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T2RL'S First View is our rapid analysis of breaking news. It helps provide perspective, putting the facts in the context of our wider and deeper knowledge of the market.

Convergence of Mobile and Self-Service in the Airport

T2R Staff

The Facts

SITA has published its annual passenger self-service survey in conjunction with Air Transport World magazine. It shows a near-doubling of smart phone use amongst air travellers, from 28% last year to 54% now. In some airports as many as 75% of passengers are carrying an intelligent device and they are very interested in using them for much more than making calls.

The Analysis

According to the SITA survey 17% of passengers who carry a smart phone have used it at least once to check in for a flight and to receive a paperless boarding pass. Three quarters of the survey respondents said that they would use their devices to connect to a free WiFi network in order to receive flight information, notification of security delays and directions to gates, lounges and other airport services. Amongst younger users there was also a willingness to receive information and offers from airport retailers on their phones.

Self-service check-in has now surpassed the volumes of traditional check-in counters in most of the western world although its use is lagging in regions such as the Middle East and Africa. Even in India the proportion of passengers using self-service check-in at Mumbai has increased to 63% in 2011. There is no serious doubt that self-service will be the dominant mode of check-in across the world within the next three years. In this the airline industry is following the path of other service industries that have developed viable self-service options. The vast majority of cash withdrawals are now made from ATMs, even when bank branches are open with tellers available. Similarly, most automotive fuel is dispensed by self-service pumps even when an attended service is available. For the service provider the attraction is significantly lower cost. For the customer the perception of being in control of the transaction and a shorter waiting time appear to provide adequate motivation. This is true even in the absence of a lower price for a self-service product.

Airlines have not been slow to exploit the cost savings of self-service. According to IATA the costs of kiosk check-in versus a traditional desk service are around seven times lower. Web check-in reduces the cost by a further factor of three, which means that an airline could save 95% of its total check-in costs if it could persuade all of its customers to use their own equipment and consumables to facilitate the process. It is unlikely that any airline will be able to completely eliminate human intervention in every check-in but the key to getting close to that target is to exploit the powerful technology that a majority of customers are already carrying. Further savings are available by moving to automated boarding solutions based on the same 2-D bar codes as check-in. The only process that remains to be cracked is baggage acceptance, which for the foreseeable future will require the production of tags, be they printed, RFID encoded or both.

The Speculation

The implications of the rapid advances in mobile technology are still unclear but they are certain to be extensive. Some of the possibilities that are well within reach of existing technologies include:

- The mobile device becomes the primary, and eventually the only, conduit for information from the airline and airport operator to the customer
- Systems support both query/response interactions and pushed messages
- Existing display screens are given over to advertising, providing a source of revenue to the airport operator. The option of reverting to safety information in an emergency is retained
- Airline staff are available at service desks. Space previously used for check-in and baggage processing is released for profitable retail use
- Airport networks automatically register the arrival of customers at the airport, notifying airlines, security operators and immigration authorities where appropriate
- Bags and suitcases are sold that contain RFID chips that may be encoded by an application on a smart phone, avoiding the need for fixed bag tagging stations
- Airlines and airports alike are enabled to up sell and cross sell ancillary products directly to the consumer device. Vouchers for services such as lounge access, seat upgrades and in flight catering are delivered directly using the same process as boarding passes.
- Airport operators use mobile devices to track customers through the airport.
- Airport retailers pay to access tracking data and for the ability to direct marketing messages to customers' phones.

None of these changes requires technology beyond that which has already been deployed in the consumer space. Where there are challenges they relate to the need to adapt existing systems such as Reservations, Check-In, Load Control and FIDS to delivering their output to mobile devices. This is hard to achieve from traditional mainframe applications but relatively easy from modern n-tier architectures. The IT providers that have invested in modernising their systems will be best placed to support these enormous opportunities.

And one final consideration. What of the small minority of passengers that declines to provide their own intelligent device? The economies of scale in the consumer IT market mean that it is already possible to buy a smart phone in the USA for less than $100, even without a network contract. Airlines selling business class tickets for thousands of dollars a time could afford to give them away. The likes of Ryanair would have no hesitation to make use of a device mandatory and to generate a useful amount of ancillary revenue by selling a branded version.