer satisfaction with the service provided by airport employees is indeed improved.

3. **Develop an implementation plan to ensure successful outcomes as for any other important program, project, or initiative.**

   The implementation plan for the customer service program or major initiative details the following for all participants, whether internal or external:

   – Tasks, task managers, timeline, critical path, key milestones, performance management plan, authorizations required, and resource requirements.
   – Budget information, including the funds required, the source of the funds, and budget performance management.
   – Projections of non-aeronautical revenue, if applicable, which may result from the implementation of the customer service program or major initiative.
   – A determination of whether a pilot program is warranted to provide a proof of concept.
   – Staffing, including training detailing the staffing level required, the source of the staff [e.g., insourced (employees of the airport operator, stakeholders, or business partners), outsourced (through a third-party service provider), or a combination]. Having identified the staffing required and its source, the implementation plan should also indicate the training required as well as the training provider and training timeframe.

12.2.2 Phase 2—Managing for Results

Phase 2 involves developing a customer service performance management system for the branded customer service program or major initiative implemented in Phase 1. Steps in implementing a customer service performance management system include those discussed in the following.

- Identify key performance indicators to measure and monitor customer satisfaction, focusing on the critical few measures to achieve results that matter most:
  – Overall customer satisfaction is often a KPI for customer experience performance management.
  – If the attitude and behavior of airport staff is a key driver of customer satisfaction airport-wide, then the attitude and behavior of airport staff would be a KPI to measure the performance of the customer service training program and airport staff in general.
- Determine baseline measures to track improvements from the launch of any customer service initiatives or branded customer service programs.
- Set stretch but realistic targets to determine successful outcomes for the key performance measures identified.
- Design and share customer service scorecards on a regular basis with the airport customer service council and others in the airport community:
  – Be sure to include those who provide the service being measured or have influence over the delivery of this service.
  – Include all measures of performance for the service on the scorecard, including customer satisfaction survey results such as ASQ results and mystery shopping results, and inspections, complaints, quantitative measures such as waiting times, length of queues, and first bag/last bag measures.

- Working in close collaboration with the airport customer service council and others in the airport community, develop customer service action plans, with a particular emphasis on the providers of the service that drive or influence customer satisfaction:
  - Monitor and track action plan deliverables and their impact on customer service KPIs.
  - Report back to the airport customer service council.
- The implementation plan and the performance management action plan should be integrated, as required, to ensure that the implementation plan is completed on time, within budget, and in line with all performance goals and targets set.
- Implement incentives as well as reward and recognition programs for customer service excellence, improvements in overall customer satisfaction, and other key performance results:
  - Airport stakeholders, business partners, terminal operators, airlines, third-party service contractors, federal agencies, other service providers, and airport employees would be eligible to be recognized.
  - Airports should take every opportunity to celebrate success with the airport community, including achieving interim targets.
  - Communicate each successful step with airport customers, the public, the community, and, when appropriate, the media across multiple channels of communication.
- Focus on educating, engaging, and energizing airport employees as valuable brand ambassadors using tools such as airport orientation programs, customer service training, reward and recognition programs, and employee communications programs.

12.2.3 Phase 3—Improving the Airport's Image

One of the key components of improving the airport's image is developing a customer satisfaction improvement communications plan. A customer satisfaction improvement communications plan details how the airport operator plans to communicate customer service excellence information/updates to various audiences and which channels of communication will be used. Ongoing, open, credible communications are critical to the long-term success of any customer satisfaction improvement program. This is because success is dependent on the airport community's understanding and buy-in of the airport's mission, vision, values, customer service brand, service standards, performance goals, action plans, and implementation plan, including all milestones.

Components of the customer satisfaction improvement communications plan include:

- **Objectives.** Objectives are the results to be achieved through communications. Examples of communications objectives are:
  - All staff working at the airport are aware of the customer satisfaction improvement initiative and the airport brand, can verbalize how it affects them, and understand how they can support it;
  - The customer satisfaction improvement initiative and the airport brand influence all airport internal and external communication channels;
  - Achievements of airport community members and individual employees that advance the customer satisfaction improvement initiative and the airport brand are promoted; and
  - To educate external stakeholders, the local convention and visitors' bureau, the public, and media regarding aviation customer service issues being addressed by the customer satisfaction improvement initiative.
- **Branding and standardized messaging.** Branding is a powerful communication concept that includes a unique name, image, and/or colors that are consistently used for all communications concerning the customer satisfaction improvement initiative and the airport. Branding, when combined with standardized messaging, establishes quicker identification, recognition, and integration of the customer satisfaction improvement initiative and airport communications by all relevant audiences.

Table 12-1.   Communications plan audiences.

Internal Audiences	Airport Stakeholders and Business Partners	External Audiences
Airport operator's board	Airlines	Political constituencies
Airport management	Concessionaires	CVB staff, etc.
Airport departments	Third-party contractors	
Airport staff	Police	
	TSA, FAA, etc.	

- **Goals.** Goals are approaches that will be used to achieve communication plan objectives. For example, if educating the external stakeholders regarding aviation customer service issues is an objective of the plan, then goals to accomplish this objective may include attending industry customer service conferences or including an aviation customer service issue topic of the month in every airport monthly report to external stakeholders.
- **Audiences.** The communications plan should include all constituencies who need to know, understand, and buy in to the customer satisfaction improvement initiative. These audiences are summarized in Table 12-1.
- **Communications channels** are the tools, communication mediums, and platforms that can be used to communicate information concerning the customer satisfaction improvement initiative and progress updates to different audiences. The communications plan typically includes guidance concerning which tool, medium, and platform is most appropriate for specific goals or audiences. Table 12-2 provides examples of communication channels by audience.
- **Suggested timetable/frequency/ownership.** The overall timetable and the frequency of use of the available communications tools to be used should be included in the communications plan.
- **Communications performance management.** Monitor/measure that the objectives of the communication plan are being achieved as is the case for KPI(s) within the customer satisfaction initiative performance management plan.

Additional communications plan actions are:

- Establish a customer satisfaction improvement communications steering group to champion/guide customer satisfaction improvement communications. The chair of this steering group should be a member of the airport operator executive team who also sits on the customer service action council.
- Incorporate ongoing identification and implementation of specific communications goals/tools in managers' performance reviews.
- Leverage communication strategies/tools already in place, such as airport operator internal town hall meetings, existing station manager meetings, and airport operations committee meetings.

Table 12-2.   Communication channels by audience.

Airport Staff	Customers and External Stakeholders
Monthly managers meetings/other meetings	External website
Customer service committees	Social media (e.g., Facebook, Twitter,
Email updates	Instagram, and Google+)
Town hall events	Brochures, banners
Posters, buttons, coins	Print ads and other media
Customer service working groups	Posters, buttons
Employee newsletters	Tenant working groups
Internal website	
Reward and recognition events	
Staff appreciation events	

12.2.4 Develop the Customer Service Plan for the Customer Satisfaction Improvement Program or Major Initiative

Using the outcomes of the activities included in the customer-driven strategic and iterative continuous improvement three-phase approach detailed in Section 12.2.1, Section 12.2.2, and Section 12.2.3, develop the customer service plan. The components of the customer service plan typically include:

- Customer service vision and brand statement;
- Customer service strategic objectives;
- Collaborative approach to foster buy-in and collaboration:
  – Within the airport operator organization;
  – Within the airport community, including stakeholders and business partners;
  – Among employees;
- Understanding of the customer:
  – Customer demographics;
  – Customer needs, wants, and expectations;
  – Customer feedback through tools such as complaints, social media, comments, and airport staff;
- Market research to determine the key drivers of customer satisfaction:
  – Customer satisfaction surveys;
  – Airport employee surveys;
  – Business partner/stakeholder surveys;
  – Focus groups;
  – Benchmarking;
- Adopting service and design standards:
  – Service policies and protocols;
  – Guidelines for service delivery; airport employee knowledge, attitude, and appearance; airport ambience; cleanliness; sense of place; wayfinding; construction, and so forth;
- Establishing customer service programs to address drivers of customer satisfaction and customer priorities;
- Cost/benefit analyses of alternative customer service standards and programs;
- Performance management plan:
  – Performance management tools such as surveys, inspections, mystery shops, and complaint tracking;
  – Key performance indicators and tracking changes;
  – Baseline measures;
  – Realistic targets;
  – Scorecards/dashboards;
  – Action plans with business partners, stakeholders, or internal airport operator department;
  – Incentive and awards programs;
- Educating, engaging, and energizing airport employees:
  – Customer service training programs;
  – Reward and recognition programs;
  – Airport employee orientation programs;
  – Needed equipment, uniforms, systems, and so forth;
- Implementation plan(s):
  – Tasks;
  – Timeline and milestones;
  – Accountability;

- – Funding levels and sources;
- – Pilot program or a phased approach;
- Communications plan:
  - – Channels of communication (e.g., social media);
  - – For internal airport operator organization;
  - – For business partners and stakeholders;
  - – For airport employees;
  - – For the community;
  - – For elected officials and airport governing board;
  - – For the media;
  - – For the public; and
- The customer relationship management approach.

12.2.5 Selling the Proposed Customer Satisfaction Improvement Program or Major Initiative

It is important that the customer satisfaction improvement program or major initiative be packaged, managed, and reported in the same way the airport operator presents other important business or capital projects to its board and other constituencies. A customer satisfaction improvement program is a business proposal that must be presented in business terms. The airport board, investors, stakeholders, and the business community need to understand that customer satisfaction improvement is not a feel-good initiative; it is good business. The return on investment is significant. A number of sources have documented that happy customers can increase revenue by as much as 40%. The potential for enhanced airport image, credibility, and market share as well as increased customer satisfaction and growth in non-aeronautical revenues is impressive.

12.3 Evaluating and Selecting Best Practices That Are Transferable and Aligned with the Airport Brand Checklist

As previously noted, air travelers benchmark at least two airports every time they fly, and their expectations can change from the time they leave their origin to the time they arrive at their destination. Similarly, airport operators frequently benchmark with other airports domestically and internationally and often emulate good ideas to which passengers seem to be favorably responding or that garner favorable media coverage. However, these ideas may not have the best return on customer satisfaction and investment for their customer base and their airport.

Following are considerations that airport operators should take into account when determining whether the notable practices identified in this guidebook are transferable to their airports, aligned with their airport brands, and of value to their customers.

12.3.1 Airport Strategic Objectives and Brand Considerations Checklist

Airport operators are responsible for putting forward an articulate mission, vision, brand (or service delivery strategy), master plan, strategic plan, and financial plan for their airports. They must then work in collaboration with the entire airport community to make their envisioned future a reality. Once the airport's key goals are defined and understood, all decisions should be made in line with these guiding principles and documents. The following bullets discuss airport strategic objectives and brand considerations.

- If an airport's mission, vision, and airport brand are not clearly articulated or are not customer-driven, airports should consider revisiting them and enhancing them for the airport's current needs.
- If an airport's mission, vision, and airport brand are deemed to be responsive to competitive pressures and customer needs, wants, expectations, and perceptions, then a strategic planning initiative with a customer service focus may be advisable. This strategic planning initiative would help ensure that all decisions are aligned with these guiding statements and documents, which should provide the first filter through which any decisions are made.

