

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.

BA iPad Apps Use Architecture to Good Advantage

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The Facts

British Airways' cabin crew, will be using the latest model of Apple's iPad tablet to "revolutionise" the carrier's customer service, according to an announcement from the airline's head of in-flight customer experience, Bill Francis.

The Analysis

Airlines have long wanted to improve the links between customer service on the ground with the experience on board their aircraft. Cabin crew members currently depend on printed passenger manifests to provide essential information about the customers in their care. The manifests are usually printed from the Departure Control System (DCS) and contain fairly minimal information about the passengers and their journeys. The information that is supplied is often in fairly cryptic format and of course the medium itself – long rolls of paper from a matrix printer – is not exactly rugged, durable or convenient for use during a flight that may last up to 14 hours.

Airlines have already implemented some electronic information transmitted to the cabin in-flight. Most notable are the displays of connecting flight services that are projected onto the In Flight Entertainment (IFE) screens as the flight approaches its destination. However the capabilities of the iPad and potentially of similar devices powered by Google's Android operating system far exceed the simple text displays currently in use.

Cabin crews equipped with a capable device like the iPad will expect to have access to full information about each passenger's journey along with information from the airline's frequent flyer and CRM systems. They will also need to receive timely operational information to enable them to deal with any disruption to customers' travel plans that occurs during the flight. All of this must be presented in an intuitive and attractive manner that does not require crews to undergo extensive training before they can use it. Cabin crews have quite enough to do without having to become computer operators as well. The iPad, which is designed to be usable by a two-year-old (see FirstView Not a Shining Star in Brussels, 27 June 2011) is the ideal device for the purpose.

However, as we discussed in that previous FirstView, the iPad by itself does not supply any value to the cabin crews who will use it. By itself it is "toy". To make it into a "tool" it must be enabled to extract information from the operational IT systems of the airline that it can then present in a user-friendly manner to the crew on board. These operational systems are often based on older mainframe technologies that use data formats far removed from the iPad-friendly XML that would be expected by programmers of modern consumer devices. The fact that British Airways has been able to implement an iPad-based service is a testimony to the value of the investment in Systems Architectures begun during the tenure of Bryan Wilson as CIO and continued under the recently departed Paul Coby.

This is not the first time that the iPad has been used to drive innovatory functions in the airline industry. Many vendors are now offering iPads as an alternative platform for electronic flight bags (EFBs)¹ and SITA has implemented iPad based check-in kiosks for Malaysia Airlines. In all these cases the platform comes straight out of the box from Apple but the capability comes from the IT Architectures implemented by skilled software developers with access to investment dollars.

The Speculation

These examples are merely the vanguard of a new generation of applications in which the vast economies of scale associated with consumer electronics will be brought to bear on challenges within the airline industry. The nature of the consumer market is that very many of an airline's customers will be routinely carrying devices more powerful than those installed in airports and airline offices. Airlines will seek to exploit this computing power that is effectively available to them for free. In particular it is likely that within the next decade the standard means of communicating information to customers in airports will switch from fixed screens and announcements on public address systems to direct interaction with the customers' own devices.

This can only happen if the airlines and their IT providers continue to invest in software architectures that allow consumer devices to interact with the main operational systems in a "plug and play" manner. Of all the functions of a CIO, architecture may be the most difficult to explain to a non-technical CEO or Board of Directors. Nevertheless probably the single most important task of airline CIOs is to maintain investment in software architectures. In this way announcements like the one from British Airways will not only become more frequent but will also be described in that same way that NASA used to talk about its abilities to control space probes millions of miles from Earth - "Routine Magic".

¹ See news story [United Continental To Issue 11,000 iPads To Pilots](#), 24 August 2011