Airport broadband infrastructure solutions
As an airport operating authority, you know that facing major challenges is “business as usual.” These days, they seem more intense than ever. To start, governments have mandated tighter security, with a much higher cost for people and equipment. Current economic conditions and higher fuel costs are wreaking havoc with most major airlines, lowering current and future airport revenue.

You’re also seeing lower revenues for other reasons, including loss of concessionaires and reduced use of public pay phones as travelers increasingly rely on their cellular devices. To respond to these drivers, you’re likely to look for alternative revenue streams and ways to improve operating efficiency.

HP understands that accomplishing this is, in itself, a challenge. With its diverse, independently managed physical and functional areas, the airport environment is highly complex. Airlines have authority over executive lounges, while airport operators control shared and public areas at gates, open lounges, and open places. Service providers have authority over their own physical spaces. Many areas of the airport are often highly congested with passengers.

Data communications within the airport operating authority, between airlines, and among the variety of service providers and tenants that populate an airport are typically provided by a myriad of network types, each with different functionality and performance requirements. Multiple independent, wired networks support most of the operational needs of airlines and other tenants. These various systems weren’t designed for sharing resources between airlines. When physical constraints are added, sharing becomes even more problematic. Because the typical architecture is difficult and expensive to change, resource re-allocation is cumbersome—and existing systems can soon become obsolete.

Compounding these factors is the need for complete security in your 24 x 7, mission-critical environment.

“With the HP ramp-handling solution’s wireless terminals, we can tell our teams of major changes to operations—such as aircraft gate changes . . . even more importantly, our staff can easily record operational information.”
Bordford Kwan, automation manager, Hong Kong Airport Services
Emerging solution: Broadband wireless infrastructure

In certain types of airport applications and backbone infrastructures, wired networks and communications systems still have their place. But, for many airports, there can be major short- and long-term advantages to implementing a common broadband infrastructure including wireless technology. This new infrastructure can completely replace the existing legacy network, or it can act at the network edge, interfacing with existing technology. In either case, wireless communication can offer distinct advantages over fixed, land-based wired networks:

- Anytime, anywhere services for all airport stakeholders
- Ability of airport entities to operate autonomously while sharing resources
- Real-time information access for aircraft and vehicles
- Easier reconfiguration, both logical and physical
- Easier system expansion for new locations, applications, and services
- Introduction of new business models, including mobile gates, services, and other applications that improve operating efficiency and reduce congestion
- Enhanced processes, passenger flows, and fast-tracks
- Highest security levels without performance compromises
- Ability to leverage legacy infrastructure
- Lower investment and operating cost
- Ability to consolidate voice and data networks—and eliminate need for radio communication system—by utilizing wireless Voice over Internet Protocol (VoIP) systems

Success story
Handling aircraft more efficiently at Hong Kong’s International Airport

Challenge: Hong Kong Airport Services (HAS), which provides ramp handling at the new Chek Lap Kok Airport in Hong Kong, needed to speed ramp-handling operations.

HP solution: Wireless-enabled ramp management solution:
- Enables control room staff to “see” entire airport using computer terminals
- Links to airport-specific databases and SITA
- Covers finance and accounting, shift rostering, time attendance, and human resources management

Benefits:
- Up-to-the-minute operational information for ramp workers
- More efficient staff deployment across the airport
- More accurate records for airline customers
- Less radio-based voice communication “clutter”
- Greater ramp-handling productivity
Wireless opportunities: Increase efficiency and profitability

As an airport operator, you capitalize on broadband wireless technology in three key ways:

- **Serve your staff and increase efficiency by providing wireless applications.** You can “wireless-enable” many of your existing or new applications and business functions—from e-mail and operations applications to audio/video streaming, tenant site-statistics reporting, and wireless IP telephony. Doing this for existing applications may require little or no change to the applications. You can also create quality of service (QoS)/class of service (CoS) levels backed by service level agreements (SLAs) and “price” them based on priority and usage, with either time or bytes as the metric. You or your agent can manage the network and gateway and provide authentication, activation, accounting, and data security. By wireless-enabling your applications, your staff receives greater assurance that they will have the level of service needed to effectively run their operation.

