


Annual Review **2021**





Willie Walsh
Director General
International Air Transport Association

Annual Review 2021
77th Annual General Meeting,
Boston, USA, October 2021

Note: Unless otherwise specified,
all dollar (\$) figures refer to US dollars (US\$).

Contents

02	Members' list
04	Director General's foreword
06	Chair's remarks and Board members
10	The industry story
18	Safety
20	Security
22	Relief measures in 2021
26	Sustainability and environment
30	Health and passenger experience
34	Cargo
36	Financial services
38	Diversity and inclusion
40	NDC and One Order
42	Products and services

Members' list

A

ABX Air
 Aegean Airlines
 Aer Lingus
 Aero Republica
 Aeroflot
 Aerolineas Argentinas
 Aeromar
 Aeromexico
 Africa World Airlines
 Air Algerie
 Air Arabia
 Air Astana
 Air Austral
 Air Baltic
 Air Botswana
 Air Burkina
 Air Cairo
 Air Caledonie
 Air Canada
 Air Caraibes
 Air China
 Air Corsica
 Air Dolomiti
 Air Europa
 Air France
 Air Guilin
 Air India
 Air Koryo
 Air Macau
 Air Madagascar
 Air Malta
 Air Mauritius
 Air Moldova
 Air New Zealand
 Air Niugini
 Air Nostrum
 Air Peace
 Air Serbia
 Air Seychelles
 Air Tahiti
 Air Tahiti Nui
 Air Tanzania

Air Transat
 Air Vanuatu
 AirBridgeCargo Airlines
 Aircalin
 Airlink
 Alaska Airlines
 Albastar
 Alitalia
 Allied Air
 AlMasria Universal Airlines
 American Airlines
 ANA
 APG Airlines
 Arik Air
 Arkia Israeli Airlines
 Asiana Airlines
 ASKY
 ASL Airlines France
 Atlantic Airways
 Atlas Air
 Austrian
 Avianca
 Avianca Costa Rica
 Avianca Ecuador
 Azerbaijan Airlines
 Azores Airlines
 Azul Brazilian Airlines

B

Bahamasair
 Bamboo Airways
 Bangkok Airways
 Batik Air
 Belavia Belarusian Airlines
 Biman Bangladesh Airlines
 Binter Canarias
 Blue Air
 Blue Panorama
 BoA Boliviana de Aviacion
 Braathens Regional Airways
 British Airways
 Brussels Airlines

Bulgaria Air

C

Cabo Verde Airlines
 CAL Cargo Airlines
 Camair-Co
 Cambodia Angkor Air
 Capital Airlines
 Cargojet Airways
 Cargolux
 Caribbean Airlines
 Carpatair
 Cathay Pacific
 Cebu Pacific
 China Airlines
 China Cargo Airlines
 China Eastern
 China Express Airlines
 China Postal Airlines
 China Southern Airlines
 CityJet
 Condor
 Congo Airways
 Copa Airlines
 Corendon Airlines
 Corsair International
 Croatia Airlines
 Cubana
 Cyprus Airways
 Czech Airlines

D

Delta Air Lines
 DHL Air
 DHL Aviation

E

Eastern Airways
 Egyptair
 EL AL
 Emirates
 Ethiopian Airlines
 Etihad Airways
 EuroAtlantic Airways
 European Air Transport

Eurowings
 EVA Air
 Evelop Airlines

F

FedEx Express
 Fiji Airways
 Finnair
 flydubai
 FlyEgypt
 Flynas
 Freebird Airlines
 French Bee
 Fuzhou Airlines

G

Garuda Indonesia
 Georgian Airways
 German Airways
 GOL Linhas Aereas
 Gulf Air
 GX Airlines

H

Hahn Air
 Hainan Airlines
 Hawaiian Airlines
 Hebei Airlines
 Hi Fly
 Hong Kong Air Cargo
 Hong Kong Airlines
 Hong Kong Express Airways