12.3.2 Customer Considerations Checklist

Those notable practices that pass the first filter (strategic and brand considerations) next need to be analyzed to determine their appropriateness and value to the airport customers who will be affected by the practices being considered for implementation. The customer considerations that should be analyzed include:

- The airport's customer profile (age, gender, socio-economical classification, education level, etc.) and customers' needs, wants, expectations, and perceptions;
- The types of products and services that the airport's customers are likely to value and use;
- Customer satisfaction with the airport's current services and products;
- Expected improvement in overall customer satisfaction;
- Customer priorities at the airport (drivers of customer satisfaction);
- Impact on customer perceptions and the airport's image;
- Expected number of new customers the airport is hoping to attract;
- How much customers are willing to pay for the proposed products or services; and
- Impact on the airport's net revenues, especially its non-aeronautical revenues.

The results of this analysis will assist the airport in determining which customer service notable practices should continue to be considered. For example, if there is value for current or future customers of the airport as well as a business value for the airport, then the practice would pass the customer considerations filter and be measured using the considerations that are discussed in following subsections.

12.3.3 Business Partner and Stakeholder Considerations Checklist

If a notable practice is aligned with the airport's strategic objectives and brand, and a viable customer base exists or is sought that values the practice being considered, then an analysis should be undertaken of any impact on the airport's business partners and stakeholders from implementing the practice.

The business partner and stakeholder considerations checklist involves understanding answers to questions such as:

- Is the notable practice in competition with products or services provided by airport business partners or stakeholders?
- Are business partners and stakeholders willing to support or help fund/sponsor the practice?
- What is the impact (real and perceived) of the practice on business partners and stakeholders?

12.3.4 Budget and Business Case Considerations Checklist

As with any other initiative that the airport is reviewing, budget considerations are important, and a business case supporting implementation of the customer service notable practice

will need to be made and presented. The budget and business case considerations checklist includes:

- All costs associated with implementing and sustaining the notable practice.
- The benefit of implementing the practice.
- Non-aeronautical revenues projected, if any. Studies have shown that increases in overall customer satisfaction increase non-aeronautical revenues. Consideration should be given to including this in the non-aeronautical revenues projected and tracked.
- Net revenue considerations, if any, such as reduced costs or cost-avoidance.
- Source of funds.
- A determination of whether a pilot program or proof of concept is required.

12.3.5 Staffing Considerations Checklist

Staffing considerations are as important as budget considerations when analyzing notable practices since staff and money are both important resources for any project or initiative. Items in the staffing considerations checklist include:

- Impact on staffing to implement and sustain the notable practice;
- Source of staffing:
  - Airport operator;
  - Insourced or outsourced;
  - Full-time employees, interns, and volunteers;
  - Collaboration with unions and third-party contractors;
  - Combination;
- Resources required by staff:
  - Skill levels;
  - Uniforms;
  - Equipment (booths, chairs, etc.);
  - Technology (radios, smart phones, tablets, computers, Wi-Fi, Internet, etc.);
- Hours of operation;
- Staff transportation requirements, if any;
- Training; and
- Performance management requirements (e.g., mystery shopping).

12.3.6 Technology Considerations Checklist

Given that technology has become a pervasive and powerful enabler and that being able to use the latest technology is expected by most customers everywhere today, the technology requirements of any notable practice need to be factored into the airport's decision-making process.

The technology considerations checklist includes:

- Source of technology:
  - Insourced or outsourced,
  - Impact on staff and staffing,
- Infrastructure needed to support the technology,
- Time required to implement technology and train staff,
- Determination of whether a pilot program or proof of concept is required,
- Custom development versus adapting a packaged solution (e.g., mobile apps),
- Potential for obsolescence or replacement by other technologies, and
- Competing applications that may limit effectiveness (for example, third-party or airline-developed apps).

12.3.7 Evaluation Considerations Checklist

In addition to the considerations discussed so far, any other evaluation criteria that may apply to the notable practice must be evaluated and added to the decision matrix before a decision is made to proceed. All evaluations should be made in terms of both the plusses (benefits, gains, revenues, increased customer satisfaction and growth, enhanced airport image, etc.) and the minuses (costs, community opposition, etc.).

The evaluation considerations checklist might include:

- Space requirements—some areas of an airport, especially in the central terminal area or within the terminal, are prime real estate, and consideration needs to be given to the best use of that space;
- Construction requirements—minimal and quick versus significant, lengthy, or expensive;
- Public relations, media, and community implications;
- Operational and custodial implications; and
- Ongoing sustainability.

12.4 Working with Business Partners, Stakeholders, Elected Officials and Airport Awards/Commissions to Garner Support, Buy-in, and Approval to Proceed

As has been documented throughout this guidebook, the airport environment is complex. An airport relies heavily on the relationships developed by all who participate in its service delivery chain and those entities that support, govern, or are affected by the airport. The more aligned these entities are with the airport's mission, vision, and customer-centric airport brand and the more integrated they are in the airport's decision-making process, the more successful the airport will be in producing highly satisfied customers. It is important that an airport's business partners, stakeholders, and elected officials feel that they are brought in (and have bought in) to the airport's programs, initiatives, processes, and other considerations before the airport proceeds.

Collaboration and communication are crucial to successfully implementing a notable practice and help ensure that the airport community acts as one in serving its customers. Various tools are used by airports to ensure that the airport, service providers, and elected officials or commission members work together. The tools available to produce successful collaboration and communications include:

- **Identifying a chief customer experience officer** who is a member of the airport's executive staff. This officer participates in any important decisions or influential discussions, including those involving business partners, stakeholders, or elected politicians.
- **Enhanced internal processes** (approval processes, budget processes, project authorizations) that ensure customer service considerations are always part of the discussion and decision making.
- **Forums** to regularly collaborate, communicate, and make decisions that affect customer experiences, including:
  - Customer service action council,
  - Station manager meetings,
  - Airport operations committee,
  - Emergency operations center,
  - Capital program/construction project updates,
  - Agenda review meetings to review items for board approval, and
  - Table-top exercises and post-mortems to avoid service disruptions or failures.

- **Changing the way the airport does business to be customer-centric** and consistently do what it says it will do at all levels of management and throughout the airport. In this customer-centric environment, customer experience management is a standing item at the aforementioned forums and at meetings with the airport board, elected officials, and airport commissions as well as at award ceremonies. Keeping customer service a priority at these meetings builds credibility and garners support on an ongoing basis.
- **Always presenting customer service improvement programs in business terms** similar to any other significant capital, concessions, technological, or operational investment. This is especially important if the airport still thinks of customer service as not one of the fundamental reasons the airport exists. Remember to include projected non-aeronautical revenue increases resulting from increased customer satisfaction in the business case and track that revenue projections KPIs as well as customer satisfaction KPIs are being realized.
- **Educating stakeholders** such as elected officials and community leaders regarding aviation issues and airport customer experience management. This can also include inviting them to participate in aviation conferences and benchmarking visits.
- **Organizing events for the airport community** to raise funds for a worthy cause, to celebrate success, to be good neighbors, and to enhance camaraderie and relationships among the members of the airport community.
- **Consistent, transparent, and frequent communications** that are aligned with the airport's mission, vision, and brand internally and externally and that emphasize the importance of enhancing the customer experience at the airport.
- **Sharing the numbers** (i.e., customer experience KPIs) with business partners, stakeholders, the airport board, elected officials, the airport commission, and airport employees is also important. In this way, everyone knows where the airport stands, and they participate in achieving its goals and enjoy celebrating its success.

12.5 Implementing Customer Satisfaction Improvement Programs and Managing Change

Implementing a customer satisfaction improvement program is as much about customer experience management as it is about managing change. This is especially true in the United States, where many airports' customer service improvement programs are still evolving. In the United States, customer experience management is often not strategically or program driven from the airport operator's executive management team. Regardless of where the airport's customer service champion resides on the airport's organization chart, managing change is important to transitioning a process- or capital-driven airport culture to a customer-centric and experience-management–driven airport culture.

The most successful airport customer experience management programs are those that operate holistically in terms of an airport's overall service delivery strategy or customer service brand. Other companies that provide services at airports, most notably those providing concessions, are no strangers to the concepts of brand, service standards, brand and performance management, and employee engagement. These companies provide a natural opportunity to benchmark customer service best practices and to collaborate with existing customer service champions already doing business at the airport to help the airport manage change and to implement airport-wide customer service improvement programs.

Airports that are consistently highly rated by their customers share many of the characteristics of success shown in Figure 12-4. These characteristics of success are worthy of consideration by every airport.

1. They build an airport brand – a shared customer service vision and a consistent service delivery strategy across the entire continuum of services provided to the airport customer. This airport brand is based on the collaboration and buy-in of the entire airport community. It is a brand that the airport's customers value and buy into.
2. They focus on customer priorities and manage performance across the entire service delivery chain.
3. They design airport experiences from the customer's point of view.
4. They get the basics right each time and every time, from the cleanliness of their restrooms to the courtesy and professionalism of staff.
5. They adopt service standards aligned with the airport brand to provide guidance on the level of service expected from all who provide service to the airport's customers.
6. They manage performance airport-wide.
7. They communicate often, and their message is consistently on brand.
8. They understand the importance and value of employee engagement and empowerment.
9. They leverage technology to optimize operations and enable their customers.
10. They empower their customers with the right information at the right time, using the communications channels preferred by those customers.
11. They cultivate the power of social media to build relationships with customers that are mobile; available 24 hours a day, 7 days a week; and human.
12. They invest in their people, their relationships, and in modernizing their facilities.
13. They constantly innovate and continuously improve.
14. They foster exceptional ambience throughout the airport, creating a unique sense of place and recognizing valuable opportunities to surprise and delight their customers.
15. They understand that excellent customer service is one of the airport's prime objectives.

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Figure 12-4.   Characteristics of success at airports rated highly by customers.

Customer Service Offerings of the Airports Profiled in Chapter 5

Chapter 5 presented overviews of the approach to customer service improvement at five leading non-U.S. airports with outstanding reputations that offer world-leading customer experience. While Chapter 5 presented each airport's organizational approach and commitment to customer service, this appendix presents detailed summaries of the extensive customer service offerings.

These detailed summaries are intended to give customer service managers at U.S. airports an understanding of the scale and scope of the customer service offerings at these international benchmark airports. The summaries are organized by:

A. Transportation;
B. Terminal configuration;
C. Services; and
D. Culture, entertainment, and education.

1. Singapore Changi Airport

A. Transportation

Changi Airport is a terminus on the East-West Line of the city's SMRT subway system, with connections throughout the system. The station is located between Terminals 2 and 3. Passengers in Terminal 1 can reach the station via Skytrain, which connects all three terminals. Skytrain allows for in-transit (sterile) connections as well as connections between the public areas of the terminal. Skytrain runs continuously except for the hours of 2:30 a.m. to 5:00 a.m.

