

Airport development drivers already in place

Both airside and landside, airports will have to make significant design changes to accommodate a paradigm shift in their role over the next two decades and beyond.

Doug Nancarrow

WE ARE ALREADY seeing some of the influences that are going to change the look and functionality of larger airports going forward.

Already in many airports there are self-check-in kiosks and bag drop points alongside the traditional check-in counter; and a growing number of travellers are arriving at the airport already checked in via internet and/or mobile devices. There is some evidence of self-processing at border control. And the terminal environment itself has evolved into much more than the basic retail experience it once was.

But there's a lot more to come...

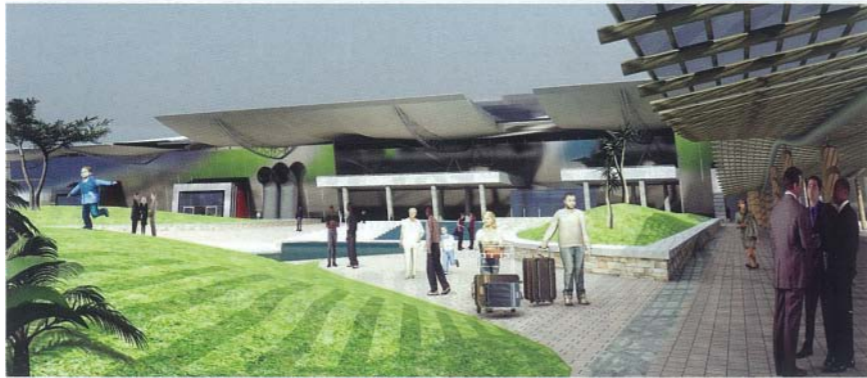
Many airports have had to make substantial investment in adapting infrastructure to handle the A380; and more will be required for the B787, which will be a Code E category aircraft replacing a Code D in the B767. That will have spatial challenges for many smaller airports that will suddenly need to accommodate the point-to-point operations on thinner routes that the 787 is designed for.

But the forthcoming new generation of airliners - those that will replace the popular A320s and B737s - is likely to have even more significant implications for airport design and operation.

Greg Fordham, principal of global airport consultancy Airbiz, believes that the narrow-body replacements, which are already on CAD screens, will be the first airliners to be specifically designed for every phase of airline operations.

"For the first time we are going to see an aircraft designed for an airline operation, rather than an airline matching its operation to a particular aircraft. There will be an emphasis in the design on the airport operation of the aircraft, in other words its turnaround, whereas in the past the emphasis has been on aircraft performance in flight and passenger comforts inside the cabin, for obvious reasons. And that will mean something designed specifically for the new generation value-based airlines.

"We are going to see some quite radical things in terms handling baggage and other ground handling aspects, so it's all simplified for the aircraft, minimizing turnaround times



and getting maximum utilization - and the ramp will have to be modified to minimize that turnaround."

Fordham believes that the traditional manhandling of bags, for example, has to give way to something far more efficient, whether that involves passengers carrying their bags even closer to (or on) the aircraft; or some form of containerization that enables rapid incorporation into or onto the aircraft fuselage.

The same emphasis on value-based operations will mean more lower-cost airport facilities, which will challenge airport management to get the balance right, because duplication of resources is costly. The challenge will be to minimize risk while providing the range of facilities and services required to satisfy different carrier models.

Greg Fordham is adamant that, while it is tempting to build a dedicated 'low cost' terminal, airports should endeavour to maintain the 'one roof' concept as far as possible (allowing of course for multiple terminals at the biggest airports).

While Fordham acknowledges some successful exceptions in airports like Singapore and Kuala Lumpur, he maintains his enthusiasm for integration, suggesting dedicated differentially priced segments or piers of terminals rather than separate buildings, in order to avoid duplication of roadways, car parks, car rental facilities, retail, rest rooms and all the other elements that any terminal demands.