I

Iberia
 Icelandair
 IndiGo

Iran Air
 Iran Airtour Airline
 Iran Aseman Airlines
 Israil

J

Japan Airlines
 Japan Transocean Air
 Jazeera Airways

Jeju Air
 JetBlue
 Jin Air
 Jordan Aviation
 Juneyao Airlines

K

Kam Air
 Kenya Airways
 KLM
 Korean Air
 Kunming Airlines
 Kuwait Airways

L

LAM
 Lao Airlines
 LATAM Airlines Brasil
 LATAM Airlines Colombia
 LATAM Airlines Ecuador
 LATAM Airlines Group
 LATAM Airlines Paraguay
 LATAM Airlines Peru
 LATAM Cargo Brasil
 LATAM Cargo Chile
 Loong Air
 LOT Polish Airlines
 Lucky Air
 Lufthansa
 Lufthansa Cargo
 Lufthansa CityLine
 Luxair

M

Mahan Air
 Malaysia Airlines
 Malindo Air
 Mandarin Airlines
 Martinair Cargo
 Mas Air
 Mauritania Airlines International
 MEA
 MIAT Mongolian Airlines
 MNG Airlines

Montenegro Airlines
 Myanmar Airways International

N

National Airlines
 NCA Nippon Cargo Airlines
 Neos
 Nesma Airlines
 Nile Air
 NordStar
 Nordwind Airlines
 Nouvelair

O

Okay Airways
 Olympic Air
 Oman Air
 Onur Air
 Overland Airways

P

Paranair
 Pegas Fly
 Pegasus Airlines
 PGA Portugalia Airlines
 Philippine Airlines
 PIA Pakistan International Airlines
 Polar Air Cargo
 Poste Air Cargo
 Precision Air
 Privilege Style

Q

Qantas
 Qatar Airways
 Qazaq Air

R

Ravn Alaska
 Rossiya Airlines
 Royal Air Maroc
 Royal Brunei
 Royal Jordanian
 Ruili Airlines

RusLine
 RwandAir

S

S7 Airlines
 Safair
 SAS
 SATA Air Acores
 Saudi Arabian Airlines
 SCAT Airlines
 SF Airlines
 Shandong Airlines
 Shanghai Airlines
 Shenzhen Airlines
 Sichuan Airlines
 Silk Way West Airlines
 Singapore Airlines
 SKY Airline
 Smartavia
 Solomon Airlines
 Somon Air
 South African Airways
 SpiceJet
 SriLankan Airlines
 SunExpress
 Suparna Airlines
 Surinam Airways
 SWISS
 Syrianair

T

TAAG Angola Airlines
 TACA
 TAP Portugal
 TAROM
 Tassili Airlines
 Thai Airways International
 Thai Lion Air
 Thai Smile
 Tianjin Airlines
 TUIfly
 Tunisair
 Turkish Airlines
 T'way Air

U

Ukraine International Airlines
 UNI AIR
 United Airlines
 UPS Airlines
 Ural Airlines
 Urumqi Air
 UTair
 Uzbekistan Airways

V

Vietjet
 Vietnam Airlines
 Virgin Atlantic
 Virgin Australia
 Vistara
 Volaris
 Volotea
 Vueling

W

Wamos Air
 West Air
 WestJet
 White Airways
 Wideroe

X

Xiamen Airlines

Y

YTO Cargo Airlines

As at October 2021

Always resilient, aviation is looking beyond COVID-19

Willie Walsh, Director General

The COVID-19 pandemic has divided the industry into three realities.

Cargo markets have gained ground on precrisis volumes. This attests to the vital role of air cargo in transporting lifesaving medical equipment, PPE, and vaccines along with delivery of e-commerce during the lockdown periods.

Domestic passenger markets have recovered to within 20% of precrisis levels. This shows that the appetite to fly has not been lost. When restrictions are removed, people want and need to connect. And they do it by plane.

International travel, however, stands at just about a quarter of 2019 levels. Demand will not come back until borders reopen and government-imposed travel restrictions are removed.

Reconnecting the world

We are well past the deepest point of the crisis. Serious issues remain. But the path to recovery is coming into view as COVID-19 vaccination rates rise and governments gradually reinstate the freedom to travel.

We advocate for a set of simple and clear principles to drive the reestablishment of global connectivity:

- Vaccinated travelers should not face any barriers to travel.
- Vaccines should be available to all who want them.
- Testing should enable travel without quarantine for the few who are unable to be vaccinated and for those in regions where vaccines are not yet widely available.
- Costs for testing should be borne by governments, relying

on efficient antigen tests.