B. Terminal Configuration

Changi has three terminals. Terminal 1 opened in 1981, Terminal 2 opened in 1990, and Terminal 3 opened in 2008. The terminal layout is shown in Figure A-1.

A budget terminal, located about 2 km from the other terminals, was built for use of low-cost carriers in 2006 but was closed in 2012. It is being torn down to make room for Terminal 4, which is scheduled to open in 2017.

Terminal 4 is being built to accommodate low-cost and regional carriers, including both narrow-body and wide-body aircraft. The new terminal will make heavy use of new technologies and a range of self-service options, including automated check-in and identity authorization. Terminal 4 is expected to cost U.S.$1 billion and cover 2 million ft^2. However, it will not be located along the Skytrain route.
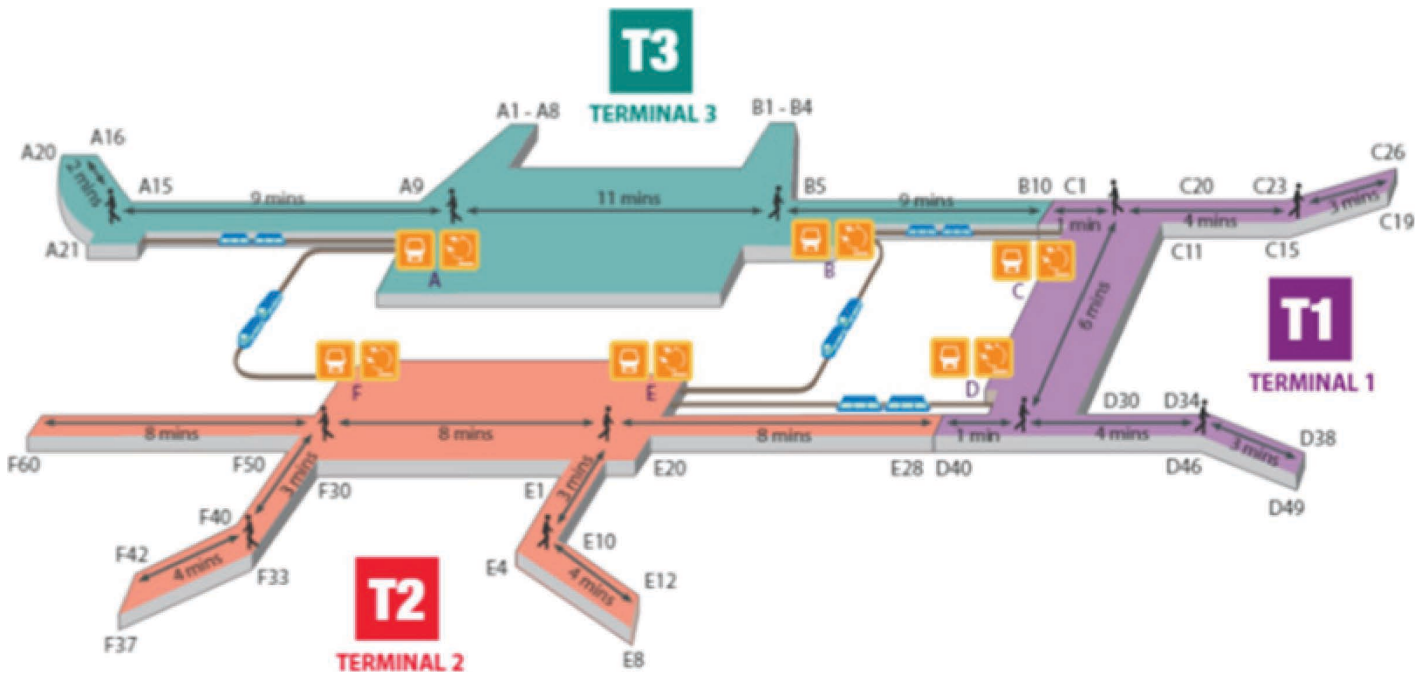
205

Figure A-1.   Terminal configuration—Singapore Changi Airport.

C. Services

Changi offers a comprehensive array of services for originating and transit passengers.

- **Transit hotels.** Three Ambassador Hotels exclusively for transit passengers are located in the terminals and are accessible only from the post-security transit areas. Passengers can use the hotels without going through customs and immigration procedures. The hotels offer single, double, and triple rooms with rates based on 6-hour increments. The Terminal 1 hotel has a rooftop swimming pool, and the Terminal 1 and 2 hotels have fitness facilities. The Terminal 2 and 3 hotels also offer hair, beauty, massage, and aromatherapy services.
- **Pay lounges.** Six pay-to-use lounges offer comfortable spaces to relax between flights and are geared to business passengers.
  – Ambassador Lounges in Terminals 2 and 3 offer upscale and spacious surroundings, meeting rooms, office services, beverages, food, and showers. The Terminal 3 lounge offers fitness and hair styling.
  – The Green Market Lounge in Terminal 2 offers similar services.
  – The Rainforest Lounge and Skyview Lounge, both in Terminal 1, offer relaxation areas, showers, and beauty and spa services.
  – The Haven in Terminal 3 is open to the public and offers relaxation areas, nap rooms, meeting rooms, showers, and other lounge amenities. The Haven offers televisions, newspapers and magazines, a kids play area, a business center with copiers, and Wi-Fi. Admission fees are based on increments of 2, 5, or 8 hours and range from $35 to $71 for adults and $23 to $47 for children. Prices are slightly higher when checking in after 10 p.m.
- **Rest areas,** with chaise-type seating for napping.
- **Smoking areas,** located indoors and outdoors in each terminal transit lounge.
- **Free Wi-Fi.** Wi-Fi at Changi is free in the transit areas but requires a one-time password available via text message or from the information counters spread throughout the terminal. In the public areas, 1 mbps wireless broadband is offered free of charge. A temporary log-in ID and password must be obtained at the information counters in the public areas.

- **Free Internet terminals.** 550 Internet terminals are provided throughout the terminals, free of charge.
- **Mobile charging points.** Over 800 free USB ports and power sockets are located throughout the terminals.
- **Speedpost@Changi.** Kiosks located near gate holdrooms provide a means for passengers to ship items not permitted aboard aircraft, such as liquids, aerosols, and gels. (Changi performs security inspections at the departure gates.)
- **Convenience stores.** Convenience stores, including 7-11 and local chain Cheers, are located in the transit areas and public areas of the terminals. A full-sized Fairprice supermarket is located in the public area of Terminal 2.
- **Hotel reservations counters.** Located in each terminal and operated by the Singapore Hotel Association, the counters arrange hotel rooms without charge. Customers pay the first night at time of booking.
- **Medical clinics.** The Raffles Medical Group operates five medical clinics. There is one in each terminal's transit lounge as well as the public areas of Terminals 2 and 3.
- **Pharmacies.** Seven pharmacies serve airport customers, with one in each departure lounge and others in public areas of each terminal.
- **Baby-care rooms** with nursing rooms, hot water dispensers and changing counters are distributed throughout the terminals, 24 in all.
- **Passenger meeting services.** A local company offers personal escort through airport airline and arrivals inspection, providing document and baggage handling. Flowers, limousine services, and hotel arrangements are additional services.
- **Prayer rooms.** A prayer room is provided in each transit lounge.
- **Transfer incentives.** Changi offers S$40 worth of Changi Dollars for passengers of Singapore Airlines and SilkAir who transfer at Changi.
- **Changi rewards cards.** Frequent travelers can join a membership rewards program with three levels of privileges. Members receive 1 point per dollar spent, while gold and platinum members receive 2 or 3 points, respectively, for each dollar spent. Gold and platinum levels are reached after spending the equivalent of U.S.$3,000 and U.S.$6,000, respectively. Every 500 points earns Changi Dollars equivalent to $5 in rebates that can be used at airport shops, restaurants, and lounges or for services. Members can also convert their points to miles in Singapore Airlines' frequent flyer program, or redeem points using an online catalogue.

D. Culture, Entertainment, and Education

Changi Airport has few peers when it comes to diversions for passengers and visitors.

- **Family Zone.** The Family Zone features rooms with diaper changing counters, nursing rooms, kids play areas, and TVs with cartoon channels.
- **Kids' play areas** are located in the transit area of each terminal.
- **Gardens.** Changi offers some unique experiences, including a collection of outdoor and indoor gardens.
  - The Butterfly Garden is a rooftop butterfly habitat in Terminal 3 with 1,000 species of butterflies, flowering plants, and a waterfall.
  - The Cactus Garden is a rooftop garden in Terminal 1 featuring 40 species of cactus and succulents from Africa and the Americas.
  - The Enchanted Garden is a rooftop garden located in Terminal 2. The interactive garden uses motion sensors to trigger sounds of nature, and LED lighting, giant glass bouquet sculptures, and stained glass create a "Shangri-La like atmosphere," according to the airport.
  - An orchid garden and koi pond in Terminal 2 display an array of orchids, Singapore's national flower.
  - A sunflower garden on the rooftop of Terminal 2 features 500 yellow sunflowers.

- **Movie theaters,** in Terminals 2 and 3, offer recent movies 24 hours per day. The theaters are accessible from the transit area.
- **Social Tree.** This social media attraction (see Figure A-2) consists of 64 high-definition video screens forming a 360-degree display of various animated backgrounds, such as the Singapore skyline or a mystical forest. Eight touch-screen photo booths let travelers post photos onto the Social Tree or post the photos on their personal social media accounts. The photos or videos posted on the Social Tree are archived so that visitors can recall them when visiting the airport in the future.
- **Aviation Gallery, Terminal 3.** The aviation gallery includes interactive aviation displays, areas to view the airplanes on the terminal ramps, and presentations on the history of Changi Airport. The gallery includes over 600 miniature aircraft models, representing the airport's daily departures. Touch-screen monitors provide presentations on the destinations served from the airport.
- **The Slide@T3.** The Slide (see Figure A-3) is a 12-meter-high (almost 40-foot) tubular slide open to adults and children over 7 years of age. Users of the slide reach speeds of almost 20 feet per second. One admission is free with every $10 spent at an airport shop, restaurant, or service on a single receipt. A smaller slide is available for free in the basement of Terminal 2.
- **Xperience Zone.** The Xperience Zone is a sponsored video area featuring a large video wall for viewing sports events, as well as interactive photo booths, 3-D televisions, notebook computers for Internet surfing, and 3-D gaming displays.
- **Entertainment deck.** Located in the Terminal 2 departure transit lounge, this area features an interactive play area featuring Xbox and PlayStation game consoles, an MTV music video booth, a movie theater, and a cafeteria.
- **"Be a Changi Millionaire."** When spending a minimum of $30, customers get a chance to enter a raffle offering instant prizes such as luxury goods and a grand prize of $1 million. Changi Rewards members earn additional chances to win.
- **Changi Recommends.** A promotion is offered to visitors to Singapore that includes local deals, promotions, and discounts for local establishments, services, and attractions, such as Universal Studios Singapore and Singapore River Safari.
- **Free Singapore tours.** The airport offers free tours of the city including a Heritage tour and a City Lights tour. Passengers with more than 5 ½ hours available between flights can register for tours 1 hour before departure. Tour registration and departure are in Terminal 2. Four Heritage tours and two City Lights tours are offered each day.

