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Editor's Notes

Planning, writing and editing the current edition of ARGS has been a difficult task. As airlines and airports around the world go into lockdown in response to Covid-19, so the world's aviation industry has come to an abrupt halt.

Anyone who still needs convincing as to what the brutal impact of the pandemic should turn to page six, where data given to ARGS by aviation analysts OAG reveals the effects government-enforced lockdowns have had on key regions' aviation markets. The numbers make for sobering reading.

As a result, airlines have begun to cut their cloth accordingly and are already making adjustments to their fleets and schedules (page 20).

Nor have airports been idle either. Conversations with airports around the world (page 28) reveal the vital efforts they have made while dealing with the initial impact of Covid-19 by working with airlines in a number of ways, from giving up parking space for aircraft to feeding back their government's latest advice to their carrier partners.

Equally importantly, they are now working hard on ensuring that when the freedom to fly gradually returns, they are well placed to work with airlines to reintroduce services as quickly and safely as possible.

Nor is this simply a job for route development teams at airports. Our feature on page 38 shows what preparations will be needed in the airports to reopen safely while on page 40, we look at the psychology of returning travellers and consider how best they can be put at ease.

Preparations for service resumptions have also been put in place by ground handling teams (page 48) and it now feels that every part of the aviation sector is ready to operate in a Covid-19 infected world.

And this is perhaps the crux of the issue. The industry has dealt with considerable losses as a result of the pandemic, and more can be expected. However, there is also a semblance of hope forming and while the industry has already undertaken positive and constructive actions in the wake of Covid-19, this could be the biggest one yet.

Using that hope to work together to resurrect the aviation industry, in whatever shape it might take form. In the face of such difficulties, it is the most positive and constructive thing left to do.



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Summer 2020











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48 Ground Handlers: Down time

Airports might be quiet at the moment, but ground handlers behind the scenes are keeping busy dealing with current issues and preparing for the future.



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Preparing for take-off

Airlines are planning their return to the skies as global lockdowns lift, but governments must also do their bit, says *Nick Careen*, IATA senior vice president, airports, passenger, cargo and security

The collapse in air traffic as a result of the Covid-19 crisis has been unprecedented in the history of aviation. We expect air passenger demand to be down around 55 per cent globally for 2020, and that is based on an assumption that traffic starts rebounding in the second half of the year. At the moment, that is only a hope—we do not yet know when and how governments will relax the lockdowns that have been placed to help us beat Covid-19.

We in the aviation sector applaud the heroic efforts being performed by all frontline staff around the world as they grapple with this terrible virus. Their hard work and sacrifices, and the discipline being shown by ordinary people in abiding by social distancing rules, are bringing the infection rate down.

Aviation has also played a part, bringing in vital medical materials and keeping essential supply chains open. Now we are seeing light at the end of the tunnel and attention is moving to how we can restart the global economy, while protecting these hard-won gains against Covid-19.

The severe impact of halting air traffic has devastated many airlines. Some have been forced to cease operations and file for bankruptcy. Many more are struggling to stay in business. Thousands of workers have been furloughed or laid off. Fleets have been reduced. Our partners in the airport, air navigation, manufacturing, ground handling and other sectors are similarly suffering. It is fair to say that aviation is not going to be the same again.

Moreover, restarting aviation in these

circumstances is far from easy. It is not like flicking a switch back on. There are many things that need to be done to bring aircraft safely back into service, crew brought back up to speed and to reboot back-office systems and infrastructure. This is before we consider the new requirements that governments will be putting in place to protect public health.

"Attention is moving to how we can restart the global economy"

Nick Careen

IATA senior vice president, airports, passenger, cargo and security

To help governments and regulators with their planning, IATA has been bringing the industry together to forge common positions. We facilitated a number of summits in different global regions, and we've published a joint approach with Airports Council International (ACI) on the measures airports and airlines are implementing. We've also worked with the World Health Organisation (WHO), the International Civil Aviation Organisation (ICAO) and others to aim for harmonised regulations across the world.

As we move towards the restart, public health and safety is our top priority. We are pursuing a layered approach designed to prevent infection on board as well as reduce the risk that airlines become a source of re-infection into a country. In terms of the elements we are recommending for airlines, the measures include:

- The wearing of face coverings for passengers and masks for crew while on board aircraft
- Boarding and deplaning processes that reduce contact with other passengers or crew
- Limiting movement within the cabin during flight
- More frequent and deeper cabin cleaning
- Simplified catering procedures that lower crew movement and interaction with passengers

It is important to remember that modern passenger jets rank alongside hospital operating theatres for their air circulation and filtration systems and the high quality of air they provide, with the entire supply passing through High Efficiency Particulate Air (HEPA) air filters, which are 99.97 per cent effective in blocking airborne viruses.

With these precautions in place, coupled with the procedures airports are introducing, we believe that more stringent measures, such as enforced testing for Covid-19 at the airport, quarantine on arrival, or banning the use of the middle seat on board, are not required.

If governments implement such measures, we urge that these be removed once the prescribed safety procedures, outlined above, have been implemented.

Another priority for governments is to develop robust contact tracing, a cornerstone of preventative medicine that will help in the fight against Covid-19. This matters because in a best-case scenario, air demand will not recover to 2019 levels until 2023.

Once governments set out their restart strategies, we are hopeful that more flights will be authorised and that the world can start to get moving again, a matter of supreme importance. There isn't an aspect of modern life that aviation doesn't impact in some way and more than 65 million jobs are dependent on air transport.

We believe the desire for people to travel, do business, and share experiences face to face will be even more sharpened by the fact it has been denied us by this virus. It will take several years, but air travel will return to growth.

We're determined that as it does, it will do so safely and sustainably, giving us a greater opportunity to build a stronger air transport network. The chance to explore the world is a precious thing, something previous generations in history could only dream about. As we recover from this terrible crisis, we owe it to ourselves to ensure that the freedom to fly is not only restored, but enhanced, for all.



Facing up to empty skies

Skies largely empty of aircraft have been a common symptom of the Covid-19 epidemic. New data supplied by OAG shows just how bad the situation is, as *Edward Robertson* discovers.

While people's experiences of lockdown differ across the world according to their government's decisions, one constant is the lack of aircraft in the sky. Scheduled seat data from the week commencing December 30, 2019, to that starting on May 4, 2020, supplied by aviation data and analytics firm OAG, shows the extent of the collapse. It also suggests where some of the first green shoots of recovery could be found.

In North America, the collapse in seat numbers has continued into May, with international routes hit particularly hard as four of the five busiest ceased operating in April. Domestic routes have stayed stronger, having lost 73.7 per cent of available seats, compared to the 93.5 per cent drop in international travel.

South America's international market has been hit equally hard, with the number of scheduled seats dropping by 93.3 per cent, although only

half of its international routes were put on hold during the same period. However, the region's domestic market has been badly hit with its three most popular domestic routes suspended during the period.

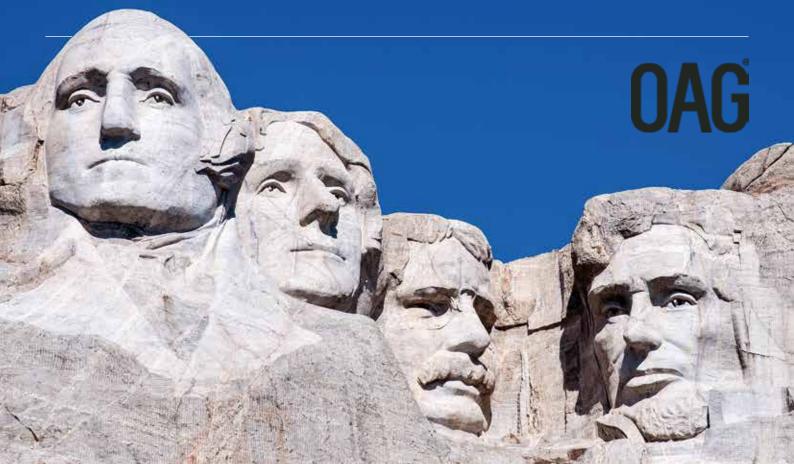
Europe's market has survived a little better, with international and domestic scheduled available seats falling by 85.2 per cent and 82.2 per cent respectively. Regardless of the destination, the brunt of the collapse has been sustained by mainline carriers, the scheduled seats of which have fallen by 90.3 per cent compared to 75.6 per cent in the low cost carrier (LCC) sector.

The situation is mirrored in Africa, where mainline carriers have seen a fall of 92.2 per cent in scheduled seats compared to 82.4 per cent in the no frills sector. How much of that is down to the fact that the LCCs went into the global crisis carrying considerably fewer seats,

551,882 compared to 2,865,887 in the mainline sector, is open for debate.

The Middle East is noteworthy as the only region with a route that has shown growth during the specified period. OAG's statistics show that the route connecting Mashhad International Airport to the Iranian capital Tehran's Mehrabad International Airport, the third most popular Middle Eastern domestic route at the start of the year, has grown 3 per cent during the period.

Meanwhile, in South East Asia, international routes have been impacted considerably harder than those serving the domestic market. The region's LCC sector has been the least worst hit out of all those featured with a 69.6 per cent loss in scheduled seats and perhaps suggests again how the route to normality might resume. And it is one route across the world we should all look forward to seeing emerge again.





