

Foresight

Smart devices, smarter airports

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Mobile technologies are creating valuable opportunities for the airport sector. But it will take more than slick new apps and devices to unlock the benefits of new technology. Are airports ready?

Passengers flying through Miami International Airport (MIA) are traveling smarter and enjoying an innovative, personalized passenger experience that MIA has created by integrating airport services, concessions, and mobile technology.

The MIA Airport Official mobile app (developed by SITA, a global air transport IT company) provides visitors with much of the functionality that consumers now expect from their mobile devices. Updates on gates, flight times, baggage carousel numbers, and personalized recommendations about nearby restaurants and shops are all available on the app. The next iteration of the app will also include turn-by-turn directions, estimated walk times, and a 'near me' feature.¹

MIA is but one of many players in the sector implementing mobile technologies (such as widely distributed bluetooth beacons) to gather data that can drive efficiency and customer satisfaction in airports. HMS Host, one of the world's largest airport restaurant operators, offers travelers a free mobile app that helps locate the nearest restaurant, displays menus, and allows passengers to preorder and pay for meals.² The system is already in use in at eight major US airports. Other large airport service providers are not far behind, nor are major technology providers. Google Maps has partnered with several airports to provide indoor maps of terminals to aid passengers in navigating airport facilities, making flight connections, and helping airports better publicize terminal offerings.³

Driving operational improvements

Mobile technologies are also rapidly being adopted on the operations side. The International Air Transport Association

(IATA) is working with Eurocontrol and others to roll out the Airport Collaborative Decision Making (A-CDM) system, which leverages mobile technologies to help improve operational efficiency at airports.⁴ The EU-led PASSME consortium is using mobile data to identify critical airport bottlenecks and intends to create a mobile app to improve communication between airport authorities and passengers.⁵

Major airports are also busy implementing mobile solutions to improve operational efficiency. London Gatwick Airport, for example, uses the 'Airport Community' app to seamlessly integrate staff, ground handlers, and airlines with airport data sources.⁶ Configurable alerts ensure that key staff are aware of delays, incidents, and changing weather patterns. The app also provides real-time data on passenger queues and aircraft turnaround performance by both airlines and ground handlers — essential information to keep the world's second-busiest single runway airport running smoothly.

It's not just the established hubs in Europe and North America that are working to integrate technology breakthroughs into their operations and business models. So, too, are the new airports now being built and opened in the developing world. India's new greenfield airports — including Navi Mumbai International Airport and the new Goa International Airport (Mopa) — are making ample use of mobile to improve efficiency and customer satisfaction, from slot allocation to contactless payment solutions for concessions and services. China's plans to build dozens of new airports enabled with in-terminal beacon technology should catalyze further adoption of mobile across the world's airports.

¹ <http://www.sita.aero/pressroom/news-releases/getting-personal-sita-app-takes-miami-international-airport-to-new-heights>

² <https://www.hmshost.com/news/details/hmshost-launches-host2coast-app>

³ <http://www.airport-world.com/news/general-news/6161-sydney-airport-introduces-indoor-google-maps-to-aid-passenger-navigation.html>

⁴ <http://www.eurocontrol.int/articles/airport-collaborative-decision-making-cdm>

⁵ <http://www.passme.eu/>

⁶ <http://www.computerweekly.com/news/4500269843/Gatwicks-Airport-Community-App-using-technology-to-make-life-simpler>

Big challenges ahead

While mobile offers significant value to the airport sector, it will take more than just slick new technology and mobile apps to create sustainable performance and customer satisfaction improvements. Airport owners and operators will need to grapple with a number of unique challenges before they're ready to tap the full value of mobile investments.

Possibly the greatest challenges are related to data. Airports will need to work out how to collect, curate, and communicate huge amounts of structured and unstructured data, streaming in from thousands — potentially millions — of sources. Understanding which data provides value and which is just 'noise' will be a significant challenge for airport owners and operators in the years to come.

Working across the multitude of airport value chain components — airlines, service providers, retailers, operations staff, passengers, flight control and regulators, to name but a few — airport operators will need to develop a clear and robust approach to data governance. Customer data and privacy concerns will need to be addressed and clear agreements and governance policies will need to be created to identify which data is collected, how it is used, who it is used by, and how long it is retained.

Data security will also need to be carefully managed. Access controls will need to be developed and maintained. Firewalls and other cyber defenses will need to be implemented. Employee security training will need to be enhanced and expanded. Potential vulnerabilities will need to be identified and remediated. And response and recovery plans will need to be created.

Airport owners and operators will also likely struggle with significant systems integration challenges. New mobile platforms will need to work with and integrate into existing airport systems and technologies. In some cases, new solutions will essentially 'wrap around' existing technologies and platforms to ease adoption and integration. In other cases, however, significant work will be required to align data, systems, and processes in order to deliver the right information to mobile users at the right time. And all this needs to be developed in a dynamic environment, where technology is constantly changing and new security exposures and traveler expectations are in continuous transition.

At the same time, airport owners and operators will need to work out how to integrate their various 'value chain' components to get the most out of mobile investments. Most airlines and some retailers (like HMS Host) have already invested heavily into building their own mobile platforms; understanding the various interdependencies and customer touchpoints involved in the mobile environment will require significant analysis and planning in a dynamic environment.

Making the most of mobile investments

KPMG's Infrastructure practice has worked with numerous airports around the globe to create and execute technology-driven performance improvement strategies. Based on our experience, we have identified 10 considerations that all airport owners and operators should be thinking about before setting out on their mobile transformation journey.

- 1. Articulate your performance objectives.** Make sure that your mobile technology investments and initiatives align with the overall performance improvements you want to achieve for your airport.
- 2. Create robust data governance frameworks.** Be clear about how data will be collected, manipulated and used, shared, managed, and governed by the airport, its partners, and suppliers.
- 3. Engage your employees.** Consider how mobile technologies will impact current roles and responsibilities, ways of working, and required capabilities.
- 4. Work closely with key partners.** Engage early and frequently with your value chain partners to improve collaboration and uncover new opportunities for value creation.
- 5. Develop a roadmap.** Understand your long-term vision for mobile enablement and create a robust roadmap that can help guide future investment decisions.
- 6. Collaborate with the sector.** Work with industry players to identify and leverage commonalities and best practices from across the sector, developing an outreach plan and schedule.
- 7. Create a data strategy.** Develop a formal enterprise strategy for managing, curating, securing and destroying data generated by mobile devices and platforms.
- 8. Assess the integration challenge.** Take some time to assess your current IT capabilities, infrastructure, and networks to understand the potential scope of the implementation.
- 9. Put the customer first.** Consider how new mobile initiatives — both customer facing and operational — might impact the overall customer experience.
- 10. Prioritize privacy and security.** Understand your regulatory, legal, and customer expectation requirements for cyber security and data privacy.

This is a transformative time in the history of aviation. Rapid improvements in technology and growth in public-private partnerships are generating new opportunities for airport owners and operators on a daily basis. We encourage airports and all aviation stakeholders to embrace these opportunities and establish clear expectations and industry outreach strategies to ensure the needs of travelers, service providers, and industry oversight agencies are addressed today and in the years to come.

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