

## Disrupters

### Airports fight back against online turbulence

Hubs to improve passenger experience as web shopping and ride-hailing hit revenues



Airlines want to harvest the data of travellers to create services tailored to their needs and preferences © FT montage

Tanya Powley in London 9 HOURS AGO

On entering the new Terminal 4 building in Singapore's Changi Airport, travellers are welcomed by self-service kiosks in place of the traditional check-in desks once staffed by sharp-attired employees.

From face-recognition software to automated check-in and baggage drop-off, [Changi's T4](#) is designed to be a 100 per cent self-service facility aimed at speeding up the more humdrum and frustrating parts of travelling through an airport.

The changes at Changi, which opened its automated terminal last year, are part of a wider trend with airports and airlines around the globe ramping up investments in [biometrics](#) and [technology](#) to make queues a thing of the past.

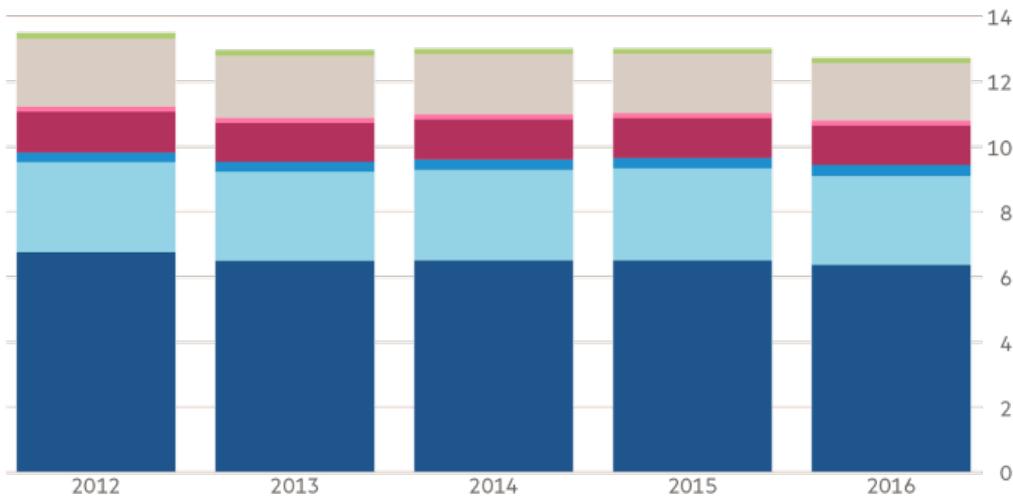
But finding solutions to queue-fatigue is not only about improving customer satisfaction levels for the world's leading airports. It is increasingly becoming a business necessity as non-aeronautical revenue, for decades the main driver of growth for airports, comes under pressure from technological disruption.

While passenger numbers continue to rise worldwide, with the number of people flying up by 7.1 per cent in 2017, non-aeronautical revenue per person has been falling at airports across Europe and plateauing in North America in the last few years.

## Non-aeronautical sales have been falling at airports across Europe

Revenue per person (€)

■ Advertising     ■ Rental car concessions     ■ Food & beverage     ■ Commercial revenue  
■ Property income/rent     ■ Car parking     ■ Retail concessions



Source: ACI World  
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Online shopping and ride-hailing apps such as Uber and Lyft have eaten into this revenue, which comes from shops, restaurants, airport parking and car rental.

The share of non-aeronautical income in total airport revenue dropped to just under 40 per cent in 2016 from an estimated 50 per cent in 2000, according to the global airport trade body ACI World.

“Airports have done amazingly well at creating real estate and commercial revenues,” said Andrew Lobbenberg, an aviation analyst at HSBC. “The cash flows from their business are highly prized by pension and infrastructure funds around the world.

“But the situation does face challenges from here.”

Hean Ho Loh, partner at Boston Consulting Group, thinks the industry is at an “inflection point” where there is a greater risk of airports being disrupted by rival sectors rather than other airport operators.

In Europe, retail revenues, which make up two-fifths of European airports’ non-aeronautical revenues, have been hit by the shift to online retail, falling to €2.73 per passenger in 2016 from €2.91 per passenger in 2010.

The growth of low-cost carriers has also played a part, with their cost-conscious passengers spending less at airport shops than business travellers.

“There is no doubt that, along with disruptive technologies such as the continued growth of online retail services, increased retail competition outside the influence of the airport will also begin to limit growth prospects for airports,” said Stefano Baronci, director of economics at ACI World.

But it is not just retail income that is under threat from technology. Car parking revenues have suffered in recent years by the rise of ride-hailing apps, which have made travelling to the airport by taxi more affordable, and the growth in public transport services. They are also facing competition from carpooling services and online parking companies that advertise cheap spaces.

In North America, in particular, this is valuable income for airports, representing about two-fifths of non-aeronautical revenues. In Europe, car-parking income makes up about one-fifth of an airport’s non-aeronautical revenues.

Some airport operators hope an improved passenger experience through a quicker, automated

check-in process will win back business from the online retailers as travellers spend more time — and money — shopping and dining in the airport.