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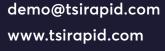
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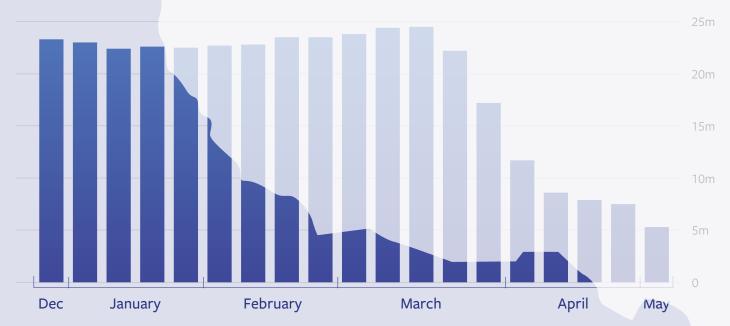




North America

Total scheduled seats

(Weeks commencing 30 December 2019 – 4 May 2020)



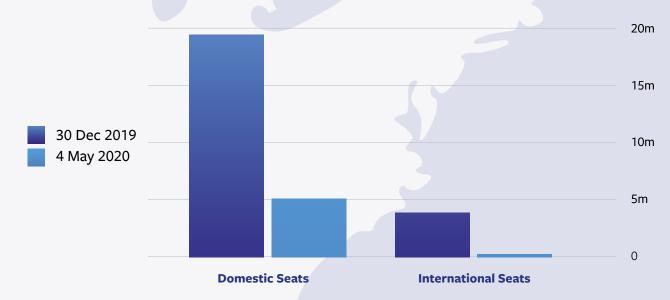
Five biggest airlines total scheduled seats



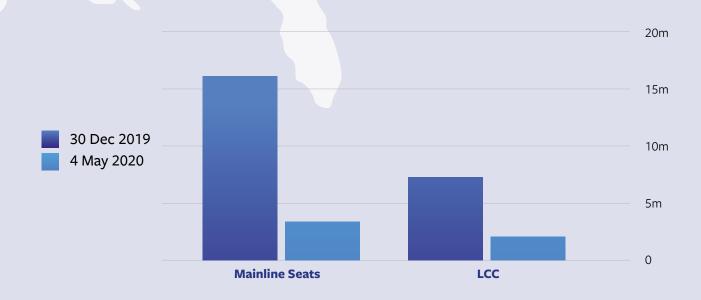
Top five domestic airport pairs (scheduled seats)

	30 Dec 2019	4th May 2020	
LAX - SFO	75,506	13,314	-82.4%
YVR- YYZ	72,264	10,875	-85%
JFK - LAX	71,423	6,360	-91.1%
LAS - LAX	71,041	9,974	-86%
ATL - FLL	64,380	8,575	-86.7%

Domestic and international seats



Mainline and LCC seats



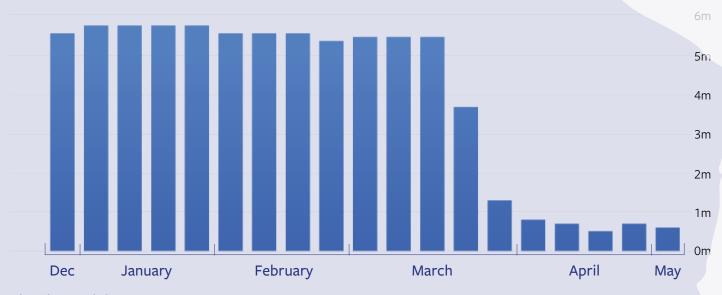
Top five international airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated	
JFK - LHR	35,310	2,203 (4 th May 2020)	-93.8%
LGA - YYZ	27,832	3,192 (6 th April 2020)	-88.5%
FLL - YYZ	25,315	720 (20 th April 2020)	-97.1 %
MCO - YYZ	22,943	720 (20 th April 2020)	-96.9 %
LAX - YVR	22,184	1,680 (20 th April 2020)	-92.4%

South America

Total scheduled seats

(Weeks commencing 30 December 2019 – 4 May 2020)



10m





Top five domestic airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated		
CGH - SDU	116,610	3,168 (13 th April 2020)	-97.3%	
BOG - MDE	101,423	15,564 (13 th April 2020)	-84.7%	
BOG - CLO	80,488	900 (13 th April 2020)	-98.9%	
CUZ - LIM	78,084	10,528 (4 th May 2020)	-86.5%	
BOG - CTG	72,063	3,266 (4 th May 2020)	-95.5%	

Domestic and international seats



Top five international airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated	
CGH - SDU	35,310	2,203 (4 th May 2020)	-93.8%
BOG - MDE	27,832	3,192 (6 th April 2020)	-88.5%
BOG - CLO	25,315	720 (20 th April 2020)	-97.1%
CUZ - LIM	22,943	720 (20 th April 2020)	-96.9%
BOG - CTG	22,184	1,680 (20 th April 2020)	-92.4%

Mainline Seats

LCC

0

Europe

Total scheduled seats

(Weeks commencing 30 December 2019 – 4 May 2020)

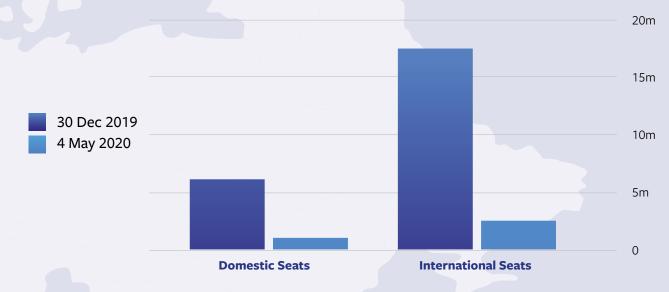




Top five of	domestic	airport	pairs ((sched	luled	l seats)
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	30 Dec 2019	Week Last Operated	
LED - SVO	58,514	8,666 (4 th May 2020)	-78.6%
BCN - MAD	58,456	12,524 (4 th May 2020)	-78.6%
ADB - SAW	56,796	2,262 (27 th April 2020)	-96 %
ESB - SAW	49,101	9,705 (27 th April 2020)	-80.2%
AYT - SAW	45,522	2,262 (27 th April 2020)	-95%

Domestic and international seats



Mainline and LCC seats



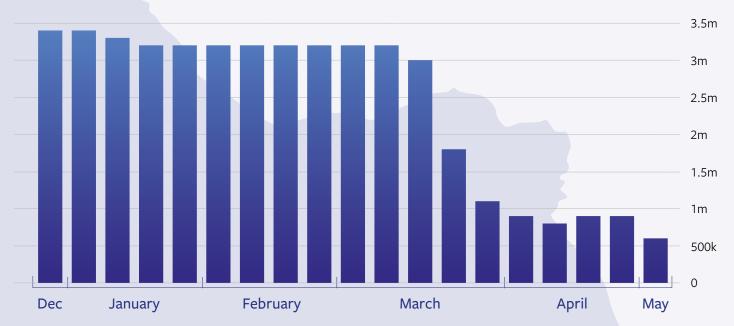
Top five international airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated	
DUB - LHR	44,222	4,984 (4 th May 2020)	-93.8%
AMS - LHR	43,646	3,268 (4 th May 2020)	-88.5%
JFK - LHR	35,354	2,203 (4 th May 2020)	-93.8%
BCN - LGW	33,800	744 (13 th April 2020)	-97.8 %
LIS - MAD	33,249	2,604 (30 th March 2020)	-92.2%

Africa

Total scheduled seats

(Weeks commencing 30 December 2019 – 4 May 2020)



Five biggest airlines total scheduled seats



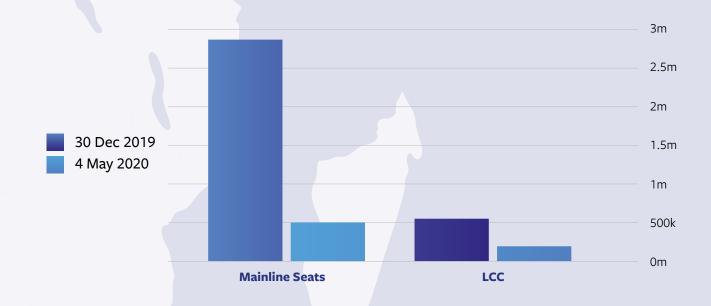
Top five domestic airport pairs (scheduled seats)

	30 Dec 2019	4th May 2020		
CPT - JNB	58,514	8,666	-85.2%	
DUR - JNB	30,806	4,542	-85.3%	
ABV - LOS	29,808	4,890	-83.6%	
CPT - DUR	26,842	8,768	-67.3%	
CAI - JED	24,329	11,048	-58.6%	

Domestic and international seats



Mainline and LCC seats



Top five international airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated	
DME - SIP	29,444	9,758 (4 th May 2020)	-66.9%
PRG - SVO	22,996	280 (27 th April 2020)	-98.8%
EVN - SVO	21,054	296 (27 th April 2020)	-98.6%
SIP - SVO	18,852	11,312 (4 th May 2020)	-40%
DME - MSQ	14,242	5,974 (27 th April 2020)	-58.1%

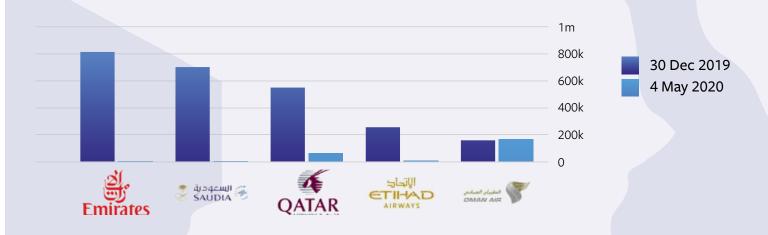
Middle East

Total scheduled seats

(Weeks commencing 30 December 2019 – 4 May 2020)



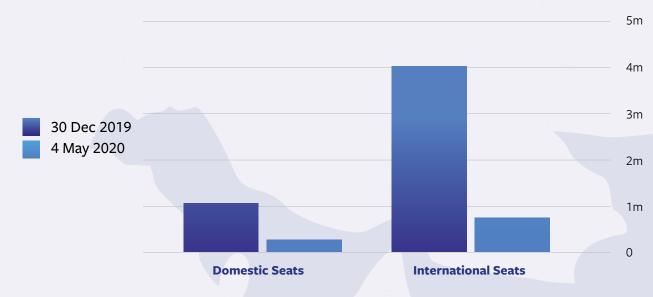
Five biggest airlines total scheduled seats



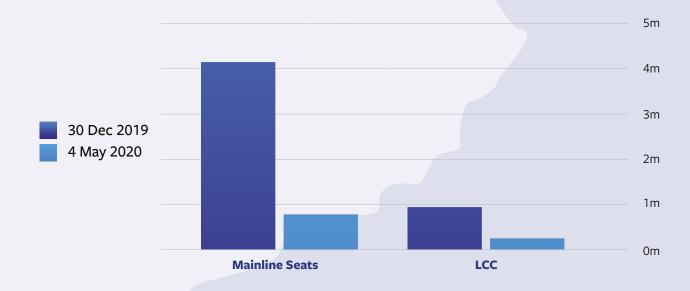
Top five domestic airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated	
JED - RUH	158,177	1,941 (4 th May 2020)	-98.8%
DMM - JED	61,626	1,588 (4 th May 2020)	-97.4%
MHD - THR	48,585	50,084 (4 th May 2020)	+3%
DMM - RUH	45,542	14,572 (27 th April 2020)	-68%
AHB - RUH	40,492	14,784 (27 th April 2020)	-63.5%

Domestic and international seats



Mainline and LCC seats

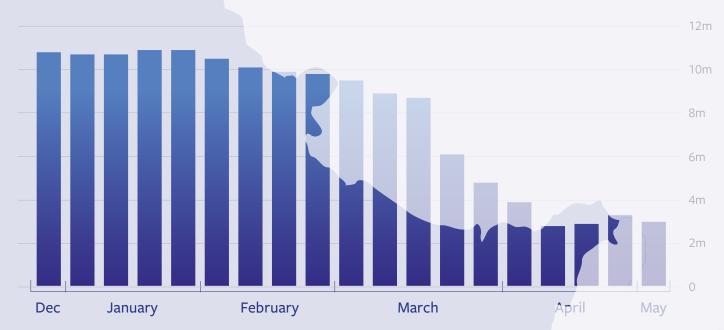


Top five international airport pairs (scheduled seats)