- Digitalized solutions should smartly manage health credentials.

Much of this is under the control of governments. And it is critical that they work together. A common list of WHO-approved vaccines and a united approach to the treatment of minors are the baseline essentials. On top of that, simplicity should be the guide. And a continuous review of pandemic-related measures should be an embedded procedure to ensure that measures do not remain in place any longer than necessary.

The IATA Travel Pass is also a part of the solution. It has now proven its capability to manage travel credentials digitally. This is critical for an efficient scaling up of operations and return to the use of automated and digital processes. This includes a solution for governments to incorporate COVID-19 document checks with efficient e-gates.

Infrastructure partners

Industry losses in the crisis are enormous, across the value chain. Airlines have survived by reducing operating costs 35%; by tapping shareholders; and by borrowing—enormously. Government aid was an essential lifeline for some. But this was not an accumulation of cash. Of the \$230 billion that was made available to airlines, \$101 was in the form of loans and \$81 billion was in direct employment and payroll support.

So it is wholly unacceptable that some airport and air navigation service provider (ANSP) partners want to recover “lost revenues” from their airline customers. Many have proposed charges increases. We will resist. These “partners” need

to cut costs, improve efficiency. And their shareholders, who have benefited from reliable returns for many years, need to step up and play their part in the recovery.

Sustainability

The COVID-19 crisis has intensified aviation's resolve to be sustainable.

In 2009, we set a target to address our climate change impact with a commitment to cut emissions to half 2005 levels by 2050. Since then, airlines have invested hundreds of billions of dollars in more fuel-efficient aircraft, and fleet fuel efficiency has improved over 20% in a decade. Sustainable aviation fuel (SAF) use grew from 8 million liters in 2016 to over 100 million liters in 2021. And the world's only sector-wide offsetting scheme—CORSA—has stabilized emissions at 2019 levels.

Climate science tells us that the situation is even more urgent than previously thought. The world is now focused on achieving net zero emissions, largely by 2050. Our 77th Annual General Meeting will consider a resolution of equal ambition.

Over the past months, our Board of Governors has worked intensively to define a path to net zero carbon emissions by 2050. It can be achieved through a combination of sustainable aviation fuels, radical airframes and propulsion methods, efficiency gains, carbon capture technology, and offsetting.

Success will require the entire value chain to commit and deliver. Aircraft and engine manufacturers, fuel-producing companies, airports, and ANSPs must address the environmental impact of their policies, products, and activities.



And the role of governments is essential. A policy framework must support emissions reducing technologies like SAF which all scenarios point to as playing the biggest role in mitigating aviation's emissions. Governments must also be true to CORSIA as the single market-based measure for aviation and must clearly understand that environmental taxes and charges are a retrograde step that cannot be tolerated.

IATA

In the six months since joining IATA, my focus has been on supporting a great global team in serving the needs of our members. This report contains many examples of ways, big and small, that IATA is helping the airline industry to be more successful. With the guidance of an exceptionally supportive Board of Governors, I am determined to make IATA an even more effective business partner, an even more powerful advocate, and an even more relevant association.

Two decades ago, we faced a crisis that crippled aviation and changed the world. The greatest tribute that we have paid to those who suffered losses on 9.11 was our determination to ensure the freedom to travel safely and securely. We did that. By 2019, the global number of travelers nearly tripled the levels of 2000, reaching over 4.5 billion. That's an inspiration.

Resilience is a hallmark of aviation. We will get through the COVID-19 crisis.

The pandemic has made the value of aviation clear. Face-to-face meetings, vacations, reunions, and the basic freedom of movement are just some of the things that we have all missed. Our 77th Annual General Meeting—conducted face-to-face—will be a turning point towards recovery.

Post-pandemic industry priorities

Robin Hayes, Chair, IATA Board of Governors,
CEO JetBlue Airways

Will the industry return to normal? What has the pandemic changed for aviation?

