



An airport's guide to a digital future

engineering & construction



Risk Intelligence Solution

When was the last time you booked an air ticket with a travel agent? Can't remember? Don't worry, neither does anyone else. Using mobiles to book air tickets, make hotel reservations and schedule airport rides is just part of the dramatic way travel is changing. There is more: Marriott Hotels is sending its guests to the mountains in Chile and to ice cream shops in Rwanda using Virtual Reality (VR). Australia is enabling document-less travel to New Zealand using passports stored in Cloud. Airports, central to world travel, aren't too far behind. They too are busy reshaping customer experience by leveraging digital technologies such as the Internet of Things (IoT), Augmented Reality (AR), Virtual Reality (VR), mobility, analytics and cognitive computing. Airport operators know that travel is demanding and if they can use these technologies to turn passenger stress into satisfaction, they stand to win by becoming the travel hubs of choice.

For decades, airports looked at passengers as people just walking from kerbside to airside. Even today, passengers have to deal with scores of irritants like security controls, navigating to the right gates, interpreting signage and hunting down simple facilities like charging points. The challenge before airports, facing competitive landing charges, tightening regulations, increasing costs and alternative modes of transport that are taking away passengers, is two-fold:

- Reducing the annoyance from routine travel processes to put passengers in the right frame of mind so that they spend time shopping and consuming value added services
- Acquiring adequate passenger information to improve operations and personalize the travel experience without sacrificing safety and security

Today, technology is creating fresh opportunities to address passengers, operations and retail—the three key areas that differentiate the leaders from the laggards in the highly competitive business of airports.

Passenger facing transformation

Airports can begin by partnering with airlines that have traditionally held vital passenger information. Using the passenger data, airports can offer a 'home2home' experience that includes mobile apps for flight information, transportation services, parking, kerbside assistance, automated check ins, language translation, etc., while pointing passengers to relevant services like business lounges, shopping, entertainment and restaurants based on their personal needs. Using real-time data, airports can offer never-before services such as assisting passengers to identify and locate friends and colleagues who are at the same airport (enabling social interaction). In essence, data can be leveraged to boost overall customer experience, enhance non-aeronautical share of wallet, improve retail revenues and make it a preferred airport.

Operational transformation

Airport operations are asset and equipment intensive. There is an increase in ownership and maintenance costs that is pushing airports to create new management solutions. Digital technologies such as IoT, analytics, Cloud and mobility can be used to improve utilization, productivity and asset longevity. As an example, fleet tracking can ensure efficient utilization of airport passenger buses, tugs, totes, refueling trucks, etc. Digital technology can cut the miles travelled by these vehicles, reduce their carbon footprint, shrink fleet size and lifecycle costs. Intelligent facilities monitoring, using digital technology and analytics, can help reduce energy and water consumption, two major costs that largely go unaddressed at most airports. Real time data, analytics, information management and advanced technologies such as AR, VR and machine vision can be used uniquely to empower passengers and the workforce to deliver a differentiated customer experience. For example, luggage can be scanned for digital tags as well as by cameras to identify location and physical condition/damage – with the information being made available directly and instantly to the passenger over a mobile app.

Retail transformation

Airports are in the happy position of having captive passengers (customers). If the kerbside to airside journey for them can be made simple, short and stress free, they will be willing to pay for services (such as advance luggage pick-up, security scanning and loading) and will have the time to spend in retail stores, spas, business lounges and restaurants while waiting for their flights.

Airports can use passenger data from shopping history, past interactions and partner channels (airlines, ticketing services, logistics partners, etc.) to send contextualized advertising and offers over a mobile phone. This can guide passengers into buying the right products (clothes, books, electronics, cosmetics, souvenirs) or opting for entertainment.

More lately, given the rising cost of real estate, retailers have the option of using VR to offer highly realistic shopping experience to customers in small retail spaces without compromising the experience. Payments for purchases can be further simplified by using mobile/ digital payment processes.

The runway to opportunity

Airports have, by default, access to large captive customers (passengers), without having to invest in marketing. In addition, new systems and security requirements are generating vast amounts of data about these customers. Airports can now leverage emerging technology (IoT, machine vision, data discovery and analytics) to extract insights and foresights about customers. New technologies (which include mobility, cognitive computing, AR and VR) can then help shape better passenger-centric experiences that can, in turn, be used to build non-aeronautical revenue.

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Manish R. Kumar leads the Domain and Digital Practice for the Engineering & Construction (E&C) vertical in Wipro Ltd. that includes Engineering Construction Sector, Airports, Smart Cities & Ports sector competencies. He is a seasoned professional with over 18 years of diverse experience in the industry verticals of Engineering Construction, Civil Infrastructure

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