	30 Dec 2019	4 th May 2020	
DXB - RUH	68,044	168	-99.8%
DXB - KWI	61,348	7,018	-7,018%
DXB - JED	59,746	6,466	-89.2%
DOH - KWI	55,236	11,828	-78.6 %
DXB - MCT	47,212	17,702	-62.5%

South East Asia

Total scheduled seats



Five biggest airlines total scheduled seats



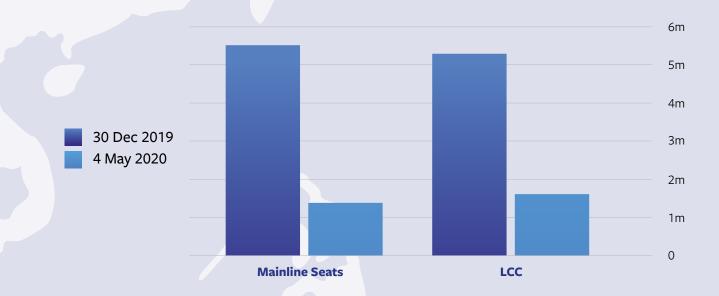
Top five domestic airport pairs (scheduled seats)

	30 Dec 2019	4th May 2020	
HAN - SGN	218,751	113,508	-48.1%
CGK - DPS	156,845	61,635	-60.7%
CGK - SUB	122,044	97,407	-20.2%
CGK - UPG	101,542	74,104	-27 %
DAD - SGN	97,207	29,020	-70.1%

Domestic and international seats



Mainline and LCC seats



Top five international airport pairs (scheduled seats)

	30 Dec 2019	Week Last Operated	
KUL - SIN	112,864	2,238 (4 th May 2020)	-98 %
CGK - SIN	105,658	4,150 (4 th May 2020)	-96 %
CGK - KUL	79,838	5,092 (4 th May 2020)	-93.6%
BKK - SIN	75,600	1,731 (4 th May 2020)	-97.7%
ATL - FLL	57,294	3,528 (13 th April 2020)	-93.8%

Global contagion

Airlines might not be talking more than necessary to the press right now, but their financial results reveal the impact Covid-19 has had on operations. *Edward Robertson* reviews the actions of some of the biggest airlines around the world.





With airlines focused on staying afloat in a hugely uncertain world, it is no surprise that talking to the press is no longer a priority.

Outlining plans and strategies for the future can only be done when it is certain, or as certain as the global aviation industry can be in normal circumstances which are bound to include inevitable disruptions.

However, the global shutdown on aviation in response to the Covid-19 outbreak is far beyond the imagination of any emergency planner and means entirely new responses have to be considered and implemented as airlines fight for their survival.

And while granting journalists lengthy interviews is understandably not much of a consideration at the moment, financial results and statements give some idea as to the fleet and route planning being undertaken in anticipation of the much-altered economic landscape.

America first

American Airlines, which carries the most passengers in the US, was due to operate 4.7 million seats per week at the end of December. At the beginning of May, it operated 1.3 million seats.

The financial impact of such a downturn is considerable, with chairman and CEO Doug Parker reporting a net loss of \$2.2 billion for the first quarter (Q1), while liquidity fell to \$6.8 billion although this is expected to rise to \$11 billion by the end of Q2.

He says: "Never before has our airline, or our industry, faced such a significant challenge." The airline now expects to cut its 2020 operating costs by more than \$12 billion via a lower fuel bill and a number of measures, including reducing system capacity by 80 per cent in April and May and 70 per cent in June.

The retirement of four aircraft types consisting of 20 Embraer 190s, 34 Boeing 757s, 17 Boeing 767s and nine Airbus A330-300s, along with a number of older regional aircraft, will further remove operating complexity and reduce costs.

This leaves the airline free to maximise its liquidity, although Parker admits: "We have a lot of difficult work ahead of us."

Southwest Airlines was riding high at the end of 2019 following its 47th year of profitability and having registered a net margin of 10.3 per cent from record operating revenues of \$22.4 billion from 134 million passengers.

Unsurprisingly, its 2020 Q1 results are less optimistic with a net loss of \$94 million after revenue plunged by 17.8 per cent to \$4.2 billion.

Speaking at the release of the recent results, Southwest chairman and CEO Gary C Kelly described the response to the "unprecedented levels" in trip cancellations.

The fleet has been cut with 150 of its 742 aircraft now in long-term storage or temporary parking "in response to capacity reductions due to the effects of the pandemic".

Kelly adds: "We will continue evaluating the need for further flight schedule adjustments, while planning to maintain service to all points in our domestic network through at least 30 September, 2020."

European woes

Nor is the picture more positive in Europe. Ryanair is the continent's largest airline and its full-year results to 31 March, 2020, show the group, including Buzz, Lauda and Malta Air, carried 149 million passengers and generated a profit of €1,002 million off revenues of €8.49 billion.

However, the airline added had it not been forced to ground its fleet of more than 450 aircraft in mid-March, it would have carried an additional five million travellers, boosting the year's profits by a further €40 million.

In a separate update for the forthcoming year also released in May, the airline said it would operate less than 1 per cent of its scheduled





We've enriched our services to include disinfection of passenger and cargo aircrafts to provide a safer, healthier and more **confident environment**.

flying programme in April, May and June, carrying 150,000 passengers in a period when 42.4 million were originally predicted.

The situation improves in the second quarter, when Ryanair is currently expecting to carry about half of its predicted 44.6 million passengers, while it also believes it will carry less than 100 million passengers in the year, 35 per cent down on its original 154 million target.

The airline also predicts passenger demand and pricing will not recover to 2019 levels until summer 2022, adding: "Ryanair is now reviewing its growth plans, and aircraft orders."

It says it is now in negotiation with both Boeing and lessors to cut the number of planned aircraft deliveries in the next two years.

Nor are the scheduled airlines doing any better. The 2020 Q1 preliminary results covering January, February and March for Lufthansa Group, which includes SWISS and Austrian Airlines, show the financial impact was immediate, with group revenues falling 18 per cent to €6.4 billion during the period, largely driven by a €1.4 billion, 47 per cent, drop in March.

However, the group is now planning a resumption of commercial operations in June with 80 of its total 763 aircraft being reactivated in order to join the 80 that have continued flying as part of Germany's repatriation programme.

This will allow Lufthansa Group to serve 106 destinations and while details remain unclear as to where they will be, comments made by Harry Hohmeister, member of the executive board of German Lufthansa AG, as he announced the resumption suggest the leisure market will be central to the plan.

He says: "We sense a great desire and longing among people to travel again. Hotels and restaurants are slowly opening, and visits to friends and family are in some cases being allowed again."

Continental drift

Heading south to Africa, the story appears quite different, at least for the continent's biggest carrier Ethiopian Airlines. Although the number of seats flown per week dropped from 346,965 in December to 28,695 in May, the H1 (first half) results for the group in the period ending December 2019 have left the airline in a strong position going into the crisis.

The unaudited accounts posted with Ethiopia's Public Enterprises Agency show it made a \$260 million profit off revenues of \$2.1 billion. The statement added it expects a



gross profit of \$696 million by the end of the year.

Since then, CEO Tewolde GebreMariam remains bullish, telling one interviewer in May that he has entered talks with both Mauritius and South Africa to help each country's airlines.

His optimism has not been shared in the Far East where China Southern Airlines has seen a considerable downturn as the largest carrier based in the country blamed by many for the outbreak.

Having seen its seat numbers decline from 2.5 million per week at the start of the year to 1.3 million by the end of April, the airline has posted an operating loss of CNY7.73 billion (\$1.08 billion) for Q1 2020 compared with a profit of CNY3.55 billion (\$500 million) in the same period the previous year.

"Never before has our airline or our industry faced such a significant challenge."

Doug Parker American Airlines CEO The airline's reversal of fortunes came following a 43.8 per cent fall in revenue to CNY21.1 billion (\$2.96 billion), with much of its poor performance attributed to countries around the world banning Chinese flights from landing while China itself will only allow carriers to operate a single weekly flight to each country that will accept them.

The airline added in an April announcement on key data that it would also be terminating the lease of three aircraft, although it is expected the impact on its 856-strong fleet will be limited.

Eastern promise

Meanwhile, the Middle East's biggest carrier Emirates, which saw its total scheduled seats fall from 813,732 in December to 3,168 in the first week of May, still recorded total revenues of \$28.3 billion for the 2019/20 year ending March 31.

While the airline noted it had been impacted in Q4 by the outbreak of Covid-19, it added it had made a profit of \$288 million, 21 per cent up year on year and the 32nd year of registering a profit, thanks to a strong performance until February 2020 and lower fuel costs.

Emirates Airline and Group chairman and CEO Sheikh Ahmed bin Saeed Al Maktoum says: "However, from mid-February things changed rapidly as the Covid-19 pandemic swept across the world, causing a sudden and tremendous

"We sense a great desire and longing among people to travel again. Hotels and restaurants are slowly opening and visits to friends and family are ... allowed again."

Harry Hohmeister

German Lufthansa AG executive board member

drop in demand for international air travel as countries closed their borders and imposed stringent travel restrictions."

The situation worsened after the airline cancelled all flights for a rolling two-week

period from March 25, barring a trickle of repatriation flights, following an order by the UAE government.

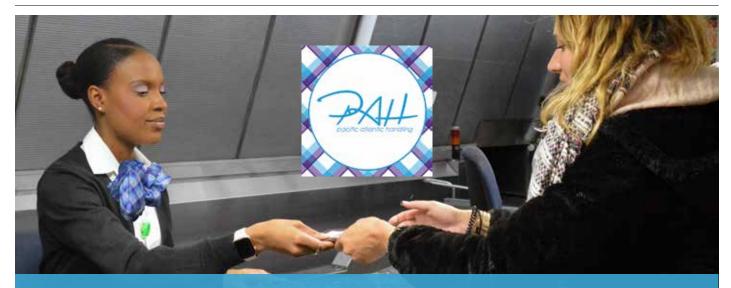
However, by mid-May Emirates announced it would be resuming scheduled flights from 21 May to nine destinations: London, Frankfurt, Paris, Milan, Madrid, Chicago, Toronto, Sydney and Melbourne.

There will also be connections available in Dubai for customers travelling between the UK and Australia, perhaps giving grounds for optimism.

Frankly, who knows? With the initial outbreak of Covid-19 seemingly retreating, airlines are beginning to look at the barren landscape and are considering how best to rebuild it.

Of course, consumer confidence will need to return, while the potential of a second wave of the virus remains hanging over everyone's head.

One thing you can be sure of: When good news begins to return, airlines will be keen to start telling journalists all about it, just as many of us will be keen to have something positive to report on.