I believe that the industry will return to normal. I am unashamedly optimistic about aviation's prospects. We have already seen evidence of bounce backs across numerous regions and markets as soon as travel restrictions are lifted. With the latest announcement from the US government, we should see an uptick of international travel to the US in the latter part of 2021.

However, managing border and health protocols will remain a challenge, especially when governments react to changes in the epidemiology at short notice. Here we need to keep pressing for international standards and cooperation in order to smoothly manage these processes in the interest of our passengers.

We also can expect certain elements of customer service that were introduced during COVID-19 to stay, such as enhanced cleaning of aircraft, the ability to easily

change or cancel tickets, and the continued move toward contactless travel.

What should be IATA's top priority as the world starts to reopen?

IATA will need to focus on two main priorities going forward. First, IATA must continue to play an important role managing the complexities of the various government-imposed measures to combat the virus and where possible seek the reduction and simplification of these. The magnitude of this task cannot be underestimated, but we need to find solutions that allow passengers to be confident in international travel. This also applies to airline employees, who are doing a great job keeping the world connected, but who face uncoordinated and unharmonized COVID-19 border entry requirements implemented by governments. This is not sustainable, particularly as demand grows in the recovery.

Second, the topic of environmental sustainability will be an integral part of rebuilding our industry. The

pandemic has accelerated the fleet renewal at many airlines, with older and less fuel-efficient aircraft being retired earlier than originally planned. But reducing our carbon footprint even further and envisaging decarbonization needs to be an industry goal.

This is why I'm deeply convinced that the airline industry will recover and will resume its role as a global "force for good." However, this crisis is at the same time a unique chance to further reduce our climate impact and to strive for sustainable and value-oriented growth. We have the responsibility to take this chance and to make our industry emerging from this crisis more climate friendly.

Has the pandemic not shaken aviation's commitment to sustainability?

No, not at all. It will be a challenge to completely decarbonize the industry because of the nature of our business: flying aircraft that rely on fossil fuels. We must therefore work together with manufacturers

06

IATA Board of Governors 2020–2021*

CHAIR OF THE BOARD Robin Hayes, Chief Executive Officer, JetBlue Airways

MEMBERS

Mikhail Poluboyarinov
General Director and
Chief Executive Officer
Aeroflot

Michael Rousseau
President and Chief
Executive Officer
Air Canada

Benjamin Smith
Chief Executive Officer
Air France/KLM
(representing Air
France)

Yuji Hirako
President and Chief
Executive Officer
All Nippon Airways

Douglas Parker
Chairman and Chief
Executive Officer
American Airlines

Adrian Neuhauser
Chief Executive Officer
Avianca

**Tang Kin Wing
Augustus**
Chief Executive Officer
Cathay Pacific Airways
Limited

Liu Shaoyong
Chairman
China Eastern Airlines

Ma Xulun
Chairman, President,
and Chief Executive
Officer
China Southern
Airlines

Pedro Heilbron
Executive President
and Chief Executive
Officer
Copa Airlines

Tewelde GebreMariam
Group Chief Executive
Officer
Ethiopian Airlines

Donald F. Collier
President and Chief
Executive Officer
Fedex Express

Topi Manner
Chief Executive Officer
and President
Finnair

and fuel suppliers to move away from this reliance on fossil fuels to cleaner fuel and ultimately carbon-free power. The first step is sustainable aviation fuels (SAF). Completely carbon-free energy sources are the only way forward, and that is what we must keep in mind.

However, achieving this cannot be done by the industry on its own. For this, we need governments to create the necessary framework and other stakeholders in the aviation value chain—such as energy companies—to support us on the journey to carbon neutrality.

What has the pandemic taught us about the value of aviation to the world?

When we look at some of the challenges the world is facing as a result of COVID-19, the value of aviation becomes obvious. It is most evident in the travel and hospitality sector. Millions have lost their jobs, and global GDP has been hit hard. Aviation is such a significant driver in these areas. And let's

not forget that businesses across the economy have also taken a hit because they have not been able to send their people to visit customers, complete deals, or look for new business opportunities.

Governments need a better understanding of the contribution aviation and travel make to economic prosperity. Not only that, but airlines are fundamental to well-being. People have not seen their families or friends or taken a vacation for such a long time. Aviation is the only cure for this.