- **Serve your staff and tenants by providing wireless bandwidth.** By creating and deploying an airport-wide, common, high-speed Ethernet environment connected to a broadband wireless LAN, you can cost-effectively overcome bandwidth limitation for all airport applications. A common infrastructure enables you to eliminate disparate networks created by various tenants, along with transmission conflicts and problematic security issues. By using virtual private network (VPN) and security services, you ensure the appropriate levels of security required by your tenants and government regulations. With a properly sized system, you can establish levels of service, allow your tenants to sign up for what they need now, and let your tenants change to different service levels as their needs evolve—all without having to make costly infrastructure changes. A major incentive for tenants is that they are assured of the bandwidth and security they need without having to undertake capital programs that directly hit their balance sheets.

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**Success story**

**Improving information flow at a large European airport**

<table>
<thead>
<tr>
<th>Challenge: Become an “airport of the future” by providing mobile access to information to travelers and airport workers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>HP solution:</strong> A secure, managed, wireless LAN infrastructure serving all internal spaces, all exterior gates, and selected aprons</td>
</tr>
<tr>
<td><strong>Benefits:</strong> Mobile access to baggage, office, and flight information</td>
</tr>
</tbody>
</table>

For many airports, there can be major advantages to implementing a wireless broadband communications infrastructure.
Serve your public by providing value-added, wireless services. Many carriers, operators, and wireless Internet service providers (WISPs) deliver high-speed, wireless access to mobile public users in “hotspots,” such as airports and other densely populated facilities. Services include a high-speed public wireless LAN (PwLAN) that enables business travelers to access their corporate intranets using devices already provided by their company and have access to e-commerce, entertainment, and other applications provided by third parties. Once you establish a private-use, broadband wireless infrastructure, all that’s needed for you to offer PwLAN to the traveling public is to install a commercially available hotspot management system. Hotspot services pricing can be flat-rate, prepaid, or by the minute or byte. If you want to minimize your risk but still share in the revenue generated by these offerings, you can let others provide the service.

Today, these broad services are offered by a number of airport authorities around the globe. Each of these services can also provide your airport authority with significant benefits: additional revenue potential, differentiation from other airports, greater internal efficiency with lower operating costs, and a visitor-friendly environment. However, the ability to offer these services in combination allows you to provide a highly flexible, wireless environment that can meet the diverse needs of all airport stakeholders and travelers.

- At Hong Kong International Airport, aircraft turnaround times have been significantly reduced using a wireless ramp-handling system.
- Wireless-Fidelity (Wi-Fi) LAN and even-faster Evolution Data Only (EvDO) wireless technologies support the download of information and graphics at faster than cable modem and DSL speeds.
- At two major European airports, operating authorities are generating additional revenue by providing a wide range of wireless services to airlines, concessionaires, other tenants, and the traveling public.
- The cost of a broadband wireless infrastructure is significantly less than the cost of installing and operating less-flexible wired alternatives.
- Using today’s wireless technology, air and ground crews can share textual and graphical information in real time.
- Today, at least one European-based airline is offering free wireless Internet access for certain classes of passengers on their planes, a trend that definitely will continue.

Generate additional revenue by providing a wide range of wireless services to airlines, concessionaires, other tenants, and the traveling public.
HP has the airport industry know-how, real-life experience, technical expertise, and product offerings to plan, design, implement, manage and support end-to-end wireless and land-based business applications and broadband networks for operators, carriers, and other public and private airport users.

How HP can help
Few airports have the on-board staff or technical expertise to plan, design, and fully implement a broadband wireless infrastructure, along with the other technologies that accompany these solutions—optical devices, application integration, mass storage, security, and post-launch network management and marketing. As a result, many airports seek professional help from a variety of consulting firms, systems integrators, network hardware vendors, carriers, and specialized wireless companies. But, coordinating all these technologies and vendors can be difficult.

By providing turnkey solutions, total project management, and a proven approach, HP can help you exploit wireless and supporting technologies in the fastest way, with minimal inconvenience to your stakeholders. Our goal is simple: to help you create a more productive, flexible, value-added working environment for your tenants and business travelers—and a more efficient and profitable operation for you.

