To gain greater insight into changes and innovations that could usher in a new era for travellers, the Economist Intelligence Unit (EIU) conducted parallel surveys of 100 airline executives and 810 air-travel customers in August and September of 2013. Augmented by interviews with 16 industry leaders and in-depth analysis, research into this topic culminated with the whitepaper, *The Future of Air Travel: Improved Personalisation and Profits through the Integrated Use of Customer Data*. This is one of a series of five articles elaborating on some of the most salient points that emerged from the findings.
Airline executives and their customers agree: the frustrating trip from the airport door to the aircraft cabin is the aspect of air travel that they would most like to see improved. The multiple lines and chokepoints to be navigated, and the tangle of paper documents to keep track of, make departure both time- and labor-intensive for travellers. For international arrivals, immigration and customs lines add other layers of frustration. And, of course, baggage anxiety is universal.

Not surprisingly then, several new airport terminals have been designed with path-clearing as a primary aim. Working together, airports and airlines are replacing or reshaping facilities, procedures and equipment, as well as refining, linking and scaling up solutions that allow for a smoother airport experience.

New tools of the trade

Technologies to ease the journey before it even begins get less expensive and more ubiquitous every year. Biometric IDs — digitised fingerprints or retinal scans incorporated into passports or other documents — are speeding up security lines (something favoured by both executives and consumers surveyed: E63%/C54%). Near-field communication (NFC) — built into a growing percentage of mobile phones and enabling wave-of-the-phone payment — is beginning to replace the boarding pass (also favoured by executives and consumers: E62%/C58%). And radio frequency identification tags (RFID) for routing and tracking luggage (E65%/C54%) are increasingly the standard for baggage-handling. Customers can even purchase their own tags and follow their bags via mobile phone apps.

A glimpse of the future today

In May 2014, United Airlines unveiled a new concourse at Boston’s Logan International Airport. Self-service options now make it possible to go through the entire airport process without interacting with a human being (the top priority for improving the customer experience on the day of travel in our survey, favoured by executives and consumers: E62%/C58%).

Using the above-referenced technologies — ID aside — passengers who so choose can entirely replace paper with digital transactions. Still, United has kept the number of customer service agents unchanged at 400, according to Forbes. Maintaining this level of staffing was a matter of necessity and continuity. Mobile phones are common, but not universal; most lack wave-of-the-phone-payment capability. Moreover, not all passengers are used to a higher degree of automation. Culture and preference also figure in when valuing speed, for example, over personal customer service.

Terminal 2 (T2) at London’s hitherto notoriously convoluted Heathrow opened a month later. Minimising walking distance and obstacles between ground transportation and airline gates was one of the highest design priorities. Today, the path to the plane is less congested: automated kiosks cut service desks by more than half while reducing serpentine lines that take up space — and passenger time.
As at Logan and for the same reasons, T2 also integrates biometric IDs, wave-of-the-phone technology and RFID tags into a continuous chain — a hybrid of new and old. Passengers can check in, print out boarding passes and bag tags, drop the bags off and board using self-scan gates. On arrival, they find automated immigration kiosks. The terminal will ultimately house 22 Star Alliance carriers, United among them, that will reduce duplication of facilities by using a common bag drop.

British Airways (BA) has also taken steps to leverage technology to improve the customer experience on the ground and in the air. Glenn Morgan, head of service transformation at International Airlines Group (IAG, the parent company of BA), explains how more than 2,000 iPads have been issued to the airline’s cabin crews. Onboard, these provide faster access to information and enable more personalised interactions. On the ground, the iPads can cut both frustration and wasted time by allowing airline and airport personnel to communicate and plan more efficiently.

Take this example: when luggage goes missing, RFID tagging lets airlines know sooner and they can move to remedy the problem faster. “Before,” Mr Morgan says, “customers had to wait at a carousel for 45 minutes,” confirm that their bags were not there, go wait in a customer service line and fill out “lost baggage” forms. With iPads and in-flight connectivity, cabin crew can make this notification before landing, along with arrangements to address the problem. Better ways of exchanging information and “being proactive enlightens customers” and smoothes the experience, Mr Morgan says.

In China, advanced technology doesn’t merely affect the structure and functioning of the airport and airplanes. Passengers themselves are being included in the web of continuous data flow. Terminal 3 of China’s Shenzhen Bao’an International Airport (opened in November 2013; projected final phase by 2035), offers a VIP service that uses information technology to smooth a different aspect of the departure sequence.

In conjunction with Shenzhen Airlines, the terminal provides what amounts to personalised, real-time departure and passenger-location information. On entering the airline’s VIP lounge, passengers are issued a “return to launch site” (RTLS) card. GPS functionality allows the airline to keep track of passenger location; a countdown sequence of visual and auditory signals that can be adjusted for changes in departure times prompts travellers to return to the boarding area — fewer “lost passengers” make for smoother departures.
Respect for past progress

Assessing the efficiency and cost-benefit ratios of new systems can be difficult, and legacy systems often end up running side-by-side with the technologies meant to replace them. At Heathrow, while T2 points towards the extinction of paper boarding passes and luggage tags — with personal interaction rare — paper and people are still very much in evidence. Dubai’s Al Maktoum International Airport, which offers several advantages for adopting modern technologies — a clean slate, rich funding and minimal administrative barriers to design and construction — also looks to retain some of the old.

Dubai Airports CEO Paul Griffiths’ goal is “to completely re-invent the whole airport experience to make it more customer-friendly.” Interestingly, he sees customer service desks being retained, but as peripheral services, preserving the human touch: “Well-informed information desks are a joy when they work properly . . . but they have to be supplemented and complemented by technology,” he says. Mr Griffiths also believes that self-service kiosks are just “interim solutions.” As passengers adjust to a clearer path, thanks to biometric IDs and, possibly, airports’ embedded walk-through scanning technologies, these kinds of kiosks won’t be needed.

Privacy and security issues

Achieving efficiencies through the use of technologies requires passengers to share information about themselves and their travel plans. To take the most extreme example, “chipped” VIP passengers traversing Shenzhen Bao’an’s T3 are clearly willing to exchange a certain amount of personal, physical privacy for efficiency, but how much privacy will these and other travellers be willing to give up? The prospect of biometric IDs and “pre-clearance” investigations elates some travellers, but concerns others. Debates about privacy implications have so far been muted — that may change as these systems become more common or even obligatory.

It is important to remember that all kinds of procedures and technologies we have come to accept — indeed, to view as basic necessities — were seen, on introduction, as not merely unacceptable, but dangerous, a cause for moral panic. Metal detectors, full-body scanners, pat-downs and shoe removal scarcely merit a second thought these days. Outside the airport, the arrival of online credit-card transactions and electronic medical records caused similar alarm but are now routine.

Finding a balance

Keeping up with the requirements of that rising cohort of travellers, the Millennials, who are both mobile and connected, while not losing travellers with more traditional expectations, will be no easy task for airlines and airports. But Heathrow, Logan, Al Maktoum and Shenzhen Bao’an are not fantasy airports of the future, showcasing new technologies in glass display cases — they are highly functional and efficient travelling hubs and destinations. In partnership with airlines, facilities designers and operators are and will be bringing to life and working the kinks out of systems that, over the next decade, will become the gold standard worldwide.
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