The fact is that every time you can't do something you have a much greater appreciation of it. Given the quick return of demand, that is certainly true of aviation.



07

Luis Gallego Martín
Chief Executive Officer
IAG (representing
IBERIA)

Ronojoy Dutta
Chief Executive Officer
Indigo

Pieter Elbers
President & CEO
KLM Royal Dutch
Airlines

Walter Cho
Chairman and CEO
Korean Air

Roberto Alvo
Chief Executive Officer
LATAM Airlines Group

Carsten Spohr
Chairman and Chief
Executive Officer
Lufthansa

Mohamad El-Hout
Chairman and Director
General
Middle East Airlines

Mehmet Tevfik Nane
Chief Executive Officer
Pegasus Airlines

Alan Joyce
Chief Executive Officer
Qantas

Akbar Al Baker
Chief Executive Officer
Qatar Airways

Abdelhamid Addou
Chairman of the Board
and Chief Executive
Officer
Royal Air Maroc

Yvonne Manzi Makolo
CEO
RwandAir

Ibrahim Al-Omar
Director General
Saudi Arabian Airlines

Goh Choon Phong
Chief Executive Officer
Singapore Airlines

Ajay Singh
Chairman and
Managing Director
SpiceJet

Scott Kirby
Chief Executive Officer
United Airlines

(To February 2021)
Calin Rovinescu
President and Chief
Executive Officer
Air Canada

(To March 2021)
**Mohamed Roshdy
Zakaria**
Chairman and Chief
Executive Officer
Egyptair Holding Co
(representing Egyptair)

Wang Changshun
Chairman
China Southern
Airlines

(To April 2021)
Anco van der Werff
Chief Executive Officer
Avianca

Rickard Gustafson
President and Chief
Executive Officer
SAS

(To May 2021)
Oscar Munoz
Chairman
United Airlines

(To July 2021)
**María José Hidalgo
Gutiérrez**
Chief Executive Officer
Air Europa

*As at October 2021

**Resilience
is a
hallmark
of aviation.**

08

**We will get
through
the
COVID-19
crisis.**



87%
of travelers

believe there's a balance between health risks and economic recovery

86%
of travelers

think governments should set COVID-19 targets in order to reopen borders

09

85%
of travelers

think COVID-19 will not disappear and we need to manage risks while living and traveling normally

75%
of travelers

feel their quality of life has suffered with travel restrictions

60%
of travelers

believe air travel restrictions have gone too far

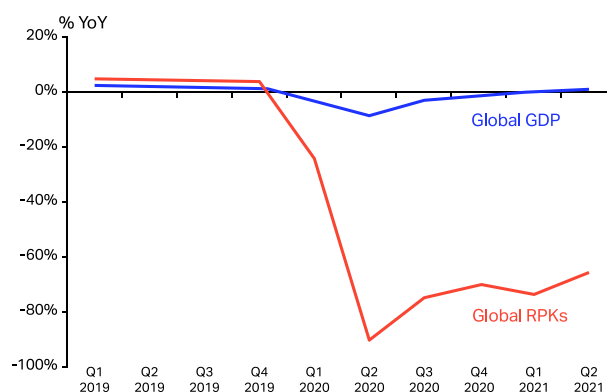
Source: IATA Traveler Survey (September 2021)

Assessing COVID-19's economic toll

Passengers

Passenger traffic is recovering slowly, but lags behind the rebound in the global economy

The passenger airline business continued to be adversely affected by the COVID-19 crisis into 2021. Although global economic activity rebounded on the back of booming manufacturing production, travel restrictions kept air passenger numbers low, especially for international travel. Second-quarter 2021 numbers improved compared with those for the first quarter because of the reopening of some domestic and regional markets. But industry-wide revenue passenger kilometers (RPKs) remained down a significant 64.5% between January 2021 and July 2021 versus the same period in precrisis 2019.