Research by DKMA found that satisfied passengers are likely to spend 10 per cent more time at the airport, twice as likely to shop and spend 7 per cent and 20 per cent more on retail and duty free respectively.

“The worse situation for retail is a worse passenger experience,” said Edward Arkwright, deputy chief executive officer for Groupe Aéroports de Paris, which runs Charles de Gaulle airport in the French capital. “Our conviction is, if we improve customer experience, we will improve all economic models.”

This is not just about embracing technology. As elsewhere in the retail sector, there is an increasing importance in bringing in experiences and luxury offerings that cannot be replicated more cheaply online.

At Charles de Gaulle, the group has spent the past few years improving its retail offering, increasing the number of high-end French brands within its terminals to 80 in 2016 from 11 in 2006.

“Many people say it's the end of retail in airports, but I don't agree with that,” said Mr Arkwright. “We have to continue to improve it and continue to develop new services in digitalisation.”

At Changi, it is too early to conclude what impact its self-service terminal has had on non-aeronautical revenues, said Ivan Tan, a spokesperson for the group. However, Mr Tan said its new system “certainly brings about time savings for passengers, which means that they can afford more time for shopping or dining”.

Other airports are making changes too. HSBC's Mr Lobbenberg says among the European listed airports, Zurich is one of the most forward thinking and understands that the [retail experience](#) is moving from one of being a shopping mall to a showroom.

He said: “They know they need to flex the revenue model for them, partly to a rent per square foot model rather than a commission on goods bought because people are not going to spend in the same way, yet airports remain a wonderful environment for a showroom for luxury goods companies.

“But that's not going to deliver the same revenue streams to the airport.”

This suggests airports need to make more radical changes. Robert O'Meara of ACI Europe, the regional arm of the global airport trade body, said: “Consider the speed with which some technology is fast-approaching the airport industry — big data, drones and autonomous cars — and the implications they could have on our business.”

One idea, which is already being implemented by some groups, is for airports to evolve from being transport hubs to becoming [destinations](#) in their own right — making them less dependent on passenger-driven revenue.

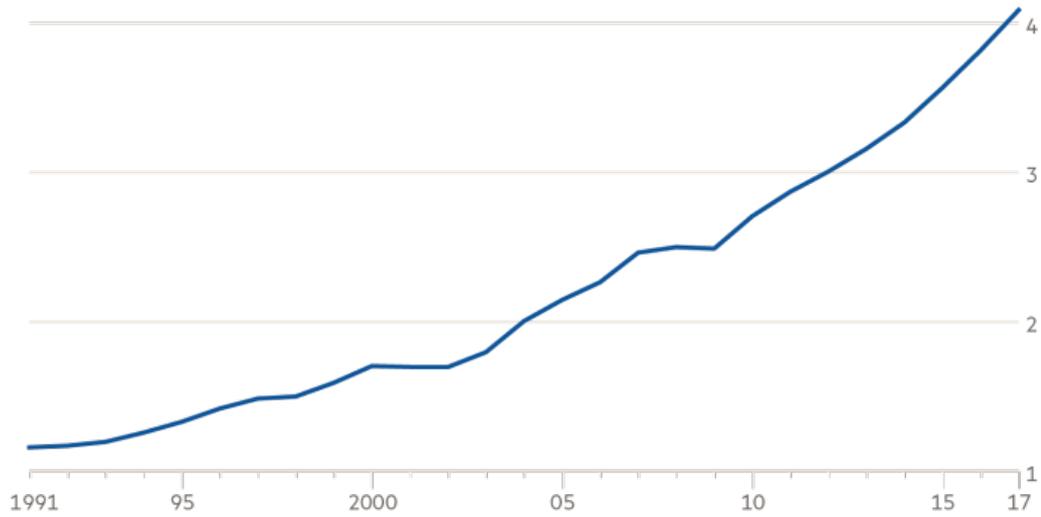
Ian Taylor, global aviation leader at professional services group Arup, says the airport industry should see self-driving cars as an opportunity rather than a threat in this context.

“The removal of car parks will free up key real estate space — that could be used for shopping malls or cinemas, to attract new investment and attract an entirely new customer base, unlocking new revenue streams,” he said.

Some Asian and Middle Eastern airports are already doing this, offering amenities such as films, butterfly gardens and bowling, while in Europe, Munich Airport hosts a range of events, including a Christmas market, in a big covered space between its terminals.