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Inside airline recovery: Six key strengths to survive Covid-19

Airlines are struggling for survival at the moment as Covid-19 continues to ravage the global travel industry. However, travel restrictions are beginning to ease in many parts of the world, meaning services could begin to restart. Cirium head of product management (air operations) *Jim Hetzel* reviews the six key factors that he believes will help drive the resurgence.

Airlines have played a pivotal role in both the spread and containment of Covid-19 and few sectors have suffered more than global aviation.

Travel restrictions around the world have had an unprecedented impact across the entire aviation industry, infiltrating every segment of the market with a ricochet effect across the wider travel and tourism networks.

Numerous regional travel restrictions and the dramatic downturn in consumer confidence have seen demand for air travel dry up.

While all eyes remain on airlines as they continue to fight for financial support, and their very survival, there's no doubt that the industry will take off again.

At Cirium we've been assessing closely the internal factors that airlines can control, identifying six key strengths that will aid recovery.

Geographic dependency

The first is a carrier's geographic dependency. With no sure way to predict where the recovery will happen first, airlines with a mix of domestic and international routes have the greatest flexibility to respond.

Short-haul flights, predominantly run by low-cost airlines and domestic flag carriers, are likely to be first to market when travel restrictions lift.

Cirium data shows that in China, more than 30 per cent of domestic capacity returned between February and April, as many countries in Asia have passed what is hoped to be the peak of the pandemic.

Network diversity

As some markets recover sooner than others, airlines with operations spread across multiple regions will be at an advantage to bring services back online market-by-market.

This could see carriers re-evaluate their planning mix in line with demand, comparing hub and spoke routes with point-to-point opportunities to understand which are essential to business profitability.

Operational capacity will also impact planning, with airline operations dictating what is available based on what carriers are confident they can support.

Airlines with a variety of planning strategies will be better positioned to quickly manipulate their schedules and consider how to leverage global alliances, and their member networks, to provide new service

offerings to their customers.

Market profile and traffic mix

The type of travel that returns first will also drive airline recovery along a particular path. Everything points towards the leisure market rebounding more quickly than corporate travel.

In the short term, this is likely to benefit low-cost carriers, which rely on leisure and visiting family travellers, while airlines that operate predominantly business routes may see a slower return.



Even when corporate travel does recover, the shift to remote working and rise of virtual teleconferencing apps is likely to influence priorities.

Combine this with concerns around large gatherings associated with the meetings and conference sector, as well as corporate duty of care, and the business travel segment may remain depressed for some time.

Progress in digital transformation

Agility will be key in adapting to these rapidly changing market conditions.

Those airlines that have embraced digital transformation and moved closer towards data fluency will be able to make informed decisions about how to adapt; for example, which routes to reopen first, which aircraft to bring out of storage and how to reconfigure their network.

This data-driven decision-making will be more important than ever post-recovery. Many airlines will have to rethink their data management strategies to accelerate automation and digitise legacy technology. One key area for airlines is in the automation of applying waivers to their own tickets, which will improve customer service and their operations.

Availability of staff and crews

Early retirements, furloughs and layoffs threaten airlines' ability to meet future capacity demands. Without the right people and skills, their operations will be severely limited.

In countries where government support for airlines is conditional upon a commitment to forego furloughs and layoffs, it will be a quicker to bring employees back to work as needed to meet the demand.

Liquidity

Finally, airlines are currently focused on cutting costs and protecting cash flow – where possible seeking government subsidies to help them survive until they can recover passenger revenues.

The relative strengths of their balance sheets will determine their ability to position themselves for a return to profitable operations.

Low-cost carriers operate leanly in normal times, so are likely to have fewer cash reserves available to ride out the crisis.

Many airlines are looking at their ratio of owned versus leased aircraft to optimise operating costs. How they handle the other factors already covered could be heavily dependent on what percentage of their fleet requires regular lease payments.

In summary, there is room for transformation right now. Airlines that have a good handle on these six internal factors will be in a favourable position to take these chances and adapt when external factors lighten.

No matter what, the industry is facing new challenges and the road to recovery will require bold thinking and tough decision-making at times. The 'new normal' will drive innovation and may even uncover solutions to longstanding legacy issues within the industry.

Dealing with the new normal

Airports around the world have been hit hard by Covid-19. *Edward Robertson* finds out how they coped with the initial shock and how they are preparing for an unknown future

The Covid-19 pandemic might have prompted different responses from governments around the world, but the impact on the world's airports has been broadly the same.

Passenger numbers have plummeted as a combination of travel bans, decreasing consumer confidence, suspended routes and capacity reductions have left the world's airports largely empty, with many forced to close until circumstances improve.

Furthermore, with IATA predicting a 55 per cent drop in air traffic this year it is hard to know when the airports can reopen and what routes could be available to commence operations when they do.

While departure and arrival halls may be closed or virtually empty, aviation route development teams have been busy, not only dealing with the immediate demands of the crisis but also planning for the future when normality begins to return, in whatever shape it takes.

Handling the immediate

London City Airport was originally ordered to close with the suspension of all commercial flights at the end of March by the UK government and, at the time of going to press, remains closed.

Having handled a record 5.1 million passengers in 2019 thanks to growth of 6.4 per cent year on year, the impact has been serious.

However, despite the lost revenues the airport's chief commercial officer Richard Hill says a key focus of staff once the closures were

announced was to support its client airlines as best as possible.

"Our view is that now definitely isn't a time to be seeking new ways to extract ancillary revenue from carriers already facing huge pressures," he adds. "Our attitude has been to understand what we can do to help alleviate costs and make the processes of looking after grounded aircraft as easy as possible for them in the short term."

Adelaide Airport was also hit badly by the virus, says its head of aviation development Jonathan Cheong. Having seen international traffic grow by 13 per cent year on year in the second half of 2019, with domestic, including regional, traffic up by 3 per cent in the same period, the airport was hit hard in March when Covid-19's impact was first felt.

He says international traffic fell by 46 per cent while domestic, again including regional, fell by 37 per cent in March. Since then the airport's nine international carriers have suspended the eight routes they operated with about 50 weekly flights.

As a result, the only international flights operated have been repatriation ones while domestic and regional passenger movements have "declined significantly".

Despite the problems they face, Cheong says the team have found a new role acting as a conduit of information both externally and internally.



Local travel policy developments were fed to international carriers at both local and head office levels while capacity and frequency changes received from the airlines have been fed to both the airport's operations team and external stakeholders.

He adds the team has also enhanced its tracking dashboard to provide daily passenger number updates to share with the airport's management, board and shareholders.

Cheong says: "We have reached out to all our carriers and expressed our commitment to



rebuilding the traffic volumes when the travel restrictions are lifted and when they reinstate the services."

Elsewhere, Sweden has stood out from the rest of Europe after its government refused to put the country into a lockdown similar to that which the rest of the continent has undergone.

Whatever impact the different strategy has on the nation, Elizabeth Axtelius, director aviation business at Swedavia, which operates 10 of the country's airports including Stockholm Arlanda Airport, says the effect on its airports has been the same as across the rest of Europe in April with declines in passenger numbers of up to 98 per cent.

She says this was largely thanks to the Swedish government's advice against all non-essential travel, as well as a decision to ban travel to other EU countries via Sweden until mid-May, although some domestic services have stayed up and running.

Furthermore, she expects total air traffic volumes to remain "considerably lower" than before for a long period, adding: "We are in the

midst of a social crisis of unprecedented nature and the consequences for a company that enables people to meet are dramatic, since our revenue is in principle completely variable and connected in one way or another to passenger volume."

Axtelius says while many of Swedavia's staff have been temporarily laid off and plans for a new pier and baggage system at Stockholm Arlanda have been put on ice, remaining staff have had a key focus.

She adds: "For Swedavia as an organisation,

our first and foremost priority is, and has been, to limit the spread of the disease and protect people's lives and health; directly followed by Swedavia's economy and supporting our valued customers in the best way."

As a result, Axtelius says the route development team is closely monitoring key markets while intensifying dialogue with airline partners to ensure they offer the right help, for instance free or temporary removed charges for parked aircraft.

"The team and all the rest of us at Swedavia do all we can to support our airline customers in these challenging times when both airlines and Swedavia lack revenue," she adds.

Planning ahead

While all three airports may have dealt with the immediate shock of handling Covid-19, they are all naturally planning for the gradual lifting of the various lockdowns and the resumption of regular domestic and international flying.

Again, supplying relevant, accurate data will be key to ensuring routes restart successfully, although Hill argues that future negotiations require a new type of sensitivity as well as a more flexible approach from both sides.

He says: "What airlines definitely don't want to hear right now is a sales pitch. The time will come to talk about backfilling lost routes and taking advantage of newly available slot capacity, but that's for another day."

While Hill adds the airport's immediate focus has been on supporting its existing airline relationships, other carriers with an eye for the long term have been getting in contact with the UK gateway to discuss potential future opportunities, which have been further helped by a landing fees review undertaken prior to the crisis.

"We're definitely receptive to those discussions and it's proving to be time very well spent," he says.

Axtelius says Swedavia is working to ensure operations at all its airports can be rapidly scaled up when the situation stabilises and demand returns, adding: "We are putting a lot of effort into the health and safety of everyone."

She believes the domestic market will be the first to recover, followed by intraregional and European services before lastly long haul, although this has seen the smallest decrease in capacity thanks to Qatar Airways, Air China and Ethiopian Airlines maintaining services. Looking ahead, Cheong says with domestic restrictions





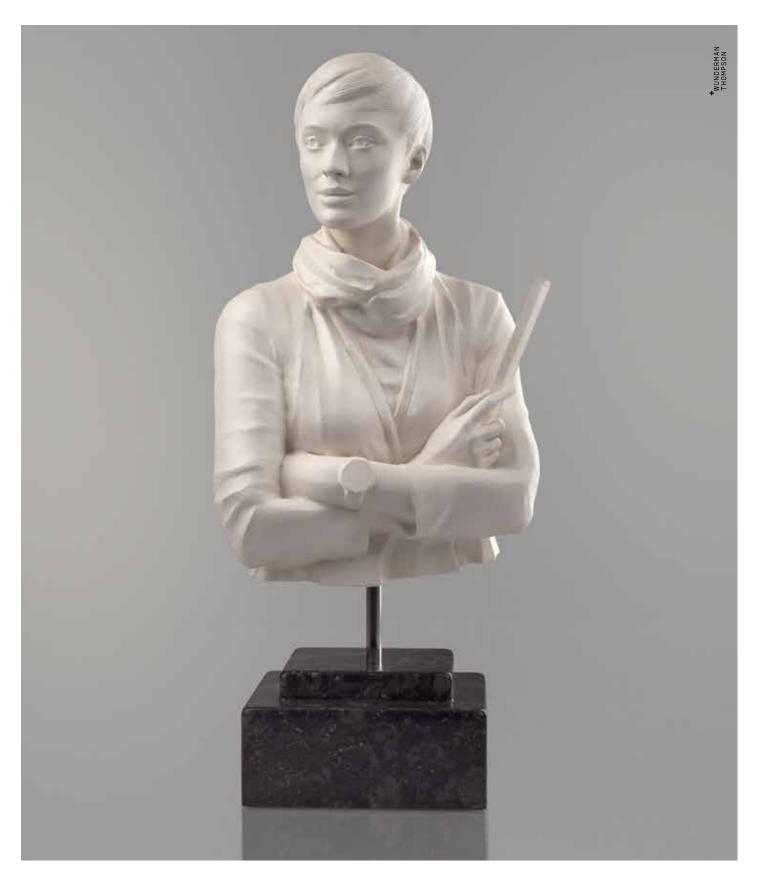
"What airlines definitely don't want to hear right now is a sales pitch."