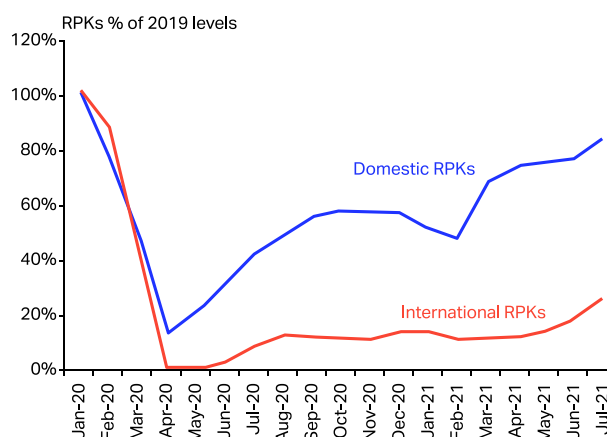


Source: IATA Economics, using data from IATA Monthly Statistics and Refinitiv Eikon

10

Domestic travel is recovering faster than international as travel restrictions slow the international recovery

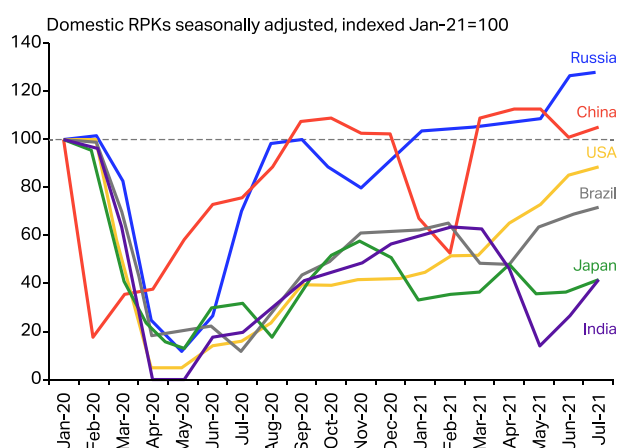
The pace of a recovery has varied across markets. Notwithstanding a temporary deterioration in January and February caused by weakness in China, domestic routes are significantly outperforming their international counterparts. This can be largely attributed to the control of COVID-19 and to the vaccine rollouts in key markets, which allowed the lifting of domestic restrictions. For the year to July 2021, aggregated domestic RPKs were down 30.2% compared with the same period in 2019. This is in stark contrast to an 83.9% year-to-July RPK contraction in global international traffic, which remains limited by strict travel restrictions.



Source: IATA Economics, using data from IATA Monthly Statistics

Domestic travel recoveries vary depending on virus control

Even domestic route performance varied depending on a combination of travel constraints, vaccination progress, and pandemic evolution. Some countries showing promising recoveries during 2020, such as India and Japan, faced renewed viral outbreaks in quarter one of 2021, which resulted in another round of restrictions and a sharp fall in air traffic. While the pandemic also reemerged in Russia, less severe domestic travel restrictions coupled with a greater willingness of the population to travel paved the way for stronger domestic traffic levels. China also performed well throughout 2020 and continues to do so as the pandemic is largely under control. But China's zero COVID-19 policy means that it has been vulnerable to localized outbreaks of the virus, as seen toward the end of 2020.

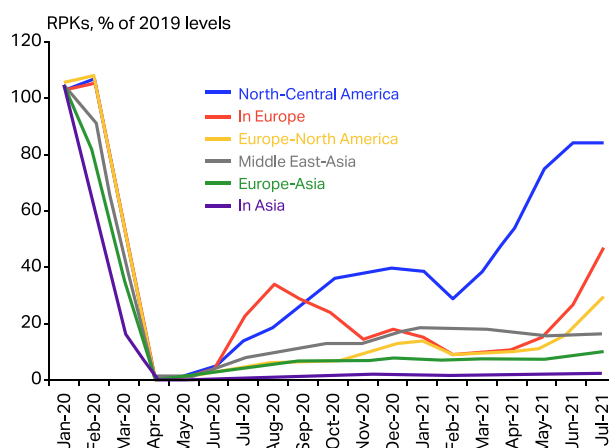


Source: IATA Economics, using data from IATA Monthly Statistics



Most international travel markets are below 2019 levels with routes to, from, and in Asia among the weakest

International passenger traffic remains weak in most main markets. An outlier has been the small North America-Central America market, where RPKs recovered to 85% of precrisis levels on less-strict travel restrictions relative to the rest of the world. The larger markets of Europe and Europe-North America have also shown recent progress amid an easing of travel regulations during the northern hemisphere summer. The experience from European routes in 2020, however, shows how fast a recovery can falter once travel restrictions are reinstated.