## Passenger numbers continue to rise worldwide

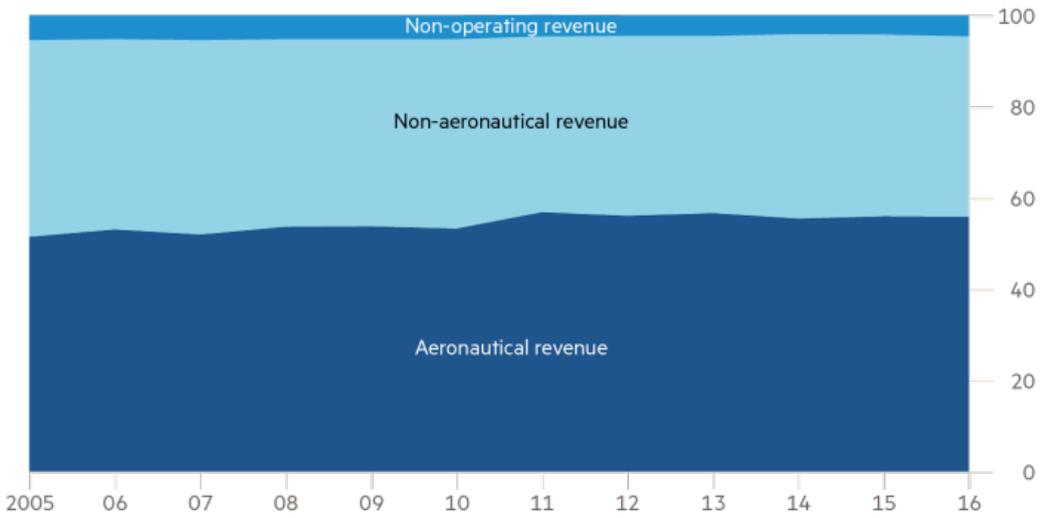
Billion



Source: ACI World  
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## Squeeze on non-aeronautical revenues at airports worldwide

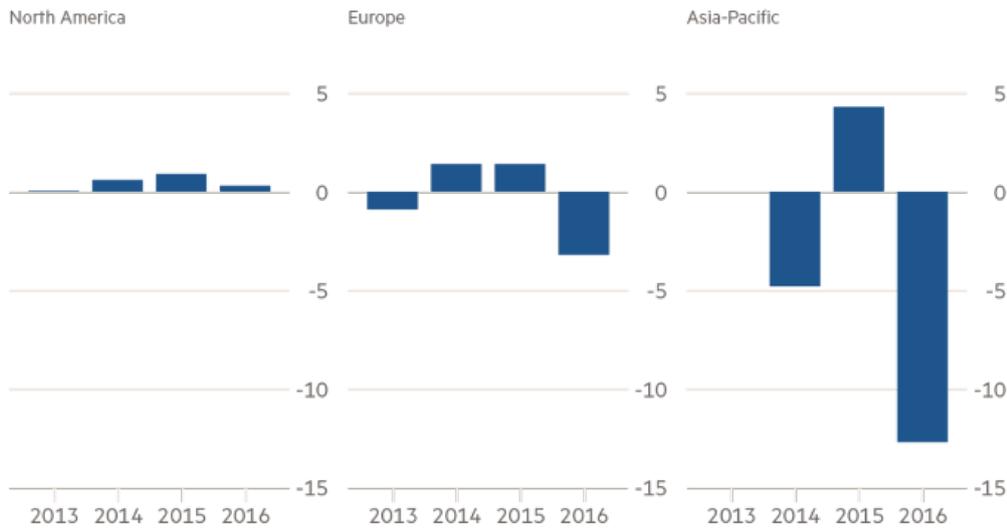
Share of total (%)



Source: ACI World  
© FT

## Retail revenues at airports have struggled to take off

Annual growth rate (%)



Source: ACI World  
© FT

At Changi, their Jewel extension at Terminal 1, due to open in 2019, will be a mixed-use development that will house about 300 shops and restaurants and include a 40m-high indoor waterfall and a five-storey garden.

But some say these changes are still not enough.

“There is a need for a culture change within the industry,” said David Feldman of Exambela Consulting. “Are they doing anything that’s really truly going to disrupt the whole ecosystem of air transport? I’m not aware of any [airports] that are.”

# Innovation hubs to boost performance

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Some airports have launched innovation hubs as they attempt to increase revenues in a fightback against technological disruption.

Singapore's Changi, Munich Airport and Aéroports de Paris have all launched these technology labs with the aim of inviting start ups, small and medium-sized businesses and universities to develop and test their emerging technologies.

In turn, they hope this will improve airport performance in five key areas — airport operations, passenger processes, travel booking/destination management, environmental impact and revenue generation.

“By creating these offshoots, it is one way to attempt to come up with a more entrepreneurial culture,” said David Feldman of Exambela Consulting.

Some analysts suggest another way to improve performance is for airports and airlines to share data and work closer together.

“I do think for the industry to be a lot more efficient and to be able to serve passengers better they need to start sharing data,” said Ilya Gutlin, who heads up air travel solutions at technology company SITA.

This could help airports and airlines to offer a more personalised travel experience.

“At this point in time, it almost seems that the likes of Google have a much better grip on traveller data than airlines and airports do,” added Mr Gutlin.

Mr Feldman agreed on the need for co-operation.

“Sometimes airlines and airports have a bit of an acrimonious relationship. But if we think about the small margins airlines make and that airports are under attack from disruptive new technologies, isn't that really an opportunity for them to co-operate more?”

**Tanya Powley**

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