Figure A-2.   The Social Tree at Singapore Changi Airport.

Figure A-3. TheSlide@T3, Singapore Changi Airport.

2. Seoul Incheon International Airport

A. Transportation

The airport is served by a network of bus lines serving the whole of metropolitan Seoul and much of South Korea. Seoul has a population of over 10 million, and nearby Incheon has a population of 2.8 million, so ground transportation options are extensive. Color-coded signs show the bus routes and pickup locations, which are distributed the length of the curbside on the arrivals level.

From the futuristic Transportation Center directly opposite the terminal across the terminal roadway, an underground rail station provides AREX express rail service to Seoul Station, the rail hub for the city. Express trains run non-stop with a travel time of 43 minutes. Trains depart every 30 minutes. A local also runs between the airport and downtown, making 11 stops and taking 56 minutes, and running every 12 minutes.

A maglev (magnetic levitation) train is currently under construction that will run from the Transportation Center to a nearby tourist entertainment complex 6 km away in Incheon. The train is a test project, but there are plans for extending the line in two additional stages.

B. Terminal Configuration

The airport's terminal (see Figure A-4) consists of a main terminal with two piers (locally referred to as "antlers") with a total of 44 departure gates. The main terminal also acts as the processor for remote Concourse A, which was completed in 2008. The main terminal has 12 ticketing islands and four security checkpoint/passport control entrances to the secure area, all on Level 3F. IIAC claims to have the shortest arrivals and departures processing times of the world's major airports.
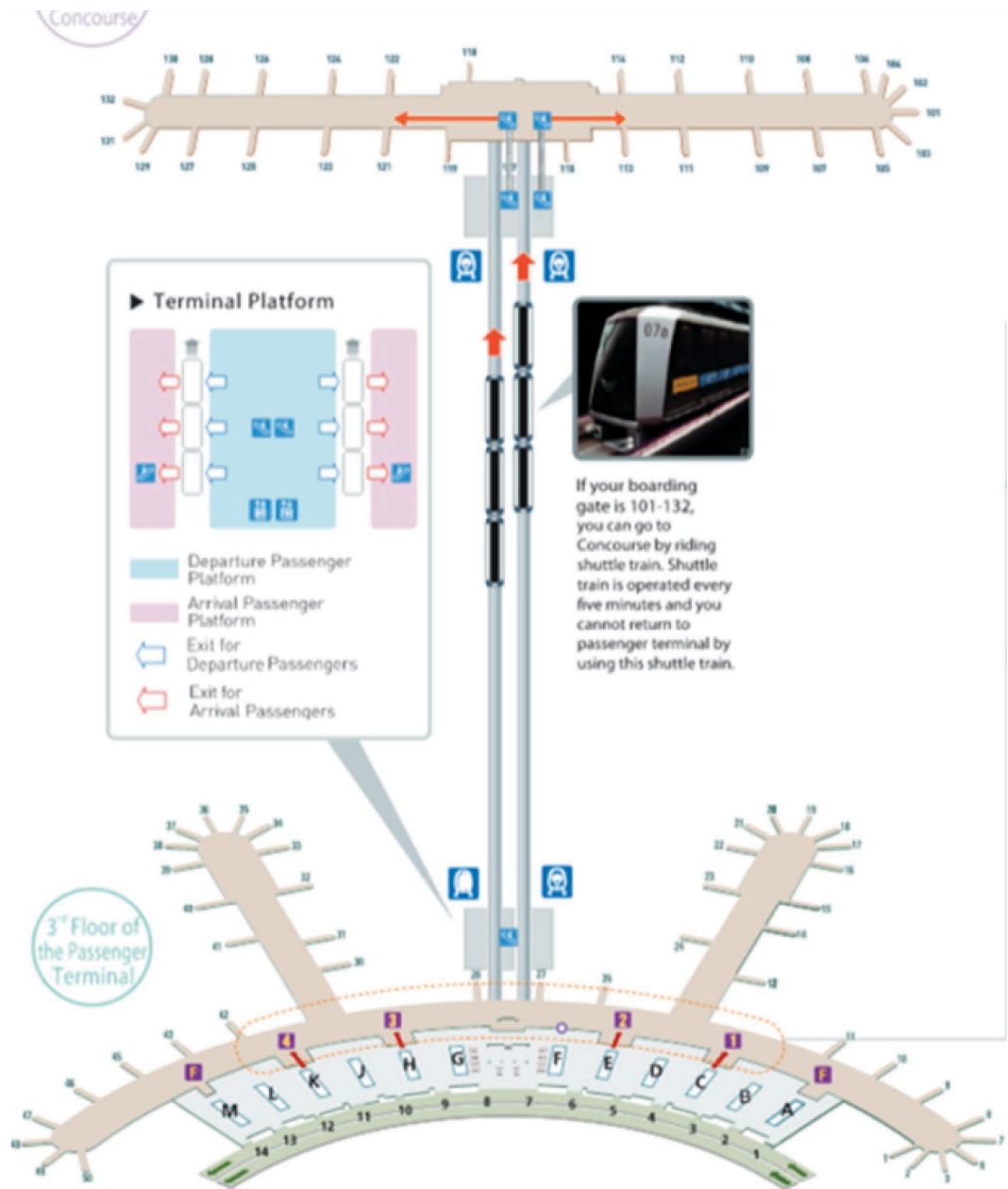
Figure A-4.   Terminal configuration—Seoul Incheon International Airport.

A mezzanine level (4F) contains numerous restaurants and coffee shops on the non-secure side, and concessions, services, and lounges for transit passengers on the secure side.

The arrivals area (1F) runs the length of the terminal and includes numerous shops and food outlets for meeters and greeters awaiting passengers clearing through one of the two customs and immigration areas.

The departures area, referred to as the duty-free area on airport maps, is post-security on Level 3F, with a mezzanine (Level 4F) predominately geared for transfer passengers with extra time between flights.

A basement level (1B) connects to underground parking garages and the Transportation Center directly across from the terminal (see Figure A-5) and has services mainly geared to employees and locals, including a cafeteria, record shop, bookstore, food court, and a sauna.

Figure A-5.   Transportation center, Seoul Incheon International Airport.

Concourse A has 28 gates along its 2,850-ft length, with most capable of handling the A-380. It is connected to the main terminal by the underground Intra-Airport Transit (IAT), a train system.

Korean Air uses the eastern half of the main terminal, and Asiana Airlines uses the western half. Concourse A is used mainly by foreign carriers.

Construction of a second terminal with 37 contact gates and 32 remote stands began in 2013 and is expected to be completed in time for the 2018 Pyeongchang Olympic Winter Games. It will be located north of the existing terminal and connected to the existing Concourse A and main terminal by extension of the IAT system.

C. Services

ICN has an extensive array of concessions and services located in the main ticketing hall, in the arrivals hall that runs the length of the terminal, on a mezzanine in the main terminal, and post-security.

- **Hair salon,** offering haircuts, permanents, and nail art.
- **Free Wi-Fi** throughout the terminals.
- **Power.** Power outlets for 110-volt, 220-volt, and USB power are available throughout the terminal complex. Free converters and plug adapters can also be checked out from any of the 10 information counters.
- **ATMs.** Automated teller machines are located throughout the airport. ATMs in the public area can convert foreign currency and issue local currency; however, those in the departures area are not permitted by law to issue local currency.
- **Banks.** Three banks, all located in the public area, provide full banking services and currency exchange services.
- **Smoking rooms.** Five smoking lounges are spread throughout the terminal, each with hard surfaces, air curtains, and special ventilation.
- **Nursery rooms.** Nine nursery rooms are available for nursing and infant care. Seven are in the departures area and two are in the public area.
- **Spa.** The Spa on Air offers private lounges, meeting rooms, a snack bar, and full spa services including tub-in-tub relaxation.
- **Prayer room,** located in the secure area.
- **VAT refunds.** Two counters in the departures area provide foreign visitors with the ability to claim refunds on VAT and special consumption taxes for purchases at off-airport tax-free shops.

- **Transit hotels.** Two transit hotels, one at each end of the terminal, offer use of standard and deluxe rooms and suites for periods of 6 to 24 hours charged in 6-hour increments. Use of a standard single room costs from $47 for 6 hours to $126 for up to 24 hours. Double rooms cost from $57 to $144 for the same periods. The transit hotels are accessible only from the secure area, so that connecting passengers do not need to leave the transit/departures area to use the transit hotels.
- **Hotels.** Outside the terminal, the Air City area immediately south of the terminal complex includes three hotels—a 534-room Grand Hyatt, a 301-room Best Western, and Hotel Hu Incheon Airport, with 100 rooms. The Grand Hyatt hotel also contains a casino.
- **Hub pay lounge.** The pay-to-use Hub lounge provides 5-star service and offers hot and cold food and snacks, wine, liquor, and other beverages, all complimentary. The lounge offers free Wi-Fi, fax and printer services, televisions, domestic and foreign newspapers and magazines, free computer use, and meeting rooms. The fee is $35 for adults and $15 for children between 2 and 12 years of age.
- **Restaurants.** Six full-service restaurants, five in the public area on the upper level and one in the Transportation Center, offer Korean, Japanese, American (Bennigan's), and Chinese cuisine.
- **Food and beverage.** Western fast food can be found pre- and post-security, with brands such as KFC, Starbucks, Dunkin' Donuts, McDonald's, Krispy Kreme, and Burger King. Korean and other Asian restaurants are also available.
- **Shops pre-security.** ICN has shops throughout. In the main terminal, pre-security, specialty retail shops are located around a four-story central atrium. Food and beverage services are located on the floors above and below. All floors overlook a central garden and performance space. Snack bars, coffee shops, and convenience stores, including a 7-11, are located in the arrivals lobby.
- **Duty free.** Duty-free shops are extensive and located throughout the departures area; they are operated by Shilla and Lotte. Luxury duty-free boutiques include Louis Vuitton, Cartier, Chanel, Prada, Fendi, Coach, Ferragamo, and Bvlgari.
- **Mobile telephone rentals.** Three mobile phone rental counters operated by the major mobile phone companies are located in the public arrivals area.
- **Baggage storage.** Two combination baggage storage and parcel delivery services are located in the public area.
- **Full-service post office** is located in the public area.
- **A car maintenance center** is located in the airport city area and performs maintenance, sells automobile parts, and washes cars.
- **Airport medical center,** operated by the Inha University Hospital, is in the public area.
- **Pharmacies,** two in the public area and two in the post-security area, operate from early morning until 11 p.m.
- **Optician.** Located at the basement level in the public area; open daily, offering eye exams, glass, contact lenses, and luxury eyewear.