HP will support you throughout the entire project
HP is not just offering a piece of the solution. HP has everything it takes to build a flexible, scalable, and secure broadband wireless infrastructure, including all necessary computing hardware, mobile access devices, public and private wireless LANs (WLANs), applications, and middleware—plus the services to bring it all together. We’ll work with you from the strategizing and design stages, then help you build, integrate, manage, and evolve your complete end-to-end system. Or, we can get involved at any stage of the process—whatever makes the most sense given your business needs and state of readiness.

Our comprehensive offering includes these key features:

**Consulting, strategizing, assessment, design, staging, and installation**—Business and technical consulting, along with complete technical services required for your total broadband wireless solution.
HP has recently been selected to provide a broad range of engineering, operational, maintenance, and Hotspot Management services at Toronto Pearson International Airport. The new turnkey wireless infrastructure will complement the airport's existing WLAN and support existing applications, including the Baggage Reconciliation System, Baggage Tracking System, and Common-Use Self-Service (CUSS) system. HP will provide a security solution for the new and existing systems; integrate the new infrastructure with the airport campus area network; ensure the new infrastructure's ability to interface with a future PwLAN for travelers; and provide outdoor coverage for wireless maintenance/operation, vehicle location, and vehicle identification applications.

HP is also providing these outsourced services:

- Project management—including planning, scheduling, reporting, equipment ordering, delivery tracking, technical support services allocation, and third-party vendor management
- End-user application development
- Service level agreement (SLA) maintenance
- Help desk, system monitoring, and maintenance to meet the airport authority's SLAs
- Marketing of wireless services to both private and public end users
- Billing system metering, reporting, and input provision
- Integration of the airport authority's directory, application, and billing interfaces
- Leasing of hardware and services to tenants
- Training facilities and support

**Systems integration**—Integration of all the pieces from all vendors to deliver a complete solution for voice, data, and multimedia, based on an open, scalable architecture. We’ll also link in local and external industry networks, databases and systems. As systems integrator, we typically provide overall project management and a single point of accountability. However, we can also share project management responsibility with your existing or preferred vendors, if that's more appropriate.

**Mobile devices and applications**—Handheld devices such as the HP iPAQ, new tablet PCs such as the Compaq Evo Tablet PC, laptops, ruggedized terminals, and Bluetooth and Biometrics devices for ground crews and flight crews who work at the gate or anywhere else in the airport.

**Applications**—Planning, design, and implementation of new, customized wireless applications; or modifications to existing, non-mobile applications for your wireless environment, as needed. HP can also provide the technology that powers these applications and integrate existing and new applications. Working with leading third-party developers, HP has already created wireless applications for a number of the verticals that make up the tenant body within major airports. (See HP's Wireless Solutions on pages 8 and 9.) HP is working with its partners to develop additional wireless airport applications for a variety of access devices, including PCs, PDAs, laptops, and Tablet PCs. In cases where applications are needed but don’t exist, HP and its partners will create them. We’ll also work closely with our partners to build wireless applications for operations and concessionaires when you want to extend service to the public.

**Security**—Consulting, planning, and design for your security solution.

**Technology transfer**—Extensive training in the use and management of the wireless infrastructure, supporting devices, and applications.

**Managed services**—A range of outsourced services, from user help desk and Hotspot Management to total infrastructure outsourcing and marketing of services/products to your tenants and the public.

**Mission-critical support**—Post-launch monitoring and maintenance support to ensure the highest levels of availability for your mobile platforms and applications.

**Billing**—A complete, real-time billing, settlement, and credit-card-processing solution that provides the PwLAN billing interface to your wireless infrastructure. HP has deployed this solution at selected Hilton and Sheraton hotels and Starbucks outlets as part of our Hotspot Management service.

**Financial**—Innovative leases and asset management services through HP Financial Services. HP’s size, experience, ability to finance all IT equipment and software, and strong relationships with value-added resellers and manufacturers allow us to tailor a leasing program that will meet your tenants’ needs and yours. Our financial services have competitive rates, flexible terms, tracking of leased assets, technology refresh options, supplier neutrality, and multivendor solutions.
HP is working closely with best-of-breed airport industry application developers to assemble a suite of integrated airport mobility solutions and services. The following table provides a list of some key applications in the suite.