Richard Hill,

London City Airport chief commercial officer

most likely to be lifted first, those routes are key to Adelaide's service resumption, followed by regional flights with trans-Tasman routes at the top of the list for further afield.

He has also been working with local businesses, freight forwarders and airlines to introduce freight-only flights in the absence of previously belly-only space on passenger aircraft. He says the strategy has paid off too, with Singapore Airlines agreeing to operate six freight-only flights on board an Airbus A350-900, commencing in May.



North European Interior Designer smiles at Athens International Airport White marble, 2020 A.D.





In addition, Cheong says many of his current conversations are with key stakeholders including the South Australian Tourism Commission, Tourism Australia, the Adelaide Convention Bureau and the state government to ensure when it is safe to resume flights, the right messaging is there to drive consumer desire.

Marketing campaigns are also being discussed with airlines to ensure travellers take to the skies again, although Cheong admits there will be a need to help build up consumer confidence as we enter a new era.

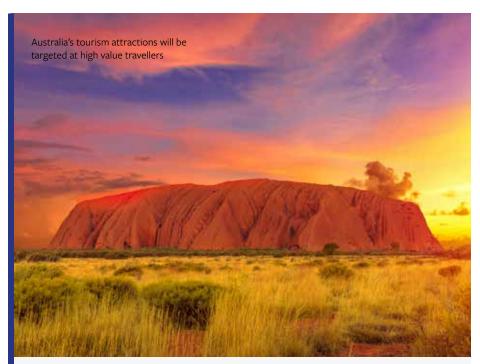
He says: "Ideally, we would like to develop the perfect spring so that we can rebound our traffic and capacity numbers stronger and quicker."

And that is a target that every airport should be striving for at the moment as we enter a new period of global travel. How it pans out remains to be seen, but the airlines and airports that cooperate, share information, remain flexible, exercise pragmatism and show a little human kindness and understanding to one another seem best placed to cope with it.

"We would like to develop the perfect spring so that we can rebound"

Jonathan Cheong

Adelaide Airport head of aviation development



Australia targets 15 global tourism markets

Tourism Australia is targeting 15 key markets via social media in anticipation of when the world's skies open up again.

Managing director Phillipa Harrison says Australia saw a sharp drop in visitor numbers when Covid-19 initially struck, forcing the country's international and domestic air schedules to reduce by 90 per cent.

The impact of the travel ban was felt heavily on the ground, with Australia reporting 331,900 international arrivals in March 2020, a 60 per cent drop year on year.

However, with the country reporting minimal new infections at the time of going to press, Tourism Australia's social media programme is again ramping up and is using additional research and market analysis to understand consumers' mindsets better. The markets now being targeted are in North America, Europe, Asia and New Zealand.

Harrison says: "We believe it is important to continue the conversation about Australia with

our high-value traveller audience around the world throughout these tough times so that Australia remains top-of-mind for when they are planning their next holiday."

She adds Tourism Australia's aviation team has also been planning for the recovery of both domestic and international aviation markets.

It will lead a countrywide task force including its airports, local tourism bodies, Austrade and three different government departments as they target a recovery in international tourism through destination marketing, building aviation capacity and growing air frequencies.

Harrison says: "The goal of this strategy is to restore key routes to Australia that were operational pre-Covid-19 as soon as possible and ahead of other destinations.

"Of the 300-plus international routes that flew to Australia prior to the outbreak, Tourism Australia has identified priority routes that are critical to tourism recovery. In addition, domestic aviation routes that are critical to the tourism industry will be an immediate focus."



Wizz focuses on the essentials

Wizz Air will be focusing on relaunching routes that cater to the most essential travel as Europe opens up from lockdown.

Owain Jones, managing director of Wizz Air UK, says the airline is currently operating a skeleton service at about 10 per cent of normal levels as European travel restrictions continue to limit passenger movement.

He adds: "When reintroducing flights at this time, we look at routes where there is the biggest need for essential travel, such as repatriating passengers across Europe as well as returning stranded British citizens home again."

The comments come as the airline prepares to launch six new routes from London Luton

Airport to destinations in Greece, Portugal and Morocco, with operations scheduled to commence between June and October.

The new routes will help drive the airline's operations to 70 per cent capacity by the end of the year, Jones believes, as the demand for business and leisure travel gradually resumes.

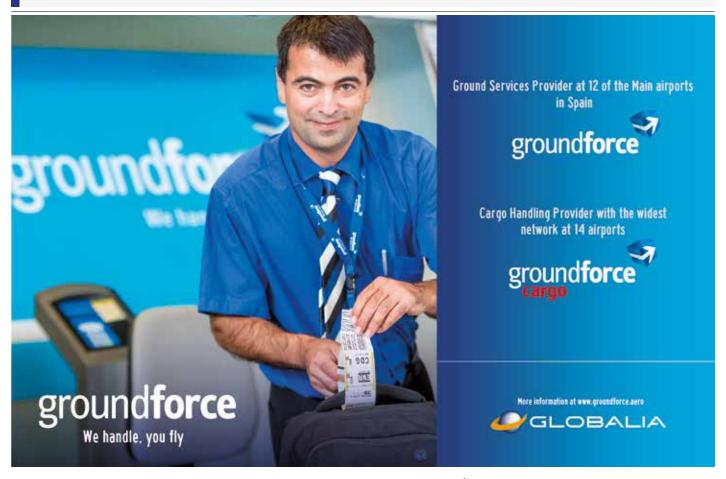
In the meantime, He adds the most important thing airports can do to help the airline is to communicate and align on the new health and safety measures required to ensure passengers feel safe and reassured.

He says the airline is introducing a number of new measures on board flights, including crew and passengers wearing masks, the handing out of sanitising wipes and making contactless payments for in-flight purchases. Jones adds: "Airports introducing similar protocols is a huge help for airlines in restarting operations and ensuring passengers feel safe to travel."

He says these protocols consist of a number of measures, including the continuation of social distancing and health checks for passengers.

"Restoring the confidence of passengers and airport staff will be crucial in returning passenger numbers to what they were prepandemic," Jones says.

"Ensuring the correct protocols are in place will serve as a competitive advantage for airports, and going forward, adaptability will be key due to the nature of this continuously unfolding situation."



China in your plan

As the first country to impose a lockdown in response to Covid-19, China is now one of the furthest down the route to some kind of normality with the resumption of flights. Using data on the Chinese market supplied by Flightradar24, aviation consultancy ICF manager aviation *Alastair Blanshard* and aviation data scientist *Riikka Hasa* examine what the new normal might look like.





The future has never been so uncertain, and yet planning for it has rarely been so critical. As the global quarantine is gradually relaxed, passengers will trickle back to airports and aircraft will again fill the skies.

But the flood of government subsidies will also ebb, and many companies are likely to be left behind. The millions of jobs, billions of dollars of assets and years of hard-fought progress that these companies represent will depend on decisions made in the coming weeks.

Having been the initial epicentre of the disease and the first to feel its impact, China is now furthest ahead on the road to recovery and perhaps holds a glimpse of the future for the 2.6 billion people globally who have undergone some form of lockdown. In April, Wuhan finally began to ease its 76-day quarantine. Now as other countries begin to do the same, what can we learn from China's gradual move to a more normal world?

Using aircraft tracking data from flight tracker Flightradar24, we found two broad phases to the recovery. In the first, essential connectivity was maintained across the domestic network but with fewer than half the number of 2019 flights. In the second phase the number of flights started to increase following the easing of quarantine on 8 April, although with a huge divergence between carriers, notably with LCC Spring Airlines already flying more than 100 per cent of pre-Covid domestic flights. International traffic remains severely suppressed, but government intervention has ensured some level of connectivity is maintained.

Life on the home front

To analyse the domestic traffic, we divided the routes into four categories, using two criteria: short or long and light or heavy. We defined short routes as those below 1,100km, and light flights as those with an average of fewer than 10 daily flights in 2019. Long routes were those above 1,100k and heavy those averaging more than 10 daily flights in 2019. Each route category had an average of 3,000 daily flights in 2019, and as shown in figure one, behaved quite differently.

The weeks following the lockdown in Wuhan were chaos. At the worst point, nearly 900 domestic flights were cancelled daily, representing 75 per cent of capacity and stranding more than 2 million domestic passengers. Many of these were over the denser routes, with shorter routes also slightly worse affected.

In late February, as the quarantine began to take effect and the rate of infection slowed below 1,000 new cases a day from a peak of nearly 4,000, connectivity was tentatively re-established. By early March, nearly three quarters of scheduled routes across China operated some service and President Xi Jinping visited Wuhan to show the worst was past

But for the aviation industry, this was far from a full recovery. In this phase there was a clear difference between routes, with the longer and lighter routes suffering less and recovering faster.

We suspect this is because connectivity was

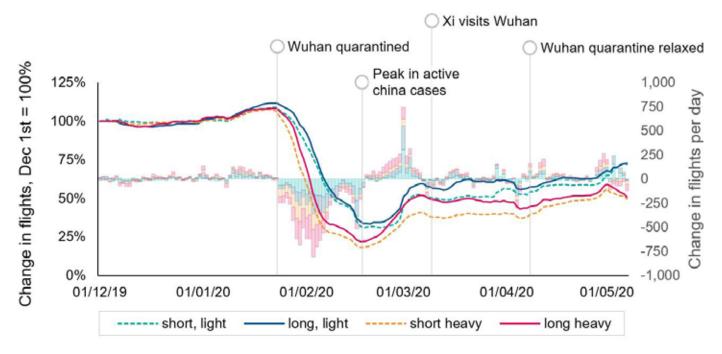


Figure 1: Change in daily flights within each route category. Lines show the cumulative percentage change from 1 December, 2019, and bars show the absolute change per day

prioritised over capacity, and once connectivity was re-established over the heavy routes there was insufficient demand to operate additional flights. The shorter routes may also have recovered more slowly as some of the demand could have been substituted by road traffic.