D. Culture, Entertainment, and Education

In addition to its broad and extensive range of customer services, ICN incorporates Korean culture throughout the terminal. The cultural attributes differentiate the airport from other Asian hubs and create a strong sense of place. Korean culture is reflected in the architecture, gardens, artwork, and some unique cultural enhancements, including:

- A branch of the **Cultural Museum of Korea,** located in the departures area.
- A Korean **cultural street** in the departures area features a pavilion and a house built using traditional construction techniques. Another cultural street in the arrivals hall features stone-work, craftsman-built furniture, and nature-themed artwork.

- A traditional **craftworks gallery** in the departures area featuring collections of porcelain, furnishings, traditional clothing, and antiques unique to Korean culture. Customers can create their own handicrafts in workshops with instruction offered in English, Chinese, and Japanese.
- **Musical performances** featuring traditional instruments.

The airport offers a range of amenities for connecting passengers. The amenities are centered on the fourth level of the main terminal post-security, one level above the departures area, including:

- **Shower rooms,** with free face washcloths, soap, and use of hair dryers;
- **Two Internet lounges,** with free use of terminals; fax and printing available for a fee;
- A **Kids Zone** play area and nursing room;
- **Children's play areas.** Seven other children's play areas are available, all in the post-security area;
- **A theater** offering free movies and news channels; and
- **A rest area** passenger lounge with chaise chairs.

Outside of the secure area, the airport offers:

- **A full-service spa,** located on Level B1.
- **Performance area,** a multistory space located in the center of the main terminal adjacent to the ticketing area. The performance area offers entertainment linked to various festivals and themed performances featuring traditional, modern and classic dance, and music performances.
- **A skating rink.** Located in the Transportation Center opposite the terminal, the Ice Forest has an artificial ice rink with room for 150 skaters.
- **A two-screen theater,** called the Cultureplex, featuring current domestic and foreign movies, is also located in the Transportation Center. According to the airport, it is one of only three movie theaters located in an airport terminal complex.
- **Casino,** located in the Grand Hyatt Incheon.
- **Free tours.** The airport offers free tours for passengers transiting or connecting at ICN with 2 or more hours available between flights. Tours depart throughout the day and evening. Tours can be reserved in advance online, although places are not guaranteed. Two tour desks are located on the upper-level transit lounge area, and one is located in the arrivals area. Shorter tours are offered three times each day, while longer tours depart once or twice each day. Passengers can check their bags for a fee or take them on the tour bus.

The free tours include:

- A 2-hour Temple Tour to the nearby city of Incheon, including a visit to Heungryunsa Temple and the city museum;
- A 3½-hour Asia in Incheon tour, visiting a traditional cultural park and the Sinpo International Market.
- A 4-hour Beautiful Night in Seoul city tour of downtown Seoul, including a visit to the Deoksu palace and Insadong Street, a center of traditional shops, galleries, tea shops, and antiques;
- A 5-hour Highlights of Seoul city tour of Ganghwa Island, Insadong Street, the Gyeongbok palace, and the Jogyesa Temple;
- A 6-hour Korean Culture tour (Tour A) of the former Ganghwa Younghwung king's residence, Hanok Village and its historic Roman Catholic cathedral, and a local market; and
- A 6-hour Korean Culture tour (Tour B) of Goyang City, the Hallyu museum, Goyang Lake Park, and the massive Onemount entertainment complex, featuring a year-round water park and snow park, as well as a shopping mall, golf driving range, spa, and fitness center.

3. Amsterdam Schiphol Airport

A. Transportation

The terminal complex is built above a rail station that provides a direct link to Amsterdam's Central Station, Holland's largest domestic rail hub, and to other cities where connections can be made. The airport is on a high-speed rail line serving Belgium, France, and Germany. Tickets for NS High-Speed Thalys, Eurostar (connecting at Brussels), and ICE International high-speed trains can be purchased in Schiphol Plaza or online.

Shared-ride van services, private van services, taxis, and business taxis using premium sedans can all be booked in advance and online.

B. Terminal Configuration

Schiphol has a single terminal built around a central plaza. There are three departure halls.

Departure Hall 1 serves Piers B and C with 35 departure gates and handles Schengen traffic. (Schengen refers to the EU treaty that abolished customs formalities between most EU countries. Of the 27 EU members, 22 are Schengen signatories. In addition, Switzerland, Sweden, Iceland, Norway, and Lichtenstein are also Schengen signatories.)

Departure Hall 2 serves Piers D and E with 28 gates and is used mainly by SkyTeam member airlines. Pier D handles both Schengen and non-Schengen flights from separate levels. Pier E handles only non-Schengen international flights from 14 gates.

Departure Hall 3 serves Piers F, G, H, and M and is used by KLM and SkyTeam member carriers. Piers F, G, and H combined have 28 gates. All are non-Schengen, except for Pier M, which has seven gates dedicated for Schengen flights.

Schiphol Plaza, a pre-security area of shops and services open to the public, has been enlarged with an extension on the front of the terminal to form a large shopping street that serves the numerous passengers, employees, and nearby office workers. Schiphol Plaza is open from 7 a.m. to 10 p.m., with 65 shops and restaurants, some open 24 hours. The area contains a supermarket; drugstore; fashion shops, including Mexx, Esprit, Lacoste, H&M accessories, and Victoria's Secret; food and beverage units, including Starbucks, Burger King, pubs, cafes, and restaurants; a large branch of ABN AMRO bank open from 7 a.m. to 10 p.m.; and services such as luggage repair, shoeshine, hair stylist, dry cleaner, key maker, and shoe repair. Schiphol Plaza also provides access to the rail station.

The airport company is completing major modifications to the terminal. The airport was originally developed around the concept of security inspection at each gate. After clearing passport control, passengers were encouraged to shop and take their purchases to the gate, where they would be inspected, and they then could check any oversized items. A recent project created five security checkpoints to replace the gate security inspections, three for originating passengers and two for transfer passengers. To accommodate the changes, an additional floor was added to Departure Halls 2 and 3, and an additional level was added to Piers E, F, and G to separate passenger flows.

C. Services

Holland Boulevard

In the transit area, Holland Boulevard is a commercial area featuring Dutch culture in the concessions and services.

- **Cultural food and beverage concessions.** Besides the usual extensive array of luxury shops and restaurants, concessions, and services, a number of prominent and distinctively designed concessions emphasize Dutch culture and traditions. These include:
  – The **Bols Genever Experience,** offering cocktails featuring Dutch gins and liqueurs;
  – The **Dutch Kitchen,** featuring traditional offerings such as raw herring, croquettes, miniature pancakes, and treacle waffles;
  – The **Grand Café Paleis,** a traditional coffee house;
  – The **House of Tulips,** incorporating a green-glass greenhouse styled as a traditional canal house and offering flowers, cheese, and bread;
  – **Say Cheese,** an authentic Dutch cheese shop; and **NL**+, a souvenir and gift shops featuring local products and merchandise; and
  – **Dutch Design Shop,** featuring work by Droog Design.
- **Casino.** The Holland Casino is located in Departure Hall 2 and is open from 6:30 a.m. to 7:45 p.m. daily.
- **Airport App.** The free Schiphol App for iPhone or Android is available free of charge from the app stores and from the airport's free Wi-Fi network. The app includes terminal maps, real-time flight information with push notification options for flight changes, airport parking reservations, shopping discounts and promotional offers, airport news, taxi reservations, social media interfaces, and comprehensive details about the airport's facilities and services. The app is available in both Dutch and English. A version for the Windows phone is also available, but has only limited functionality.
- **Living rooms.** Several areas are set aside for relaxation and feature fireplaces, televisions, creative seating, and, in one location, a piano.
- **Free Wi-Fi.** Schiphol offers 1 hour of free Wi-Fi throughout all areas of the terminals. Premium Wi-Fi, with download speeds of 4 mbps, is available for 15 minutes for €1.89, 1 hour for €4.90, and 24 hours for €9.90. Timed access is based on connect time and must be used within 24 hours.
- **Internet centers.** The airport offers seven Internet centers with personal computers and ultra-fast 10 mbps Internet connections. The Internet centers also offer charging stations, printing, scanning, and photocopying services. Three are located in departure lounges, one in the parking garage, and three in the pre-security areas, including one in Schiphol Plaza. Customers are allowed five pages of free printing.
- **Assistance to passengers with disabilities or reduced mobility.** All European airports, rather than airlines, are required to offer assistance to passengers with disabilities as well as those with reduced mobility under the EU Passengers with Reduced Mobility directive 1107/2006 and subsequent interpretations. Services are requested through the airlines, but the responsibility for providing the service resides with the airport. These include wheelchairs and lifts for ramp loading.
- **Medical services.** Schiphol has a walk-in medical clinic that also serves as a first-aid center. The clinic is located in the pre-security area and is open 7 days per week from 8:30 a.m. to 4:30 p.m.
- **Pharmacy.** A pharmacy is open from 7:00 a.m. to 10:00 p.m. every day and is located in the Schiphol Plaza. The pharmacy provides medications as well as medical items sought after by travelers, including seasick medicines, insect repellants, compression stockings, first-aid kits, and anti-malarial tablets.
- **Airport Business Point.** This business lounge in the arrivals hall provides Internet access, small meeting rooms, and waiting areas for business travelers; it bills itself as a place to meet clients, partners, or drivers. The lounge also can provide close-in parking access to the terminal. The lounge is open from 9:00 a.m. to 5:00 p.m. weekdays and afternoons on Saturday and Sunday.
- **Exchange Avenue Conference Facility.** Exchange Avenue has four boardrooms with a capacity of up to 14 persons each. These rooms can be configured to host up to 80 people in a reception format. Catering can be arranged.

- **Transit hotel.** Hotel Mercure is a 3-star hotel located in the post-security area after passport control; the hotel offers 32 rooms. Guests are required to possess both a passport and a ticket for travel the same or next day. The pricing structure breaks the day into two parts. Recent daytime rates were offered consisting of $104 for use from 10:00 a.m. to 7:00 p.m. Overnight stays were quoted at $130 for a period beginning at 8:00 p.m. and ending at 9:00 a.m.
- **Hotels (outside the terminal).** Schiphol has six on-airport hotels offering a total 1,782 rooms. Three hotels—CitizenM (230 rooms), Sheraton (406), Hilton (277)—are located in the terminal area. Three others are located in the nearby on-airport Schiphol Business Park, including a Radisson BLU (279), Park Inn (150), and Steigenberger (440). Hotel rooms can be booked directly on the Schiphol airport website.
- **Massage-o-matic.** These massage units consist of an open cabin with a shiatsu vibrating lounge chair and a display showing relaxing imagery. The price is €2 for 5 minutes. Machines are located throughout the departures area.
- **Smoking rooms.** Smoking is prohibited within the terminal. Designated smoking areas outside the terminal are delineated by white dotted lines and contain ashtrays. After security, six smoking rooms are provided, all near food and beverage facilities. The smoking rooms are glass-enclosed and use separate exhaust and ventilation systems.
- **Spas.** Two spas, Rituals and Xpress Spa, offer massage, wellness, health, and beauty treatments.
- **Yotel.** This cabin hotel is a smaller version of the transit hotel, offering compact cabins, each with a bed, bathroom with shower, television, and workstation. The rooms have two configurations—65 ft^2 (standard) and 110 ft^2 (premium). The Yotel is located in the departure area, post-security on the mezzanine. Rates are quoted for a specific time period.
- **Baby-care lounge.** Facilities for families with children include a baby-care lounge, which offers small curtained areas where babies can be cared for, fed, changed, and bathed, as well as comfortable seating for parents, free of charge.
- **VIP services.** The airport offers personalized VIP services for departures, arrivals, and transfers. On departure, passengers go to a lounge 90 minutes before flight time, where staff handle the check-in, baggage tagging, and bag check-in while the guest waits in a private lounge that offers beverages and snacks. The guest is accompanied to a private security check and then driven planeside in a luxury car. For arrivals, the passenger is met at the aircraft and driven to the VIP center, where the passenger waits in a lounge while staff handle passport control and baggage collection. Rates for arrival or departure services are €285 for the first passenger and €110 for each additional passenger. Transfer passenger charges are €420 for the first passenger and €165 for each additional passenger. Two meeters or greeters are included (excluding drivers and assistants).
- **VIP parking.** Close-in self-parking and valet parking are offered directly in front of the VIP center. The charge for either service is €42.50 (U.S.$46) per day.