<table>
<thead>
<tr>
<th>Wireless solution/service</th>
<th>Provides end users with</th>
<th>Benefits to airport operator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public wireless LAN (PwLAN)</td>
<td>• Access to Internet, corporate intranets, and e-mail</td>
<td>• Promotes visitor-friendly environment</td>
</tr>
<tr>
<td></td>
<td>• Access to third-party information, entertainment, and e-commerce</td>
<td>• New source of revenue</td>
</tr>
<tr>
<td></td>
<td>• “Loyalty” services</td>
<td></td>
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<tr>
<td>Printing</td>
<td>• Fast anywhere, anytime printing of text and graphics for operations,</td>
<td>• Traveler convenience</td>
</tr>
<tr>
<td></td>
<td>public and private users, without cables or printer drivers</td>
<td>• New source of revenue</td>
</tr>
<tr>
<td></td>
<td>• Works with laptops, PDAs, and other mobile devices</td>
<td>• Eliminates need to run cabling for tenants or airport operator staff</td>
</tr>
<tr>
<td>Baggage tracking and</td>
<td>• Wireless bag match</td>
<td>• Track every bag and container</td>
</tr>
<tr>
<td>reconciliation</td>
<td>• Wireless barcode reader</td>
<td>• Reduce passenger processing time</td>
</tr>
<tr>
<td></td>
<td>• Wireless Radio Frequency Identification (RFID) tags</td>
<td>• Minimize misdirected luggage</td>
</tr>
<tr>
<td></td>
<td>• Instant streaming of video and images to security staff</td>
<td>• Reduce time to locate loaded baggage</td>
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<tr>
<td>Security and surveillance</td>
<td>• Wireless surveillance</td>
<td></td>
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<tr>
<td></td>
<td>• Mobile security checkpoints</td>
<td></td>
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<tr>
<td></td>
<td>• Perimeter surveillance</td>
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<tr>
<td>Retail</td>
<td>• Wireless point-of-sale kiosks for car rentals, hotels, and restaurants</td>
<td>• Increased revenue</td>
</tr>
<tr>
<td></td>
<td>• Wireless advertising and concessions to mobile-enabled customers</td>
<td>• Targeted marketing</td>
</tr>
<tr>
<td></td>
<td>• Access to maintenance information</td>
<td>• Location flexibility</td>
</tr>
<tr>
<td></td>
<td>• Refueling and catering scheduling</td>
<td></td>
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<tr>
<td></td>
<td>• Real-time billing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Cargo, baggage, mail, and courier handling</td>
<td></td>
</tr>
<tr>
<td>Ramp handling</td>
<td>• Mobilization of fixed, common resources at gate</td>
<td>• Easily manage and monitor resources</td>
</tr>
<tr>
<td></td>
<td>• Roaming agents utilizing PDAs and tablet PCs</td>
<td>• Help meet SLAs and airline on-time reporting requirements</td>
</tr>
<tr>
<td></td>
<td>• Voice communications with supervisors, experts, and crews</td>
<td>• Improve productivity</td>
</tr>
<tr>
<td></td>
<td>• Permanent access to check-list, guidance material, and databases</td>
<td>• Reduce gate delays</td>
</tr>
<tr>
<td></td>
<td>• Voice communications with supervisors, experts, and crews</td>
<td>• Improve turnaround time</td>
</tr>
<tr>
<td></td>
<td>• Flight information, concession discounts, and ground transportation information</td>
<td></td>
</tr>
<tr>
<td>CUTE (common user terminal</td>
<td>• Wireless curbside or roaming agent ticketing and baggage check-in</td>