There could also be geographic factors driving this – Wuhan itself is the ninth largest city in China by population and is conveniently located. Many of the shorter, dense routes connecting the heavily inhabited East of China were therefore near the epicentre of the disease, while longer, thinner routes overflying the region or connecting outlying provinces would have been less impacted.

The net result was long, light routes recovering to 60 per cent of prior levels, compared to just 40 per cent for the short, dense routes.

As the Wuhan quarantine was relaxed in April, the domestic market gradually transitioned to the second phase of recovery. figure one shows an inflection as the quarantine was

relaxed, with an increasing number of flight operations across all route categories and a somewhat higher rate on the shorter, heavier routes. The average increase since quarantine was lifted is about 12 per cent in a month and helped China overtake the US to become the world's largest aviation market.

The recovery accelerated leading up to May which continued for the lighter routes but slightly relapsed on heavier routes. In early May the Civil Aviation Administration of China (CAAC) was also due to make the delayed transition to summer schedules, potentially leading to further capacity increases.

Recovering services

Different carriers have recovered at noticeably different rates. As shown in figure two, LCCs have recovered to nearly 80 per cent of pre-Covid-19 domestic flight levels, compared to 50 per cent for the full-service carriers. Spring Airlines has recovered particularly aggressively, operating more domestic daily flights in May than in much of 2019.

"The average increase [in flights] since quarantine was lifted ... helped China overtake the US to become the world's largest aviation market."



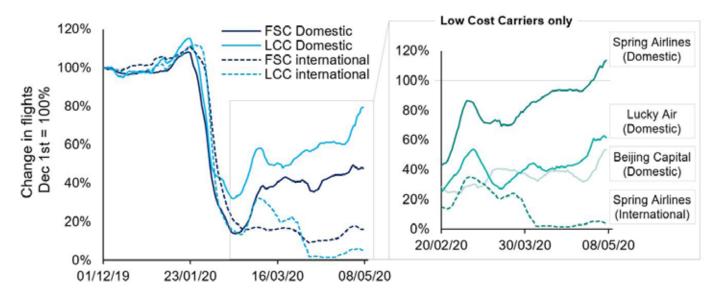


Figure 2: Change in daily flights for the top three Chinese full-service carriers (China Southern Airlines, China Eastern Airlines, Air China) and top three low-cost carriers (Spring Airlines, Lucky Air and Beijing Capital)

By comparison the international market is on life support. The Chinese government has taken a direct – and restrictive – role in managing routes to foreign countries. From 12 March Chinese airlines have only been allowed to operate a weekly flight to each other country, and each foreign airline was only allowed one weekly route to China. To increase social distancing, load factors are capped at 75 per cent .

At the same time, the government offered airlines subsidies to maintain crucial international connectivity. But set at just \$0.003 per available seat kilometres ASK (or 1 cent per ASK if no other airlines serve the route) this only eases the pain. Typical CASKs for long-haul flights are closer to 8-10 cents, so a typical London-Beijing flight would still require an additional \$200,000 of revenue just to break even.

As shown in figure three, this may have had a slight impact in mitigating the decrease in international routes served to about 65 per cent in May, while the reduction in flights was about 75 per cent. This can be seen in

the breakdown on the right-hand side, with many more routes operating with just a single weekly service compared to 2019 and consequently greater connectivity than the volume of flights would suggest.

These routes will likely have a long, gradual recovery compared to the domestic markets. All indications are for restrictions to remain in place for weeks yet, as politicians avoid the scandal that could potentially result from re-importing infections to fragile populations still feeling the economic and social pain from the first wave.

A phased lifting of these restrictions seems likely, with the EU recently voting to extend restrictions on access for non-EU residents, and discussion of a 'Trans-Tasman' aviation bubble connecting Australia and New Zealand as an intermediate step back to open skies.

Encouraging passengers and businesses back to aircraft may take a longer time. The burden of proof for safe operations has always been particularly high for airlines, and airlines and airports will need layered measures to reassure passengers and governments.

Even so, many businesses may be increasingly acclimatised to teleconferencing, and for tourists the thrill of exotic holidays may be overshadowed by an increased sensitivity to the risk of the unknown. Financial pressures are likely to weigh on both.

Positive potential

There is light at the end of the tunnel. Aviation is fundamentally a growth industry and has proved resilient to recessions, oil crisis, terrorist attacks, natural disasters, MERS and SARS.

A survey of aviation industry executives conducted by ICF in April saw 66 per cent expecting the severe reduction in flights to last fewer than four months, and 90 per cent expected traffic to return to pre-Covid-19 levels within two years. In the long term it seems there is little expectation this will dent the global appetite for the opportunities, experiences and benefits created by aviation. Beneath the surface, the industry that serves this appetite may look a little different though.

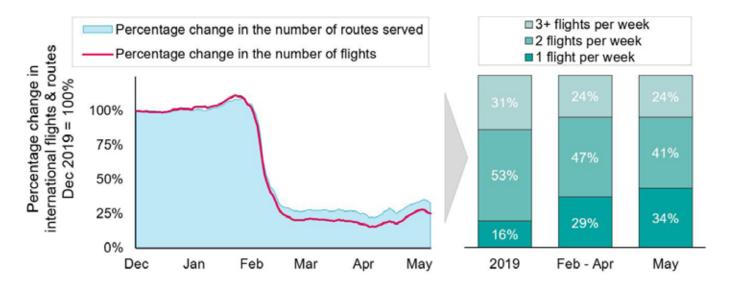


Figure 3: Left – percentage change in the number of international flights and routes.

Right – distribution of flights over international routes

Cargo boost

Each of the previous crises hurt some companies more than others, and this one is likely to be no different. China will have the first-mover advantage, and its large, recuperating domestic network will provide useful feeder traffic when international flights are possible again.

An ability to draw on state aid with fewer conditions has allowed the big three Chinese carriers to avoid masslayoffs and by mid-March, 77 per cent of major national airport construction projects had been resumed. This will provide them a more solid foundation then many foreign competitors, and is perhaps reflected by the market, with the share price for the Chinese big three recording a trailing 52-week max versus min drop of just 37 per cent, compared to 70 per cent for comparable airlines across Europe and the US. Whatever the outcome, it is certain that many of the seismic shifts to the industry are still ahead of us.

While passenger flights have been in a downward spiral throughout the pandemic, air cargo carriers have seen an increase in operations. More than 50 per cent of air cargo is typically transported in the belly of passenger aircraft, but with so many passenger aircraft grounded the available capacity has rapidly dropped. Air cargo operators have ramped up to respond to the global and urgent need to deliver medical supplies and to ensure goods are flowing without disruptions.

In March and April, freighter aircraft operated 30 per cent more freight tonne-kilometres to and from China compared with the same time last year. Notably, there was a 51 per cent increase in capacity to and from Central Asian market and a 13 per cent decrease in Europe, Middle East and Africa (EMEA). However, despite the average decease in traffic to EMEA, there was an upward trend through the period and capacity had recovered to last year's levels by the end of April.

There has also been a slight shift in the distribution of cargo flights between geographic regions. While flights to and from Central Asia accounted for 15 per cent of all cargo flights in March and April in 2019, they increased to 20 per cent in 2020. In comparison, 35 per cent of the cargo flights were EMEA-bound in 2019, but this dropped to 25 per cent in 2020. The significant increase in cargo capacity flown to Central

Asia and simultaneous decrease in the capacity with EMEA may hint that the cargo carriers are flying with heavier loads, but the reduced range requires stopping in Central Asia airports such as Novosibirsk for refuelling before continuing to Europe.

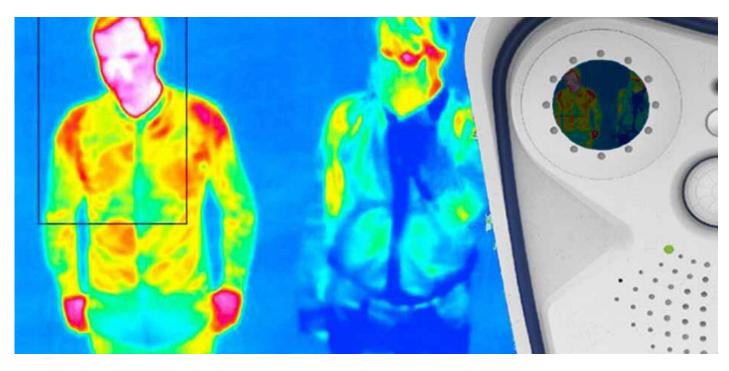
The global reduction in cargo capacity has also resulted in a surge in cargo rates. For example, the cargo rates from China to Europe more than doubled compared with those of last year, according to the freight analysis firm TAC Index.

To compensate for the increased cost of air freight, and to utilise the grounded fleet, passenger aircraft have been transformed into cargo carriers – some temporarily by strapping cargo to passenger seats and some more permanently refitted for cargo-only use. Remarkably, this has even led to a contract for Lufthansa Technik to convert an A380 to a freighter, 13 years after the original A380 freighter programme was shelved.

The good times for cargo airlines may be winding down though. With Chinese passenger flights starting to recover, domestic cargo traffic in China dropped by 20 per cent between March and April. At their peak, domestic cargo flights in China were 80 per cent above last year's level at the end of March, declined to 20 per cent in April.

Testing times

Airports' efforts to implement new systems for handling passengers in the new Covid-19 era will fail unless the customer experience is placed at the heart of the new rules. *Edward Robertson* reports.



As airports seek to ramp up operations, or even reopen, in a world now stalked by Covid-19 they are considering various technologies to do so.

The UK's busiest airport – and the seventh busiest in the world with 80.8 million passengers recorded in 2019 – Heathrow Airport in May announced it would trial technologies and processes which would allow travel, while reducing the chances of the virus spreading.

At the time of the announcement, its CEO John Holland-Kaye also told the UK government's transport committee that he hopes the trial's findings can then be shared both nationally and internationally in a bid to create a common international standard which would help get the world flying again.

And just a quick look at Heathrow's own figures show how important it is to do so - in

the first quarter of 2020, the airport saw an 18.3 per cent drop in passenger numbers to 14.6 million.

While this is bad enough, the impact of the UK government's lockdown, which was imposed at the end of March not long after most of Europe had closed down, was especially serious with passenger numbers expected to be down by 97 per cent in April.

The financial figures are equally stark, with overall revenue in Q1 down by 12.7 per cent to £593 million while adjusted EBITDA fell by 22.4 per cent to £315 million and the airport is now operating from two terminals -2 and 5.

The airport adds: "We expect passenger demand will remain weak until governments around the world deem it safe to lift travel restrictions."

So what is it doing to show that travel in the

new normal can be safe? Plenty, as it turns

Testing technology

Holland-Kaye told the UK government that the key technologies under review include UV sanitation, facial recognition thermal screening technology and contactless security procedures.

While the overall aim is to reduce the risk of contracting or transmitting Covid-19 while travelling, he added the trials will be assessed according to medical effectiveness, passenger response and practicality.