"There's nothing better at the end of the day than a single integrated facility under one roof. Carriers can provide three or more classes on

an aircraft. Why can't we provide different levels of service in an airport terminal? You have it in shopping centres, where you have everything from expensive high street shops right down to the two dollars shop - and they all have different levels of fitout and appeal to different customers. But as soon as you start splitting things off, things will change. And there's no guarantee that those carriers are going to be around. To build dedicated facilities, I think, is short-term thinking."

Lifestyle hubs

And whether the 'airport city' concept evolves at a particular location or not, there's not the slightest doubt that airports will increasingly agglomerate the variety of lifestyle support elements that are currently the essence of the suburban shopping mall.

"Generation Y, and certainly Generation Z, will use airports far more often than earlier generations and it will just be a commodity to them," Greg Fordham says. "It will be part of their monthly/weekly/daily activity. And because they will be there for a certain part of their day, they will want a whole range of services, retail and entertainment to be located there as well. The showroom will come to where the people are, rather than currently when we are used to spending our weekends going to showrooms."

Fordham envisages an airport environment where "the airport is the ideal place to do a retail transaction, whether it's for a mobile phone, flat screen TV, a car or even the weekly grocery order. You will be able to go there, view

in real life the particular product, model, colour, do the transaction, and when you get back from your trip it's already delivered and even installed. When you have tens of millions of people with high disposable incomes but who are also time poor, going through the facility, you have a huge retail/commercial opportunity that we are presently just scratching the surface of."

Even the airline travel process within the terminal will change dramatically.

"The check in hall as we know it will basically disappear," Fordham says. "Everyone will be checked in before they even get to the airport, all they'll want to do is drop a bag and there will be facilities to do even that remotely. As soon as they arrive at the airport, whether it's in the car park or as they get out of a cab, they will be able to drop the bag and feed it into the system. Then their entry into the terminal will be straight into security. So there will be a change in the airside/landside boundary.

"In the future, the first time there's any contact with airline people will be when you board the aircraft. There will be highly trained customer service agents who will be roaming around to deal with any problems, but they'll be employed by the airports because it will be the airports that will have the incentive. They'll want a streamlined process, they'll want everyone to be feeling comfortable and

without anxiety, so that their retail spend is high. The airline's focus will return back to on board the aircraft. The airports will be looking after customer service, because it will be in their interests, because they will be getting the revenue associated with those people.

Smart airports and smart airlines will be getting together to work out something where there's absolutely a win-win. The airline cuts its costs, and the airport ends up with a hassle-free environment for its customers who will then be inclined to utilize the shops and services."

Interchange models

And outside the terminal, an area too often the most unpleasant part of the airport experience, the terminal kerbside roadway is already disappearing, partly for security reasons but also because it is a demonstrably inefficient delivery system.

Airbiz is promoting two replacement models, one for larger airports and one for second tier entities.

"The larger airports will have a large separate ground transport interchange building which will house all modes," says Greg Fordham. "And from the centre of that a people-mover will take you straight into a large terminal complex. When you alight from the people-mover you will be in large atrium space

and will be able to either move straight through to your gate, because you will already have checked in and got rid of your bag, or there will be an extensive mixed use commercial development, everything from serviced apartments to movie theatres to office buildings through to retail, again taking advantage of the tens of millions of people that are moving through that facility. Just as the large railway stations in Europe are in the centre of a huge mixed use commercial development so will our airport terminals be.

"Then, at the smaller airport scale we just simply pick up the terminal roadway, move it back and service with horseshoe loops all the ground transport modes which are all fronting a pedestrian plaza out the front of the terminal. So instead of the roadway sitting between the terminal and the ground transport, we are taking it back and having all the vehicle routes servicing into it. Then the people are free to move from the terminal across a plaza out to their various modes of transport, which is far more logical, provides a better sense of arrival and creates yet another retail opportunity. For airport staff it provides an attractive plaza environment where they can meet for coffee or lunch, getting away from that terrible environment you currently experience at the front of most airport terminals." **A**

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