<td>• Personalization</td>
</tr>
<tr>
<td>equipment)*</td>
<td>• Full telephony functionality—including display, multiple-line appearances, message</td>
<td>• Pager, e-mail, or voice notification</td>
</tr>
<tr>
<td></td>
<td>waiting indication, and messaging—over the wireless LAN using PDAs</td>
<td>• Improved customer experience</td>
</tr>
<tr>
<td></td>
<td>• Excellent voice quality</td>
<td></td>
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<tr>
<td></td>
<td>• No need for separate wireless telephony infrastructure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Roam indoors and outside</td>
<td></td>
</tr>
<tr>
<td>Maintenance, repair, and</td>
<td>• New services to airlines, agents</td>
<td>• Location flexibility</td>
</tr>
<tr>
<td>overhaul</td>
<td>• Voice communications with supervisors, experts, and crews</td>
<td></td>
</tr>
<tr>
<td>IDS (flight information</td>
<td>• Flight information, concession discounts, and ground transportation information</td>
<td>• New services to terminal design</td>
</tr>
<tr>
<td>display systems</td>
<td>• Voice communication anywhere within the airport campus</td>
<td>• Less expensive host access from remote areas</td>
</tr>
<tr>
<td></td>
<td>• Reduced congestion</td>
<td>• Additional revenue from service provided to tenants</td>
</tr>
<tr>
<td>Ticketing and check-in</td>
<td>• Improved passenger throughput</td>
<td>• Lower airport operator costs by eliminating telco operator charges</td>
</tr>
<tr>
<td></td>
<td>• Better customer experience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Location flexibility</td>
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<tr>
<td>VoIP communications</td>
<td>• Voice communication anywhere within the airport campus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Full telephony functionality—including display, multiple-line appearances, message</td>
<td>• Additional revenue from service provided to tenants</td>
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<td></td>
<td>waiting indication, and messaging—over the wireless LAN using PDAs</td>
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<td></td>
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</tr>
<tr>
<td></td>
<td>• Roam indoors and outside</td>
<td></td>
</tr>
<tr>
<td>Parking payment</td>
<td>• Mobile phone activated or PDA activated</td>
<td>• Reduces congestion at pay stations</td>
</tr>
<tr>
<td></td>
<td>• Corporate accounts</td>
<td>• Improves customer experience</td>
</tr>
<tr>
<td></td>
<td>• E-mail receipts to users</td>
<td></td>
</tr>
<tr>
<td>Licensed mobile telephony</td>
<td>• In-building radio frequency system, which provides additional mobile phone channel</td>
<td>• Enhances security, safety, and convenience for both travelers and</td>
</tr>
<tr>
<td></td>
<td>capacity during emergencies and weather delays</td>
<td>airport employees using mobile phones</td>
</tr>
<tr>
<td></td>
<td>• All information, including voice, treated as packetized data suitable for delivery</td>
<td></td>
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<tr>
<td></td>
<td>over the WLAN</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Technology provided by RadioFrame Networks</td>
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</tbody>
</table>
Success story
Scandinavian Airline Systems, Oslo, achieves faster turn around of aircraft