The first trial, which was set to be introduced by the end of May in Terminal 2, will be temperature screening technology which uses camera detection systems to record passenger temperatures.

It will initially be used in the airport's

immigration halls, before being rolled out to departures, connections and colleague search areas if it proves to be successful.

Holland-Kaye also told the government transport committee that UV sanitation could also be used to sanitise security trays quickly, while the introduction of contact-free security screening equipment would cut down person-to-person exposure. He pledged to share the findings from the trials with other UK airports, while urging the UK government to use the data to lead the global implementation of a common international standard in a bid to ensure continued passenger safety and restore confidence in travel.

Holland-Kaye says: "Aviation is the cornerstone of the UK economy, and to restart the economy, the government needs to help restart aviation. The UK has the world's third largest aviation sector offering the platform for the government to take a lead in agreeing a Common International Standard for aviation health with our main trading partners.

"This standard is key to minimising transmission of Covid-19 across borders, and the technology we are trialling at Heathrow could be part of the solution."

People first

Jerry Angrave, a customer and passenger experience director at passenger-experience consultancy Empathyce, supports the use of technology to solve the problem.

But he argues that in doing so Heathrow must never lose sight of the single most important factor in getting the global aviation market back up and running – the passenger experience.



Angrave says: "One of the biggest things airports have to do now is be more people focused, because if they're not, they're not understanding what their passengers are thinking, feeling, hoping for and fearing.

"Airports might unwittingly create the right processes but do so with a complete lack of empathy. The one thing that will drive the recovery is the passenger having the reassurance and confidence that although it may not be the quickest journey through the airport now, it is still easy and tolerable.

"What the airports can't afford to happen is have those initial tentative customers come through and have that feeling it was catastrophic and such a pain in the backside that they are never going to do it again."

Angrave adds in order to counter this, the process of handling the passenger must start before they even get to the airport with information supplied on queuing, the number and nature of prospective health checks and even if a health passport is required and, if so, where to get one.

"It's about managing expectations and making sure the customers are prepared for what they might have to do," he adds.

Once at the airport, Angrave believes any new systems and processes will need to be clearly and carefully highlighted, while an increase in the numbers of staff on the ground will be required to help passengers navigate the changes.

He says: "The airports are almost going to have to treat all passengers as if they were first-time passengers. Even the gold card loyalty members will find their journey is going to be quite different too."

Angrave adds the new systems will need to be implemented and explained as effectively for arriving passengers as departing ones, while even transit passengers should expect to be subject to tests.

"There's absolutely an argument for them not

to be tested (in transit) as they are tested before and after so they are sort of ringfenced," he adds.

"If you look at passenger expectation, if I was going through the transit lounge I would be expecting to be tested, even if it's a quick thermometer on the head. I might be a bit worried or even surprised if it didn't happen."

Furthermore, Angrave believes the decision over how to handle transit passengers might be taken out of the hands of airports as either governments or the World Health Organisation (WHO) see it as an opportunity to gather more data through testing.

For this reason, he thinks passengers on domestic flights, which are expected to return sooner, may too face the prospect of tests.

Angrave says: "The airports that have domestic flights will probably be up and running sooner as you don't have those issues of international borders with quarantine.

"But don't think domestic flights will operate as normal. The CAA or the government will place an obligation on them to test everybody and use it as part of a wider test programme; there will be tests, albeit not as many or as stringent as if you were dealing with an international flight."

He also welcomes Heathrow's pledge to share its findings from the trials with other airports both in the UK and overseas.

"The smaller regional airports are just shut down at the moment so they've not got that opportunity (to test new systems)," Angrave says.

"They won't have had the ability to test and learn as others are like Heathrow. (They won't know) where some things have worked and some things haven't as business ramps up again. Heathrow will have a good sense of what works (and will know that) if we're back up to 20 per cent flights or 30 per cent flights, these things will work."

With this in mind, airports could find themselves opening for business quicker than hoped for. More importantly, the technology is already out there and if it is coupled correctly to the passenger experience then airports will find themselves driving a resurgence in travel across the globe.

"The technology we are trialling at Heathrow could be part of the solution"

John Holland-Kaye,Heathrow Airport CEO





Restricted terminal access, redesigned gate areas and hand luggage limitations could all be part of the new airport experience in a plan suggested by IATA.

The association has published a new report entitled Biosecurity for Air Transport: A Roadmap for Restarting Aviation, which contains proposals for new biosecurity arrangements to restart passenger flights amid the Covid-19 crisis.

The proposals cover arrangements for airports and aircraft and aim to provide the confidence required by both governments and consumers to get them flying again.

IATA director general and CEO Alexandre de Juniac says: "There is no single measure that will reduce risk and enable a safe restart of flying. But layering measures that are globally implemented and mutually recognised by governments can achieve the needed outcome.

"This is the greatest crisis that aviation has ever faced. A layered approach has worked with safety and with security. It's the way forward for biosecurity as well."

The airport proposals are:

- Access to the terminal building should be restricted to airport and airline workers and travellers (exceptions made for those accompanying disabled passengers or unaccompanied minors)
- Temperature screening by trained government staff at entry points to the terminal building
- Physical distancing through all passenger processes, including queue management
- Use of face coverings for passengers and masks for staff in line with local regulations
- Self-service options for check-in used as much as possible to reduce contact points and queues. This includes remote check-in, automated bag drops and self-boarding
- Boarding should be made as efficient as possible with re-designed gate areas, congestion-reducing boarding priorities and hand luggage limitations
- Cleaning and sanitisation of high-touch areas, including wide availability of hand sanitiser





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Blue sky thinking

In the wake of Covid-19, consumer attitudes to flying have changed greatly. Management consultancy EDIwave director *Mark Finch* considers the traveller's mindset and what can be done to tempt them back into the air.

Anyone listening to aviation-related webinars since the Covid-19 outbreak will know the main theme at the moment is consumer confidence and what can be done to stimulate demand.

It seems before the pandemic, UK travellers didn't want to think too much about air travel and felt well informed. Previous research carried out in the UK's aviation sector by the Civil Aviation Authority (CAA) found that most consumers couldn't identify any gaps in available information or wouldn't want more, even if it's beneficial.

The same study also found that people don't want more information on safety as it may make them feel less safe, suggesting that although safety and security are important, consumers put them to the back of their minds when flying.

This might seem surprising, in terms of travellers not wanting to know more about flying despite the complexity air travel involves. Or is it a case of ignorance is bliss?

Despite the potential unease around safety and security, aviation has experienced

consistent year-on-year global growth.

Therefore, understanding how consumers deal with perceived safety and security concerns and make their decisions is of interest in the Covid-19 pandemic and its impact on consumer demand.

Bill Franke, managing partner of private equity firm Indigo Partners, who appeared as a guest speaker on a recent Centre for Aviation Pacific Aviation (CAPA) Masterclass webinar, discussed the complexity of the aviation industry.

The issues surrounding demand in the current crisis clearly demonstrate this complexity and the detailed analysis needed to understand it.

The feeling among industry experts is that consumer demand is pent up and awaits confidence to return, although it's unclear how and when the recovery will happen.

John Grant, senior aviation analyst with aviation data analysts OAG, has spoken of using of all available information as a reliable recovery tool, adding: "We need to trust our own intuition and data points."

There is significant importance attached to understanding consumers' insights which are now being tracked through a new tool called the Travel Recovery Insights Portal produced by Boston Consulting Group with data from ARC, 3Victors and OAG as part of a collaborative approach to understanding returning air travel demand.

Considering consumer sentiment as crucial data is encouraging. However, we're still not able to explain the consumer's mental, emotional and behavioural responses, in particular attitudes and decision-making that are fundamental to the industry.

Understanding instincts

Psychologically speaking, consumer insight provides in-depth understanding of the decision-making process, which can be used effectively to develop strategies for restoring confidence, stimulate demand and improve our understanding of future trends.

Conventional wisdom may suggest that we all think rationally about purchasing decisions but such choices are made more unconsciously and emotionally than we realise.

For instance, consumers may not rationally consider the facts about air-travel safety and security but still have attitudes towards them. Attitudes are formed through different components, including our emotional reactions, our thoughts and beliefs and through the actions or behaviour of others.

To make sense of the world we need to have the ability to decipher, filter and process information fast and mental short cuts, heuristics, help this. We simply can't process all the information around us consciously, in fact the working memory can only cope with three to four pieces of new information at a time and research shows that 95 per cent of our decisions take place unconsciously.

This is important in understanding how the Covid-19 pandemic is affecting consumer confidence by causing analysis paralysis or when missing information gaps are filled with heuristics.

Information that isn't consistent with our beliefs causes psychological stress, cognitive dissonance, which could also be having an impact on confidence with consumers being reluctant to travel by air until Covid-19 is eliminated.

This uncertainty can be overwhelming, causing consumers to become more dependent on emotions which at the current time will negatively impact confidence.

Feeling safe

Heuristics and biases influence the way we perceive things around us and when communications are definitive and assertive, people tend to be more reassured and comply as they assume authority and leadership. Unfortunately the advice for air travel during the pandemic hasn't been complete enough and in some cases, it has been too confusing for consumers to be able to make decisions about safety concerns, leading to negative attitudes.

A recent survey on consumer sentiment carried out by Boston Consulting Group shows that consumers "cite virus safety measures as being nearly as critical as price". Other factors that may sway consumers to travel included: a cheap price, health and safety measures, best-

in-class hygiene, fewer crowds and enforced social distancing.

This would infer that rock-bottom prices alone aren't enough to drive recovery, so the focus on safety and cleanliness is paramount.

Global integration

The good news is attitudes change with time and additional information. Also, long-lasting attitude change is more likely and more resistant to counter-arguments over time when it is formed by careful, conscious analysis.

A clear, concise and consistent narrative aligned with consumer beliefs on safety and the virus will be beneficial in restoring confidence by improving perception and attitudes towards air travel.

Franke expressed his grave concerns about the lack of global "integration around opportunities to process passengers" and the need for

agreement where various methods are being applied internationally.

For instance, the European Union Aviation Safety Agency (EASA) issued a Covid-19 aviation health safety protocol concerning management of airline passengers which is aligned with the European Centre for Disease Prevention and Control (ECDC) and the World Health Organisation (WHO).

Although not regulation, it at least offers a consistent approach, which is what consumer confidence desperately needs now. The consumer research carried out by the CAA also showed that 49 per cent of the travellers surveyed agreed that a lack of consistency in security procedures concerns them.

As time goes by in this crisis we're starting to see consensus around risk factors which should help create some common ground across the industry. Effective aircraft cabin ventilation has been widely publicised and accepted for



preventing the spread of contagion as it dilutes and limits airborne particles.

Face masks, hand sanitiser, thermal screening, cleaning and disinfection are some of the common and now increasingly familiar measures that the public expect to keep them safe on the ground and it will be the same factors that breed confidence once they are up in the air.