D. Culture, Entertainment, and Education

- **Great Amsterdam Excursions.** Passengers with long transfer times can book short tours of Amsterdam and Keukenhof from a tour company with desks located in Schiphol Plaza near the curbside.
- **Rijksmuseum at the airport.** The Rijksmuseum, or National Museum (see Figure A-6), is Amsterdam's most prominent art museum and features the art and history of Holland from the Middle Ages to the present. It is best known for its collection of paintings by Dutch masters such as Rembrandt and Vermeer. The museum operates a branch at the airport and features rotating exhibits of eight to 10 paintings. The museum is free and is open from 7 a.m. to 8 p.m.
- **Airport library.** Located in the departures area, the airport library is a free service sponsored by the national library system, the airport, and local cultural and promotional organizations, all of which contribute to its funding. The focus of the library is Dutch culture, and it offers Dutch-language and translated books as well as digital media.

***Figure A-6.   Entrance to Rijksmuseum,
Amsterdam Airport Schiphol.***

4. Munich Airport

A. Transportation

In addition to the usual taxi, rental car, and shared-ride options, the regional S-Bahn railway operates two lines serving Munich Airport. Both lines, with different routes, provide direct services to downtown and the central station and mainline rail connections throughout Germany. The S-Bahn station is outside of Terminal 1. Trains depart every 10 minutes. Nearly one-third of passengers use the train.

B. Terminal Configuration

The airport has two linear terminals, Terminals 1 and 2, which face each other. A remote satellite concourse for Terminal 2 is under construction and was scheduled for completion in late 2015. The expansion is needed to accommodate Lufthansa's growth. The satellite concourse will be connected with Terminal 2 by an underground passenger transport system and will add 1.2 million ft^2 of space, 52 gates and 27 hardstands, and 90,000 ft^2 of space for concessions and services.

Between the two facing terminals is the Munich Airport Center (see Figure A-7), which has a spectacular, tent-like glass roof covering a multipurpose facility that includes the S-Bahn station, pedestrian entrances to the adjacent parking garages and the rental car center, the Airport Hilton Hotel, shops, a medical center, and a supermarket. Audi operates a promotional center, and there are several options for meetings and conferences.

A traditional Bavarian beer garden called Airbräu offers regional cuisine, beer brewed on-site, outdoor seating, indoor restaurant seating, function rooms for groups, evening entertainment, and seating for 600.

The large central covered space is used for promotions and events. At Christmastime the area is turned into a winter market with 50 market stalls, 400 Christmas trees, ice skating and curling

Figure A-7. ***Munich Airport Center.***

rink, and live entertainment. Other events have included polo matches, beach volleyball, World Cup viewing parties, and a surf event complete with wave machine that can create 5-ft.-high waves.

Within the Munich Airport Center, the Meta Twist Tower is an advertising and promotional device consisting of three 441-ft^2 screens, each of which can rotate independently. In addition to advertising, the Meta Twist Tower can show airport promotional videos and videos related to special events.

C. Services

- **Car rental center.** The eight major rental car companies have ready spaces in the central area opposite Terminal 1. Returns are handled in an adjacent parking structure.
- **Service centers.** Two service centers, one in each terminal, provide baggage storage services, photocopying, faxing, printing, and coat storage, allowing customers to leave bulky winter coats behind when using terminal concessions or until they return from their trips.
- **Hotels.** There are two hotels on the airport, including the 5-star, 389-room Hilton Munich Airport, located in the Munich Airport Center between the two terminals. Formerly operated as a Kempinski Hotel, the Hilton has 23,000 ft^2 of function space. A 3-star Novotel with 257 rooms is also on airport, but requires a short bus ride for a fee.
- **Wi-Fi.** Wi-Fi is free in both terminals and the Munich Airport Center, but requires registration and entering a confirmation code sent by email. After registration, log-in is simplified. For customers not wishing to register, Wi-Fi is available for purchase by credit card at €4.95 per hour.
- **Airport app.** MUC Airport is the official smart-phone app for the airport. The app provides up-to-date arrival and departure information, including gates, aircraft, and weather at destination; push notifications of flight status changes; parking space recall; guides for airport shopping and restaurants, including special offers and coupons; one-touch airline and airport phone numbers; and notification links to Twitter, Facebook, and text messages. The app is available free for iPhone and Android.
- **Internet Point.** Located in the Munich Airport Center and in the service centers in each terminal, the Internet Point offers machines for rent at a fee of €5 per hour. Use of Microsoft Office (no Internet) is €4 per hour. Rates are discounted by 20% after the first hour.
- **Motion Magazine.** The airport publishes a free e-magazine about the airport for iPads and Android tablets.
- **Fotoautomat.** Photo booths are located in the Munich Airport Center for taking passport and visa photos.

- **Lufthansa amenities, Terminal 2.** Lufthansa offers free service stations between departure gates in Terminal 2. These offer coffee and espresso drinks from automatic machines, as well as free newspapers.
- **VAT refund counters.** Four value-added tax refund centers, two in each terminal, offer refunds of the VAT included in the price of most goods purchased locally, generally equal to 19% of the price. Persons residing outside the EU are eligible for VAT refunds if they are taking the goods out of the EU.
- **Showers.** Six private shower booths are available in Terminal 2. For €15, customers can use a booth with shower, toilet and sink, towels, shower gel, and shampoo. Customers gain access by paying a fee at the service centers and receive a one-time electronic key to the shower unit. Showers are also available in the central area, but towels and toiletries must be purchased from a vending machine.
- **Mountain World.** Customers heading to the Zillertal, SkiWelt Kaiser-Brixental, and Kitzbuhel (Austria) ski resorts can arrange economy, economy plus, private-class, or first-class transportation services to the ski areas at counters in Terminal 2 (Lufthansa). Transportation can also be booked online. Counters are also available for check-in of sports equipment on return.
- **Meetings and conferences.** Munich Airport markets itself as a self-sufficient city and a destination in its own right. There are several meeting, conference, and event options at the airport. Several are in the Munich Airport Center, making them convenient for visitors arriving at either Terminal 1 or 2 by the S-Bahn rail lines or private or commercial vehicle.
- **Municon.** A large purpose-built conference center located on upper floors overlooking the Munich Airport Center, Municon has 30 meeting rooms, all with flip boards, white boards, and pin boards. Audio-visual equipment is also available. An adjacent 160-seat restaurant offers lunches and dinners, and catering can be provided to meeting rooms.
- **Airport academy.** The FMG Training Center Airport Academy is the employee training center for FMG employees and has training rooms, workshops, and meeting rooms available for rent. It is located on airport but out of the terminal area.
- **Audi Forum.** German luxury carmaker Audi has a car showroom, brand boutique, and automobile promotional center in the Munich Airport Center. The Audi Forum also makes available for rent meeting rooms of various sizes, a modern lounge, high-tech video and sound systems, and catering for business meetings, workshops, and conferences.
- **Massage chairs.** Coin-operated massage chairs are available in the pre- and post-security areas of Terminal 1.
- **Barber shop.** Two barber shops are located in Terminal 2 in the arrivals and departures areas.
- **Hair salon.** M-Crew hairdressers is located in Terminal 1 in the public area.
- **Fitness.** The Hilton Hotel offers 2-hour use of its 17-meter indoor pool, steam bath, sauna, and fitness center for €20 for adults, €10 for children; it is open 24 hours. Bodystreet Fitness Studio offers a concentrated exercise regimen. The studio is located in the Munich Airport Center and is open from 10 a.m. to 8 p.m. weekdays and until 6 p.m. on Saturdays; it is closed Sundays.
- **Cosmetic Institute.** This beauty shop offers manicures, facials, body treatments, and other services.
- **Acupuncture.** The Chi-Mas Institute is an acupressure massage service, located in Terminal 2, post-security.
- **Pay lounges.** Lufthansa operates Senator and Business lounges for itself and Star Alliance members in Terminal 2. In Terminal 1, the airport operates three lounges—VIP Wing, Atlantic, and Europe lounges. The Atlantic and Europe lounges are available for premium customers and invitees of airlines and can be accessed by non-members for €30. Discounted access is available for Diners Club cardholders. Other travel service companies may also sell access through their websites.

- **VIPWing.** This premium service is available to anyone on a fee basis. The personalized services include exclusive check-in facility and baggage handling, separate security screening and passport control, customs clearances and VAT refunds, use of a luxury lounge and open-air Bavarian beer garden, a separate bar and dining area, a smoking room, private suites, and escorted Audi or BMW car or VIP bus transfer to or from the aircraft. Rates start at €290 per person for arrival or departure services and €380 for transfer/transit services. Private lounge use runs €190 to €230 additional for the first hour, and €100 or €120 per hour for each additional hour or partial hour.
- **Automobile servicing.** BMW and Mercedes-Benz offer car servicing, scheduled maintenance and repairs, and free shuttle to and from the terminals from on-airport service centers near the terminal complex.
- **Television.** Departure lounges all feature televisions offering CNN and German-language news network N24.
- **Travel agencies.** Major travel agencies, including Thomas Cook, TUI, and Reisecenter, are among a number of tour companies that have offices in the central area or Terminal 2.
- **Shop and store.** Passengers in Terminal 2 may make purchases in the airport shops and drop them off at the shop-and-store counter in Terminal 2. Items are barcoded and available for pickup in the baggage claim area upon return. The service is free of charge.
- **Hotel reservations.** Arriving passengers can make reservations for hotels in Munich and surrounding areas at the information desk in the central area.
- **Travelers with special needs.** Passengers with disabilities or reduced mobility have special check-in counters available for use, as well as barrier-free access throughout the terminals. As with other European airports, ultimate responsibility for providing equal participation in air travel is that of the airport, which provides assistance in aircraft boarding and deplaning.