Challenge: Enable maintenance crews to be connected while on the move and to have the ability to generate hardcopy without returning to base

HP solution:
- Roaming between aircraft terminal WLAN and maintenance base LAN+WLAN
- GPRS coverage between base and terminal building
- Maintenance crew PC used at base and in vehicle

Our comprehensive offering includes key features such as mobile devices and applications for ground crews and flight crews who work at the gate or anywhere else in the airport.
Comprehensive solution and design methodology by HP ensures success

HP applies a rigorous, multi-step solution and design methodology to ensure successful implementation of your wireless infrastructure. We begin by clearly identifying both your stakeholders’ business and application needs and yours. We then proceed to:

- Assess your existing network infrastructure, back-end systems, and airport security policies
- Plan and design your complete solution architecture, including means of access, network and supporting systems, management, and security measures

Success story

Iberia Airlines makes travel more convenient

**Challenge:**
- Improve management of personnel on ramp
- Create more efficient working practice
- Provide added flexibility for changing flight schedules and workers at an airport serving 1300 flights daily

**Solution:**
- Public wireless LAN throughout main terminal and three concourses
- HP, in partnership with Nokia, architects and designs wireless network, including security, radio access, and Internet connectivity

**Impact:** Passengers can access Internet for updated travel information while in transit

- Model your network in detail, characterize all applications, and identify total bandwidth requirements
- Identify preliminary access-point locations, antenna types, radiation patterns, power levels, and channel assignments using computerized radio frequency (RF) simulation; HP’s sophisticated network planning, modeling, and simulation tools enable you to “see” the performance and functionality your new solution can deliver even before surveys or pilot programs are initiated
- Verify RF simulation results and establish the optimal, final wireless infrastructure access-point locations by taking onsite measurements throughout the airport
- Perform pilot trials to verify solution performance and functionality prior to full solution implementation
- Make any needed corrections based on the pilot trials, and then implement the full solution

Anticipating the unexpected

HP realizes that unplanned events and issues always arise during the course of any complex project. That’s why our detailed project plans consider a variety of contingencies. Our formal, proven risk-management process, which is part of our formalized Quality Program Management (QPM) methodology, minimizes the exposure from both expected and unanticipated events, including change requests, delays, and acceptance test results. HP’s “ahead-of-the-curve” risk management processes are continually upgraded to meet or exceed the Program Management Institute’s Project Management Body of Knowledge and are designed to eliminate surprises.
Rock-solid user security
HP also realizes that your tenants’ and your own mobile users require extremely high security and confidentiality. Our mobility solutions incorporate a variety of technical and managerial features to achieve this goal, including role-based access control, two-factor authentication, firewalls, virus detection and filtering, session and file encryption, user profile checking, security management, device security, and security policy enforcement. Our public-use solutions also incorporate built-in security, including intrusion detection and prevention measures. Our security solutions allow public and private users to utilize the same wireless network with total confidentiality—neither class of user can access the other’s information.

We’ll provide a level of security that’s appropriate for any user—everything from requiring a password at login to highly complex encryption and authorization controls. We’ve been successfully providing security services to our clients—including stock exchanges, banking institutions, and government agencies—for more than 30 years.

You’ll know exactly how your project will be implemented
HP firmly believes that, as our client, you have the right to expect a successful project—and to understand how we intend to perform the effort, from beginning to end. To achieve these objectives, we carry out a comprehensive planning process that includes the following deliverables:

- **Implementation plan**—Defines schedules, financing, team composition, resource management, constraints, risk mitigation, contingencies, and customer requirements. The plan also includes detailed milestones, dependent and interdependent activities, construction timelines, subcontractor work packages, and critical paths required to meet your installation timeframe. We consider any construction projects in process at your airport, as well as security and aesthetic requirements.

- **Program plan**—Addresses all essential program attributes, such as contract compliance, points of contact, technical plans, work breakdown structure, budget constraints, risk mitigation, contingencies, quality requirements, and project team composition.

- **Operation and maintenance (O&M) plan**—HP O&M services provide solution monitoring, corrective actions such as technician dispatch, access and security requirements for onsite visits, data needed for statistics and billing, and maintenance program details.
Our proposed solution will be based on today’s leading-edge technology and will also take into consideration those technologies we expect to reflect best practices in the future.

- **Security plan**—Defines technical and managerial features that ensure private user confidentiality, as well as fraud detection and prevention measures as they apply to public usage.

- **Tenant marketing plan**—HP marketing for private-user wireless can act as your agent in targeting promotions, demonstrations, rapid-deployment pilots, and hands-on trials.

- **Public marketing plan**—HP marketing for public-user wireless can act as your agent in promotion and marketing of entertainment, information, e-commerce, and productivity services. This plan typically implements a mix of marketing and promotional activities to enlist support from technology partners such as Intel®, Cisco, and iPass and from airlines that promote the services. We base our marketing and promotional programs on similar programs that were successfully implemented in other markets, including holding seminars targeted at enterprises located near your airport.

Once we complete the planning effort, we’ll meet with you to discuss each of these plans, answer your questions, and make sure you know precisely how we intend to carry out every project phase.

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**What makes HP different?**

HP differs from other wireless vendors and carriers in several important ways:

- **We focus on your business needs**—HP believes that you will get the right solution if we first explore and understand your business and application needs and your vision. Our experienced staff and partner teams have worked in the travel, transportation, and airline industries in both business and technical capacities. With a clear understanding of your goals, we’ll use our structured methodology to design the right solution for you and provide ROI calculations.

