




Elevating the passenger experience

The world's leading airports have turned to new technologies to stay competent. High time to follow suit?

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Flight delays. Lost luggage.
Gate change mix-ups. A lack of
coordinated travel information
and - perhaps most frustrating
of all - long, unpredictable waits
at check-in, security and
baggage claim.

For airport managers around the world, continually improving the airport experience for passengers can be challenging, to say the least - and the pace is only set to get busier. Passenger numbers are expected to reach 7.3 billion by 2034, more than double the 3.3 billion reached in 2014, the International Air Transport Association predicts.

As throughput rises, airports must also deal with passengers' escalating expectations. Accustomed to sophisticated technology environments both at work and at home, they have grown to expect painless self-service and fast, unfettered access to resources and information.

To further complicate matters, increased competition is driving airfares lower. This means regulated aviation charges are likely to stagnate in many places, amplifying the pressure on airports to identify and improve non-aeronautical revenue sources to remain profitable.

These challenges are forcing many airport operators to rethink how they process passengers, luggage and cargo - which in turn is requiring new business models and initiatives. So, what strategies work?



Enhancing customer experiences

Like customers in other industries, passengers today expect cheaper and faster services from airports. They want real-time information about gate changes and flight delays. They demand streamlined processes for check-in and boarding, and higher levels of personalized services, even though ever-stronger security measures have often heightened passengers' frustration.

With this in mind, leading airports are investing in a plethora of digital technologies to enhance the passenger experience at touchpoints across their journey.

At Copenhagen Airport, for instance, sensor-based predictive modeling is used to measure the passenger flow and waiting times, allowing the airport to allocate staff and optimize every part of the terminal, based on the number of people in one area at any given time.

London's Heathrow and Amsterdam's Schiphol are already trialing self-service biometric passport gates that use facial recognition technology. Singapore's Changi International has implemented an initiative it calls 'FAST' - 'Fast and Seamless Travel' - which involves providing more kiosks for self-check-in, self-bag-tagging and self-bag-drops. Processes at key touch points, such as check-in, and immigration and security clearance, are all streamlined through the use of technology, thus reducing processing times and staffing and improving productivity.

The new technologies can also mitigate security issues. Gatwick, for instance, uses facial recognition technology to make sure queue time in security is always below five minutes. Here, passengers' faces are tracked at four points on their journey through security, to get real-time feedback on how long it is taking - data which is then combined with expected traffic patterns. Security staff can proactively open and close security lanes if required by sending emails to the smartphones of airport employees.

Albert van Veen, Chief Information Officer, Schiphol Group, believes technology will empower passengers. "In a few years' time, an entirely automated and seamless airport journey will see the passenger take complete control," he said. "Thanks to biometric technology, passengers will be able to pass through airport controls without using paper documents. Airlines, meanwhile, will get a smart and efficient airport operations system where they can further increase efficiencies by predicting passenger flows and tracking all their assets. It's a win-win all round."

"Airports today are investing in technology and transforming their business to improve asset and staff utilization, operational efficiencies and revenue growth."

Emre Serpen
Head of global Airport Practice, Wipro

Creating new revenue streams

Non-aeronautical income from operating units, such as parking, retail, advertising, and food-and-beverage providers has long been a vital part of the revenue mix for airports. In turn, leading operators are also testing a host of new technologies to boost these revenue opportunities.

Frankfurt has invested in “virtual shopping walls,” where shoppers scan QR codes on their smartphones to buy luxury goods or groceries.

Changi, Copenhagen and Schiphol are experimenting with beacon transmitters that send Bluetooth signals to smartphones alerting passengers to discounts or special offers - along with information about their flights.

“We now have the tools to bring about a broad process integration among airlines, retailers, fuel providers, caterers, and other ecosystem partners that can create new benefits along the entire value chain,” says Kristian Durhuus, Chief Operating Officer at Copenhagen Airports A/S.

“Developing an end-to-end passenger experience framework that involves both airlines and airports, for example, means there is more scope to up-sell and cross-sell personalized services based on real-time information and status of the travel environment. This could mean offering valet parking to passengers arriving late for a flight, or hospitality services in the event of a delay.”

Developing and implementing a “Digital Airport Strategy” is a considerable task that must take into account where you are and where you need to be. Simply initiating new technologies without a clear plan will not work.

Emre Serpen
Head of global Airport Practice, Wipro

Improving operational efficiencies

Experts agree that technological innovations cannot effectively address the challenges airports face if key players do not work together closely.

For many airports, the next step to consider in their “smart” journey might be a “digital grid” – a single, converged, often carrier-class IP network that can enable high-speed broadband traffic throughout the entire ecosystem. This ecosystem might comprise the airport as well as the surrounding city, logistics, government agencies, and other parties.

“By enabling the exchange of real-time information, deep cross-silo collaboration, and airport-wide process integration, a digital grid can significantly improve operational efficiencies and enhance security capabilities,” says Steve Lee, CIO/SVP (Technology), Changi Airport Group. “It can also take passenger experience to new heights by delivering a range of personalized services enabled by seamless exchange of data to anticipate needed customer services.”

Fit for the future

Significant efficiencies can be gained, as airports embrace the digital revolution, rethinking what customers value most and creating operating models that take advantage of the new technologies for competitive differentiation.

By deploying technologies such as analytics, airport managers can gain an end-to-end view of the passenger experience, thus broadening the value chain to more players and increasing non-aeronautical revenues.

An integrated approach incorporating every touchpoint on the passenger’s journey is enabling leading airports to offer a more consistently satisfying passenger experience.

Could yours be one of them?



About Author

Emre Serpen

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Emre Serpen is the global head of Aviation practice and leads Wipro's innovation and transformation activities in this space. He has been instrumental in developing and executing programs around business improvements, performance management, process modelling and integration for improvements in passenger services. He has also helped clients in the Aviation industry drive operational efficiencies and non-aeronautical improvements and leads marketing and value proposition of Airport transformation programs.

Emre has 30 years of experience in the Aviation industry and has previously established and led global Aviation practices for Intervistas, ICF, Sabre, Cap Gemini and Ove Arup. Emre has a PhD in Cybernetics and B.Sc. in Industrial Engineering.

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