D. Culture, Entertainment, and Education

- **Tours.** The airport offers tours of the airport daily at 2:30 p.m. The tours use a motor coach and travel a route of 12 kilometers (about 7 miles) and last 50 minutes, passing both terminals and terminal aprons, both fire stations, the cargo and maintenance areas, and the fuel storage areas. A 90-minute tour is offered on weekends, as is an A-380 tour. The cost for the airport tour is €9 (U.S.$10) for adults; €7 (U.S.$7.75) for students 15 or over, pensioners, and the disabled; and €5 for children (U.S.$5.50). Group prices are also offered.
- **Visitor hill (observation area).** An 80-foot hill in the airport's visitor's park offers visitors a view of the airfield and Terminal 1 ramp, a kid's play area, a putt-putt golf course, and a small café and shop offering model aircraft and aviation-themed merchandise. The play area is currently undergoing a major expansion that will create five themed play areas, one for each major continent, as well as a visitor center with interactive exhibits. The visitor's park also has three historic aircraft that visitors can go aboard, including a former Lufthansa Super Constellation, a Swissair DC-3, and a 1930s-era Lufthansa Junkers JU-52. Admission is €1, and admission to the historic aircraft exhibit is an additional €1. The visitor hill and aircraft are open 24 hours a day.
- **Visitor terrace (observation deck).** The visitor terrace on the 7th level of Terminal 2 has 9,000 ft^2 of viewing space where a wall of windows offers views over the aircraft apron as well as both runways. The visitor terrace is accessed through a glass tunnel that rises through the terminal from the public area, negating the need to go through security. The visitor terrace is open from 8:00 a.m. to 10:00 p.m.
- **Amusement arcade.** CasinoRoyal is a game room located in Terminal 1 pre-security. Merkur Gaming Arcade is located in Terminal 2 and includes some gambling machines.
- **Law offices.** Three law offices are located in the Munich Airport Center office building or Regus Conference Center. The three law firms accept walk-in clients for general legal services, with one firm also offering audit and tax advisory services.

5. Vancouver International Airport

A. Transportation

The Canada Line rail service carries passengers to and from the airport and downtown Vancouver in 26 minutes. Passengers pay the normal zone fare plus C$5 on a single ticket. There is no surcharge for day passes and other prepaid cards. The YVR-Airport Station serves the domestic and international terminals. Trains depart every 6 or 7 minutes during midday and peak weekday periods, every 12 minutes in the early morning and evening, and every 20 minutes in the late evening. The airport authority contributed C$300 million toward the airport branch of the Canada Line.

B. Terminal Configuration

YVR has a main terminal and a south terminal. The south terminal is used by floatplanes and regional airlines flying within British Columbia.

The main terminal (see Figure A-8) is divided into a domestic terminal and an international terminal. The domestic terminal serves Concourses A, B, and C, which are used by Air Canada, WestJet, and Air Canada Express.

The international terminal has a trans-border facility with a U.S. preclearance facility, which is one of eight preclearance facilities currently operated by U.S. Customs and Border Protection around the world. U.S.-bound passengers complete inspection at YVR and arrive in the United
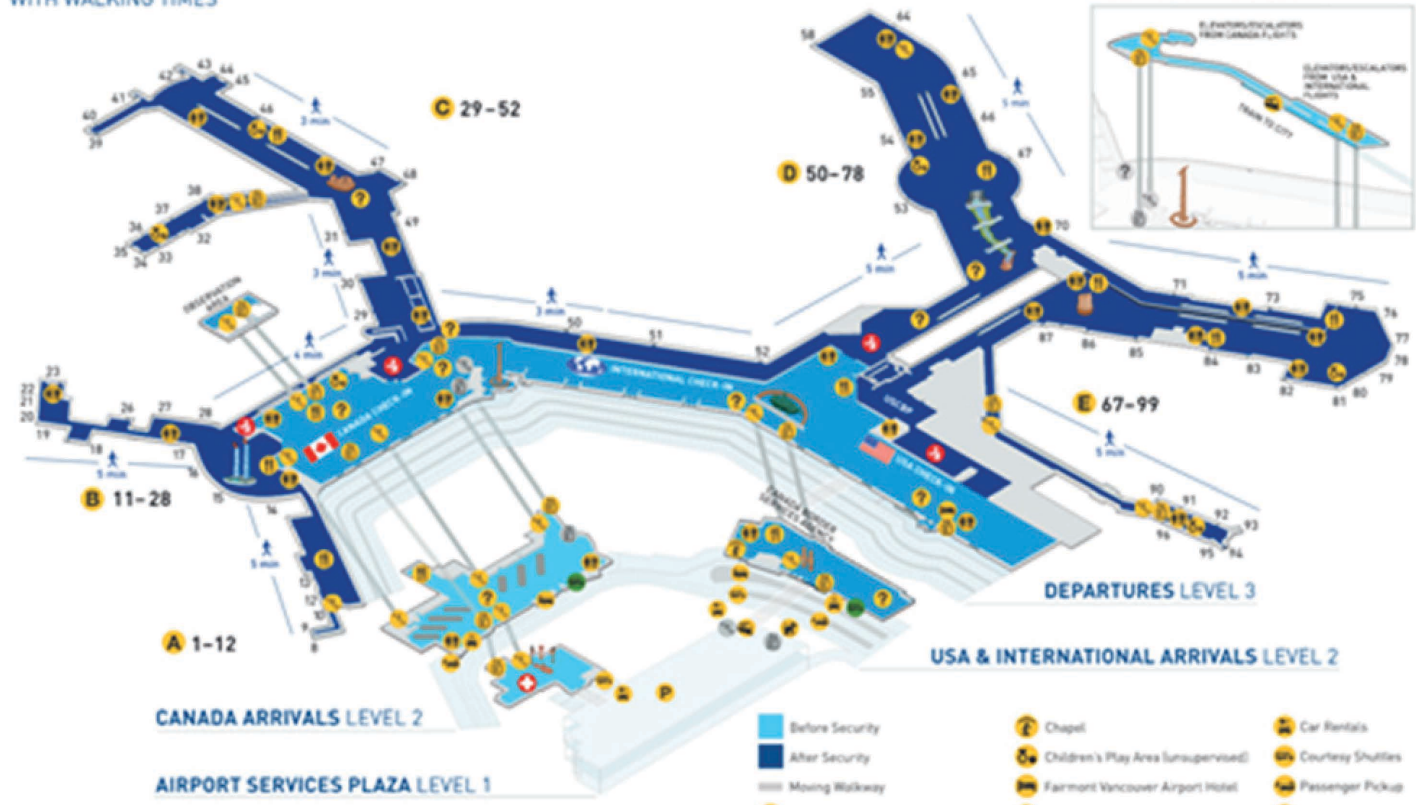

Figure A-8.   Terminal configuration, Vancouver International Airport.

States as domestic passengers. Concourse D, the largest at YVR, handles international departures on one side and U.S. departures on the other.

The main terminal is striking in its design and British Columbia theme throughout. The airport terminal has a strong sense of place and features the world's largest collection of Northwest Coast native art, including wood sculptures and totem poles. Local wood and stone are used throughout. The terminal is also known for its accessibility for passengers with limited mobility, with flooring, elevators, and ticket counters designed with wheelchair users in mind. Visual paging is used throughout the terminal, and loudspeaker density is increased so that announcements can be heard at lower volumes.

C. Services

- **Passenger guides.** The YVR website has a custom connection advisor that allows passengers to identify their inbound and outbound airlines and get a step-by-step summary of what they will need to do at the airport. The process varies depending on whether the passenger is making an international to domestic, international to international, or international to U.S. connection. For example, international passengers making a connection to the United States will need to clear customs if arriving after 6:30 p.m. or before 7:30 a.m. and go to the trans-border airline check-in area and subsequent U.S. inspection. Passengers arriving during daytime hours are able to use the in-transit facility and clear U.S. Customs and Border Protection inspections prior to departure without going through the public area of the terminal and checking in at their airlines.
- **Airport Butler Meet and Greet Service.** This service offers escorted service through the departures or arrivals process, including fast-track escort through security, customs and immigration inspections, and concierge services for duty-free shopping, car services, spa services, lounge access, notification to friends and families, and other services on an a la carte basis. Gold-level service is on foot at a fee of $110 for one person and $145 for two persons. Platinum-level service uses electric carts and is $160 for one person and $240 for two persons.
- **Hotel.** The Fairmont Vancouver Airport Hotel is a 392-room hotel built above the transborder terminal U.S. check-in area. The Fairmont is rated 4-diamond by AAA. The hotel operates a day spa and health club and meeting rooms with over 8,000 ft^2 of space.
- **Health care services.** YVR offers a medical clinic, dental center, pharmacy, and rehabilitation and wellness clinic. All are located pre-security on the first level of the terminal.
- **The Vancouver Airport Dental Clinic** is open from 8:00 a.m. to 4:00 p.m. weekdays and from 9:00 a.m. to 5:30 p.m. on Saturdays; it is closed on Sundays and holidays.
- **Vancouver Airport Medical Clinic** is a walk-in medical clinic offering travel medicine, physiotherapy, podiatry, acute injury management, and general and specialized treatment for passengers and airport tenants, including specialized aviation and corporate medical services. The clinic operates from 8:00 a.m. to 5:00 p.m. Monday through Friday.
- **Pharmacy.** A pharmacy is operated by Pharmasave, a nationwide chain, and offers a full range of prescription, over-the-counter medicines, vitamins, supplements, cosmetics, and other drugstore items. The pharmacy is open Monday through Friday from 8:00 a.m. to 6:00 p.m.
- **Plaza premium lounge.** YVR offers four pay lounges offering showers, nap rooms, and food and bar areas as well as comfortable lounge areas. Other services include free Wi-Fi, computer workstations, and business services. According to the lounge operator, emphasis is on healthy eating with freshly baked artisanal breads, hot breakfast, paninis, quesadillas, soups, and salads offered. The cost is $36 per person. The lounge operator, Plaza Premium Lounge Management, operates lounges in China, Hong Kong, Australia, Cambodia, India, Malaysia, Singapore, and the Middle East; other locations in Canada are the Toronto Pearson, Edmonton,

and Winnipeg airports. The pay lounges offer more upscale surroundings than the typical airline membership lounge. Customers can buy access online or walk in. Locations are in the domestic terminal, the international terminal, and the trans-border (U.S.) terminal, all after security. A fourth lounge is located post-security in the international arrivals area and is capable of holding up to 20 persons, with a four-person minimum. The cost is $180 for 3 hours for four persons, with additional hours at $60 each and additional persons at $45 each.