- **Our architectural skills are multi-disciplined**—Our solution architects are experts in more than just wireless networking and related technologies. They also bring an understanding of security, business modeling, and airport operations to the task to make sure your solution meets your business needs.

- **We develop future-looking solutions**—HP constantly monitors new technologies, such as wireless network printing, location-based services, and seamless network roaming, and integrates those that can add even more value to your wireless infrastructure. Our proposed solution will be based on today’s leading-edge technology and will also take into consideration those technologies we expect to reflect best practices in the future. We’ll work with you and your tenants to determine when and how to introduce new technologies and establish a solution roadmap for optimal protection of your investments.
• **We offer alternatives**—Before we even start writing our proposal, we’ll evaluate your current and future needs from both a business and an operational perspective. We’ll then propose detailed, alternative solutions to achieve your goals. You select the solution that best meets your business needs.

• **We offer flexibility**—As systems integrator, we can orchestrate your entire solution or just a part of it. We can also provide total post-launch operation and maintenance of your infrastructure, as well as hotspot marketing and business management to your tenants and the public. If it makes sense, we’ll develop a wireless solution that complements your existing LAN or WLAN infrastructure, as we’ve done successfully for others. We’ll also work closely with your preferred vendors and maximize the use of your existing devices and capabilities. For example, airports in a European country may prefer their own national telecom company. We work with that company as a team to share design work and transfer our knowledge and expertise. We always strive to maximize the use of existing infrastructure and not lock in third-party vendors up front. Typically, we recommend an optimal combination of products and vendors only after we conduct a radio frequency survey and design your wireless infrastructure.

• **We offer marketing support**—HP is the only wireless infrastructure vendor that will also assist you in marketing your wireless products and services to both private and public users. We can offer this service using our own experts or in conjunction with a proven partner. Our private-user marketing services are designed to convince your tenants to access their existing applications via your new broadband wireless infrastructure, to convert existing land-based applications to mobility solutions, and to create new mobility applications. HP will design trial programs and create rapid-deployment mobile pilot offerings to demonstrate how your new wireless infrastructure can meet your tenants’ needs. Our public-user marketing service will promote use of your public WLAN by creating unique marketing programs. For example, you can work with airlines to print promotional vouchers, an access code, and instructions on how to connect to the WLAN—right on the boarding pass.

• **We have pilot and simulation programs**—We offer easy ways to pilot our solutions to help ensure success. We developed a low-cost pilot for a wireless hotspot that helps demonstrate performance and benefits before the airport makes major commitments.
Why HP for airport mobility solutions

Airport operations expertise—Our consulting staff includes individuals with many years’ experience in airport business operations, airport communications networks, and other leading-edge technologies and products used at major airports and transportation hotspots. (See “HP: A leading provider.”)

Depth—HP is the global leader in many key IT services areas (see “HP: A leading provider”) and has the industry’s largest channel partner network.

Breadth—For many years, HP has provided “traveler transportation” solutions for all modes of transportation. We also have world-class experience in all aspects of networking, computing, and enterprise systems.

Facilities and staff—HP has:

• 105 response and operations centers worldwide
• 80 customer education centers
• 15 SAP/HP Competency Centers
• 65,000 service professionals in 160 countries

Mobility solution experience—With more than 30 years of experience in networking and systems integration, HP has “mobilized” hundreds of enterprises and millions of mobile users around the world. Our end-to-end wireless infrastructure solutions include industry-leading mobile access devices and industry-standard servers, as well as partnerships with the world’s leading applications providers.

Teaming—HP works with leading partners to develop comprehensive, best-in-class wireless solutions in these functional areas:

• Hotspot management—Cisco and Aptilo
• Billing settlement—iPass and Gric
• Wireless carriers—All major carriers
• Security—Bluesocket, F-Secure, and Cisco

When you turn to HP for your broadband wireless infrastructure, you’ll receive:

• Practical mobility solutions knowledge
• A world-class partner
• Quick, effective solutions deployment that minimizes your risk
• The most innovative handheld platforms

For more information
To learn more about HP mobility solutions, contact your HP sales representative or visit us on the Web at www.hp.com/services and www.hp.com/go/mobility.