However, it's important that aviation not only works towards adopting a common approach but also ensures that travellers are aware of the measures. Consumers need consistency and common ground is where it'll be found.

Gradual return

Recent webinars held on Covid-19 have been cautiously optimistic. Grant points out that we need an international breakthrough and that "aviation is at the mercy of consumer confidence".

Dr Michael Osterholm, director of the Center for Infectious Disease Research and Policy (CIDRAP) in the US believes it is critical for everyone to understand the facts in order to prepare for and prevent viral pandemics like Covid-19.

Agreeing the facts and making them easier for consumers to understand would be an optimal way forward. What is also becoming increasingly evident is the need to do this through an integrated approach and perhaps rallying a coalition of the willing across aviation will help this?

Progress is another vital component for consumers, with the perception of making

progress being the most important thing for boosting our emotions, motivations and perceptions.

Recent news of easyJet resuming flights from 15 June, Japan ending its state of emergency and EU borders opening are all having a positive effect and airline share prices are rallying as a result. A recovery won't happen overnight, but if the small wins continue then people will feel progress is being made.

Dr Simon Moore, a behavioural psychologist from behavioural science consultancy Innovation Bubble, believes that Europeans have been cautious in returning to the shops

"Rock-bottom prices alone aren't enough to drive recovery, so the focus on safety and cleanliness is paramount"

as they're waiting for social proof. This means that there is still more of a reliance on gut feeling and emotion and that consumers are essentially observing the behaviour of others to see how safe it is before returning to the shops. The same behaviour applies to air travel.

Green shoots and good news will start to build momentum and work towards more positive attitudes. In the meantime there is an opportunity to work towards a long-term and resilient change in attitudes, leading to better-informed travellers and a more effective and stable recovery.

Reaching a recovery should not be the end of the traveller confidence conversation. Aviation is complex and consumers are one of the key moving parts and need to be understood at a deeper level. While this crisis has given us the opportunity to start focusing more on the consumer we need to build on this and ensure that it remains a crucial part of future strategy.

There are opportunities throughout the customer journey and across all touch points to develop the traveller proposition and improve experience while also increasing interest in techniques designed to understand consumer intuition.

Organisations with a deeper understanding of their brand perception will have the advantage, especially where the standard practices for customers include best-in-class health and safety measures, service delivery and value for money.

Wizz Air CEO Josef Varadi said in a CAPA Masterclass webinar on Covid-19 recovery that "robust measures" are needed to restore consumer confidence, while "convincing the consumers that we are efficient and doing the right thing" is crucial.

There couldn't be a clearer way of putting this feeling into words and it is an urgent requirement for aviation right now. After all, by understanding how the traveller thinks, we could be acting on more than just instinct.





Handling unprecedented challenges

Ground handlers and airports are working to ensure staff safety during Covid-19 and their survival in an uncertain future. *Megan Ramsay* reports.

Guidelines from the International Air Transport Association (IATA) for ground handling operations during Covid-19 state that "the principles of most operational procedures are unchanged".

However, practices such as the use of PPE, good hygiene and physical distancing are encouraged, to prevent transmission of the virus.

As the spread of Covid-19 is not apparently driven by contact with

surfaces, GSE equipment should be used as normal and the handling of water and toilet waste also remains unchanged. It is, however, recommended to clean and sanitise passenger and crew buses, and any "high-touch" areas, regularly.

Practical examples abound among the ground handling community. Dubai-based Emirates Group, which includes handler dnata, has implemented "enhanced cleaning and disinfection protocols at its facilities, introduced temperature

screening at its key office entry points, and launched internal educational campaigns on hand hygiene and health practices".

Other steps include the provision of hand sanitisers and face masks where required, to protect frontline employees such as crew and airport teams while on duty.

At the same time, Airports Council International (ACI) has outlined ways to ensure the wellbeing of airport staff along similar lines to IATA's advice for ground handlers. Airport operators have been quick to do whatever they can.

"The safety and health of all Schiphol employees and travellers have been Schiphol's number one priority since the outbreak of Covid-19," says Maaike van der Windt, director aviation marketing, cargo and customer experience at Amsterdam Airport Schiphol.

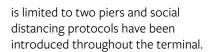
For instance, boarding and disembarking



"The safety and health of all Schiphol employees and travellers have been Schiphol's number one priority since the outbreak of Covid-19"

Maaike van der Windt

Amsterdam Airport Schiphol director aviation marketing, cargo and customer experience



Schiphol takes its responsibility as a landlord seriously too and has offered relief measures to its tenants, business partners and airlines. These relate, for



example, to airport charges, real estate rent and parking of non-operational aircraft.

A different mix

According to van der Windt, in April passenger numbers at Schiphol were down by about 98 per cent compared

to the same time last year. Air traffic movements (ATMs) have fallen by 90 per cent year on year, to about 130 per day.

On the plus side: "We have an upsurge in freighter flights – both full freighters and passenger aircraft that the airlines now use to carry cargo. The numbers show

approximately 54.8 per cent more full freight ATMs than this same period last year."

However, that increase in cargo flights has not compensated for the loss of belly freight volumes usually carried on passenger flights.

A spokesperson for handler Swissport says: "Whereas you normally have a 50:50 split between the capacity on freighter aircraft and the belly capacity on passenger aircraft, air cargo now relies almost entirely on full-freighter flights. At airports that naturally have a high share of belly capacity, business is down dramatically."

The situation is different at smaller airports, which have little or no long-haul traffic. If such airports have a significant cargo segment, it is typically full-freighter business; examples include Basel, Liege or East Midlands.

At other stations in its network, Swissport staff are on short hours – but at Basel, on the other hand, they have more to do than usual.

"For instance, Qatar Airways has doubled its flights to 13 to 15 weekly since March as it moved parts of its operations from Luxembourg to Basel," the Swissport spokesperson notes.

"We've handled a charter flight operated by AirBridgeCargo (from Basel) to Beijing, carrying 118 tons of medical supplies, as well as several incoming flights with medical equipment from Shanghai."

Schiphol is working very closely with handlers, Dutch Customs and the rest of its cargo community to keep goods moving – which is particularly important now that many medical shipments are flown, van der Windt says.

"Supply chain cooperation is – especially now – very important as flight schedules continue to change on a daily basis," she adds.

Getting ahead

"At first we were busy trying to predict the impact of the corona crisis," van der Windt recalls. "Now we know the depth of the impact and have focused on developing scenarios for what recovery might look like.

"Due to the uncertainties we have developed several scenarios around when corona will be under control and what the economic implications might be. All these scenarios ultimately result in traffic levels being back at the levels pre-corona.

"Obviously, we have also looked to other implications – such as changed passenger

requirements including providing a safe, healthy and germ-free journey and changed travel needs.

"But we also have looked at driving our innovation portfolio by accelerating some projects, including providing a more seamless (and touch-free) journey for our passengers and freight," van der Windt adds.

Plus, Schiphol has identified opportunities to carry out projects and maintenance more efficiently during the pandemic.

Maintenance at Schiphol usually takes



place at night and tends to be phased to minimise disruption. Currently, though, work can move much faster.

Schiphol has replaced drinking water pipe valves, for instance, and is also expanding the number of security lanes and passport control counters.

Software updates and the roll-out of a fibre optic network are all in progress too, while outside, Schiphol's landing strip is being repaired and the airport's busiest access road is being resurfaced.

At Swissport, with staff on leave or dismissed and many projects on hold,

virtually every role is affected by the handler's cost-cutting measures. Even regular maintenance work on GSE is affected, as the reduction in operational hours translates into lower maintenance and repair needs.

Remote working is running smoothly for office-based roles such as HR and communications. But, the Swissport spokesperson says: "For frontline jobs it's a different story. There's not really anything you can do remotely. For these colleagues it's tough."

Frontline staff

Fabio Gamba, head of the Airport Services Association (ASA) and the Airline Catering Association (ACA), considers: "The economic effects of the coronavirus disproportionately affect the hundreds of thousands of men and women working in this industry."

One of Gamba's priorities is to ensure government relief reaches those who need it, wherever they fit into the air transport system. He believes there is an assumption that the money given to airlines will trickle down to handlers





and catering companies – which is incorrect.

According to Gamba: "About 60 per cent of the ground handling workforce has been furloughed or laid off. If people find alternative work they are unlikely to return to the tarmac [once demand picks up] because of the nature of the work. It's low paid, low skilled, labour intensive – a tough job."

Furthermore, "the more staff we lay off, the greater the challenge we will face in servicing the bounce-back and economic recovery once this crisis is over. On average we estimate it takes around three months to hire, train and badge new staff, and there is very low transferability between stations."

In an example of efforts to tackle this problem, Emirates Group has introduced a temporary reduction in basic salary, ranging from 25 per cent to 50 per cent, for the majority of employees.

Sheikh Ahmed bin Saeed Al Maktoum, chairman and CEO of Emirates Group, says: "Rather than ask employees to leave the business, we chose to implement a temporary basic salary cut as we want to protect our workforce and keep our talented and skilled people, as much as possible.

"We want to avoid cutting jobs. When demand picks up again, we also want to be able to quickly ramp up and resume services for our customers."

Back at Schiphol van der Windt agrees, saying: "As a result of the current situation we have noticed that a few of our colleagues were very busy, whereas others saw a



decline in their usual amount of work.

"That's why we have developed a matchmaker site where people can advertise tasks and projects and others can apply for these.

"Within our team we have had additional support to cater for the increase in full freighter demand, as well as additional help for work we usually outsource."

All of the measures to protect and retain staff, while controlling costs and using the enforced downtime productively where possible, have a common aim, says Swissport senior communications manager Stefan Hartung.

"The goal is simple: to get through the crisis in one piece to be able to pick up as a healthy partner on the other side.

"Things will certainly not jump back to normal. We expect a prolonged recovery phase, but we want to be ready when our customers return," he concludes.

A new normal

According to international law firm Watson Farley & Williams' 'Covid-19 Aviation Restructuring Report' published in April, the return of demand for air transport "depends not only on when the crisis can be considered 'over' (in the sense that lockdowns and quarantines are no longer required to contain the outbreak, whether at origin or destination) but the willingness and financial ability of consumers (including business customers) to return to the skies'

IATA CEO Alexandre de Juniac points out that "the industry's problems will not magically disappear as the severe measures to control the spread of the virus are eased.

"There is a group of passengers – about 60 per cent – who will return to travel relatively quickly. But an important 40 per cent are telling us that they will likely wait six months or more. And an even larger portion – nearly 70 per cent – are saying that they want to see their financial situation stabilise before returning to the skies."

While there is a great deal of talk about a 'new normal' after Covid-19, it is not clear exactly what that means.

"We've had crises before but they've been much smaller and more one-dimensional. This one is unprecedented and it's coming at us from everywhere," Gamba points out.



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