- **Post office.** A full-service post office is located inside the 7-11 convenience store located pre-security on the first level of the terminal.
- **Green Coat volunteer program.** The volunteer program provides directions and information to visitors and includes nearly 500 members. More than 30 languages are spoken among the volunteer group. According to the airport, as many as 50 Green Coat volunteers work at the airport each day.
- **Chapel.** A nondenominational church located in the international arrivals area and staffed by the Vancouver Airport Chaplaincy, a nonprofit organization. The chapel is open 24 hours a day, with chaplains and volunteers on duty from 9:00 a.m. to 7:00 p.m. The chapel offers Catholic masses and devotions, Christian prayers, and Muslim prayers weekly.
- **Spa and hair salon.** The Absolute Spa and Hair Salon is a national chain with four locations at YVR; it also operates the spa within the Fairmont Hotel. The spa offers massage, hair styling, and hair removal. Hours conform to the departure schedules in each terminal, but generally run from morning to early evening.
- **Dry cleaning.** Fabricare Cleaners offers drop-off services for departing passengers and airport employees. Same-day alterations and repairs are also offered. Their location is pre-security.
- **Luggage and shoe repair.** Located pre-security in the domestic terminal, this shop offers shoe repair, baggage repairs, key cutting, and leather accessories.
- **Baggage storage.** CDS Ltd. Baggage Services offers baggage storage at rates of $5.00 to $6.50 per item. Located pre-security in the domestic terminal, this service is open from 5:00 a.m. to 11:00 p.m.
- **Priority baggage services.** Located in the international terminal, priority baggage service provides baggage storage as well as baggage pickup and delivery services and tools and packaging for shipping bicycles.
- **Gateway valet and concierge.** Valet parking services provide drop-off and pickup at the domestic and international terminals. Rates are $26 per hour, $38 per day, and $206 per week.
- **Bank.** The Royal Bank of Canada has a full-service branch open from 9:00 a.m. to 4:30 p.m. weekdays.

D. Culture, Entertainment, and Education

- **Children's play areas.** The airport provides four unsupervised children's play areas, one in the domestic terminal pre-security and three post-security—two in the domestic terminal and one in the international terminal.
- **Public observation area.** A free observation deck is provided on the fourth level of the domestic terminal with floor-to-ceiling windows, free telescopes, interactive kiosks, air traffic control listening stations, real-time flight activity displays, and videos showing how baggage is handled. There is also an interactive display of the island on which the airport is built that shows its past and present.
- **Guided tours.** The YVR Explorer Tour is offered twice a week and covers the pre-security areas of the airport, including the First Nations (Native American) art collection, environmental programs, airport operations, terminal architecture, and other features of the YVR terminal.
- **Self-guided tours.** Several self-guided tours are available free at the airport or by download from the airport's website, featuring a map of the terminal with points of interest marked on

Figure A-9.   Aquarium and Creek, Vancouver International Airport.

the map and described on the accompanying pages. Tours include the Explorer Tour, Art and Architecture Tour, Family Fun Tour, and a Sustainability Tour.

- **Aquarium.** The airport's connection to the rugged outdoors of the Pacific Northwest can also be seen in the 30,000-gallon aquarium (see Figure A-9) located in the domestic terminal. The aquarium is operated by the Vancouver Aquarium and is home to 5,000 creatures. A separate tank features jellyfish.

APPENDIX B

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Collateral Material List

Customer service improvement materials were provided by many of the airports interviewed for this project. These materials can be accessed through the URLs provided. The materials include:

1. Airport/Customer Service Organization Charts

    a. Hartsfield-Jackson Atlanta International Airport–OMT Org Chart Jan 2015 file
       https://www.dropbox.com/s/r3gz59w23hkrkji/ATL%20-%20OMT%20Org%20Chart%20Jan%202015%20%5BRead-Only%5D.pdf?dl=0

    b. Cincinnati/Northern Kentucky International Airport–Kenton County Airport Board Organization Chart Executive/Senior Management, KCAB Organization Chart file
       https://www.dropbox.com/s/8dx0pojcgkgz4rp/CVG%20-%20KCAB%20Organization%20Chart.pdf?dl=0

    c. Tampa International Airport–Official TIA Organizational Chart file
       https://www.dropbox.com/s/zjcysmczed96qa7/TPA%20-%20Official_TIA_Organizational_Chart.pdf?dl=0

d. Tampa International Airport–Guest Services Department, Guest_Services_Org_Chart_Jan_2016 file
https://www.dropbox.com/s/y6e7gt0o9w26cqq/TPA%20-%20Guest_Services_Org_Chart_Jan_2016.pdf?dl=0

2. Customer Service Plans

a. Cincinnati/Northern Kentucky International Airport—Redefining CX to Complete in the Marketplace, CVG Redefining CX October2014 file
https://www.dropbox.com/s/2qf0trrv1w185ry/CVG%20Redefining%20CX%20October2014.pdf?dl=0

b. Jacksonville International Airport–JAA Business Plan Customer Service 2012–2015, JAA Customer Service Business Plan file
https://www.dropbox.com/s/2sqcitztgfl79z6/JAX%20-%20JAA%20Customer%20Service%20Business%20Plan.pdf?dl=0

c. Seattle International Airport–Mission-Strategies-Values, Port Strategies 10-14
https://www.dropbox.com/s/so23uph8vlbv1en/SEA%20-%20PortStrategies10-14.pdf?dl=0

3. Customer Service Standards

a. Port Authority of New York and New Jersey—Customer Care Airport Standards Manual, Airport, 5th Edition, CC Standards file
https://www.dropbox.com/s/hob37jrrgvrr0qj/Port%20Authority%20New%20York%20New%20Jersey%20Customer%20Care%20Airport%20Standards%20Manual.pdf?dl=0

b. Houston Airport System–Houston Friendly Standards, HAS Standards Brochure file
https://www.dropbox.com/s/zxr3k89ocusfh40/HAS%20-%20Standards%20Brochure.pdf?dl=0

4. Customer Service Airport-wide Programs

a. Hartsfield-Jackson Atlanta International Airport–OneATL Program, ACRP Info_June 2015 file
https://www.dropbox.com/s/yrs4jers5qo1k5g/Hartsfield-Jackson%20ATL%20OneATL%20Program%2C%20ACRP%20Info_June%202015%20file.pdf?dl=0

b. McCarran International Airport–McCarran At Your Service (MAYS) in collaboration with the airport community, MAYS Flyer v2 file
https://www.dropbox.com/s/m9uz8fm53qe3tvf/LAS%20-%20McCarran%20At%20Your%20Service%20%28MAYS%29%20in%20collaboration%20with%20the%20airport%20community%2C%20MAYS%20flyer-v2.pdf?dl=0

c. Los Angeles International Airport–LAXceptional Xperience LAX Guest Experience Information Sheet, Guest Experience Information Sheet 9 8 15 file
https://www.dropbox.com/s/kfc98eu3ta4z3xv/LAX%20-%20Guest%20Experience%20Information%20Sheet%209%208%2015.pdf?dl=0

d. Los Angeles International Airport–LAXceptional Xperience How YOU Can Create An LAXceptional Xperience Guidelines, Guidelines file
https://www.dropbox.com/s/qwp9080kccq182i/LAX%20-%20Guidelines.pdf?dl=0

e. Los Angeles International Airport–Airport Response Team (ART) Procedures Manual, ART Manual file
https://www.dropbox.com/s/ys1mqnnojm4rher/LAX%20-%20ART%20manual.pdf?dl=0

5. Customer Service Training

a. Charlotte-Douglas International Airport, CLT Customer Service Video file
https://www.dropbox.com/s/2mgdw74kjcstoam/CLT_Customer-Service_Video.wmv?dl=0

b. Houston Airport System–Houston Friendly Customer Service Training Class, Houston Friendly Customer Service Training (Snapshot) file
https://www.dropbox.com/s/7aiz30cugkntb2x/HAS%20-%20Customer%20Service%20Training%20%28snapshot%29%20%5BRead-Only%5D.pdf?dl=0

c. Port Authority of New York and New Jersey–Port Authority Customer Care—Aviation's Customer Care Training Program, EWR_ 60 min_12-15 file
https://www.dropbox.com/s/gw13t0wghix4if0/EWR_60min_06-14%20with%20videos.ppt?dl=0

d. Port Authority of New York and New Jersey–Port Authority Customer Care Program–12 Most Frequently Asked Questions, EWR-JFK-LGA_12 Most Asked Questions file
https://www.dropbox.com/s/tl5yn5ettfijevd/PANYNJ%20-%20LGA_12%20Most%20Asked%20Questions.pdf?dl=0

6. Customer Service Rewards and Recognition Programs

  a. Houston Airport System–Houston Friendly Rewards & Recognition Roundup, HAS-Rewards Program file
  https://www.dropbox.com/s/7r2gcawr89bziuv/HAS%20-%20REWARDS_PROGRAM.pdf?dl=0

7. Customer Satisfaction Survey Results Presentations

  a. Charlotte-Douglas International Airport, CLT On-Airport Customer Satisfaction Survey Results 2014 Year End Results, CLT 2014 Year End Report file
  https://www.dropbox.com/s/c4efsvu5o7nucjh/CLT%20-%202014%20Year%20End%20Report.pdf?dl=0
  b. Tampa International Airport–Integrating ASQ into Airport Branding Research, ASQ 2014 Presentation Final file
  https://www.dropbox.com/s/i0tda6sqozx8qra/TPA%20-%20ASQ%202014%20Presentation%20FINAL.pdf?dl=0

8. Volunteer Programs

  a. Charlotte-Douglas International Airport–CLT Airport Volunteer Program Quick Reference Guide, 2015 Org–Final 2-2-15 file
  https://www.dropbox.com/s/3nk51h5vnzixi2a/CLT%20-%202015%20QRG%20-%20FINAL%202-2-15.pdf?dl=0
  b. Los Angeles International Airport–Pets Unstressing Passengers (PUP) Handbook, pup Handbook file
  https://www.dropbox.com/s/pmipqtt8svsc8sn/LAX%20-%20pup%20handbook%202.pdf?dl=0

9. Customer Communications

  a. Gerald R. Ford International Airport—Airport Connections, Connections Spring 14 file
  https://www.dropbox.com/s/ztvwopfdenjwn8h/GRR%20-%20Connections%20Spring%2014%27.pdf?dl=0

Abbreviations and acronyms used without definitions in TRB publications:

A4A	Airlines for America
AAAE	American Association of Airport Executives
AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
ACI–NA	Airports Council International–North America
ACRP	Airport Cooperative Research Program
ADA	Americans with Disabilities Act
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATA	American Trucking Associations
CTAA	Community Transportation Association of America
CTBSSP	Commercial Truck and Bus Safety Synthesis Program
DHS	Department of Homeland Security
DOE	Department of Energy
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FAST	Fixing America's Surface Transportation Act (2015)
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
HMCRP	Hazardous Materials Cooperative Research Program
IEEE	Institute of Electrical and Electronics Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITE	Institute of Transportation Engineers
MAP-21	Moving Ahead for Progress in the 21st Century Act (2012)
NASA	National Aeronautics and Space Administration
NASAO	National Association of State Aviation Officials
NCFRP	National Cooperative Freight Research Program
NCHRP	National Cooperative Highway Research Program
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
PHMSA	Pipeline and Hazardous Materials Safety Administration
RITA	Research and Innovative Technology Administration
SAE	Society of Automotive Engineers
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (2005)
TCRP	Transit Cooperative Research Program
TDC	Transit Development Corporation
TEA-21	Transportation Equity Act for the 21st Century (1998)
TRB	Transportation Research Board
TSA	Transportation Security Administration
U.S.DOT	United States Department of Transportation

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