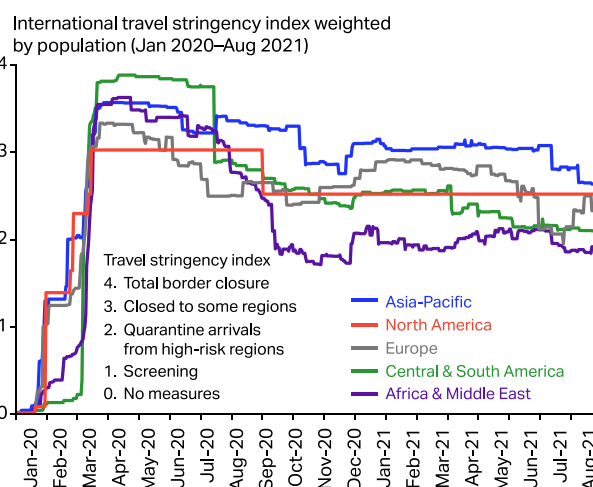


Source: IATA Economics, using data from IATA Monthly Statistics

12

International travel restrictions remain high

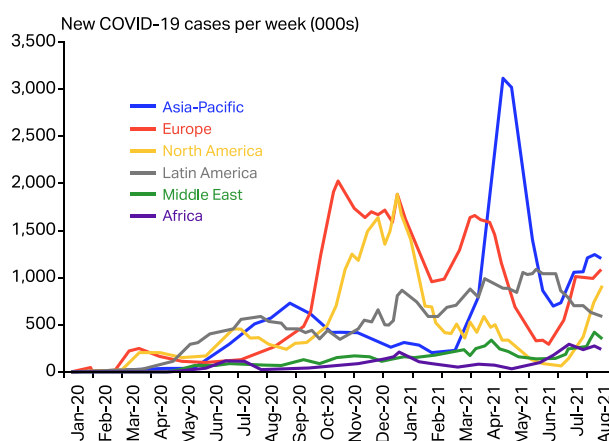
Most international air travel markets are at less than 25% of 2019 RPKs. The principal drivers of air passenger demand have changed during the crisis. Normally, a robust recovery in economic activity in advanced and emerging economies would contribute to a swift rebound in air travel volumes. The improving global economic backdrop has had little impact on passenger volumes, as travel restrictions remained in place. Although some easing has taken place since the second quarter of 2020, restrictions remain sufficiently elevated in all regions—most notably in Asia-Pacific, where governments are risk averse—as to deter travel.



Source: IATA Economics analysis based on Oxford university data

COVID-19 cases are again rising with Asia-Pacific, Europe, and North America the most affected

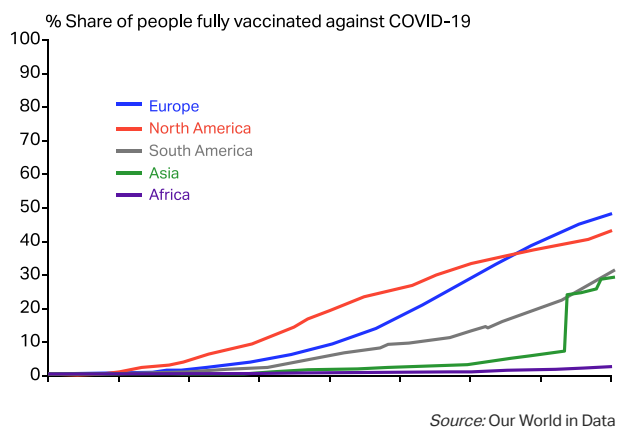
The number of COVID cases will most likely remain a factor in government pandemic decision-making, although an increasing number of authorities are taking vaccination rates and levels of hospitalization into account. That being said, with the number of cases still on the rise across the world the reimposition of travel restrictions cannot be ruled out, halting the little progress seen in international travel so far.



Source: European Centre for Disease Prevention and Control (ECDC)

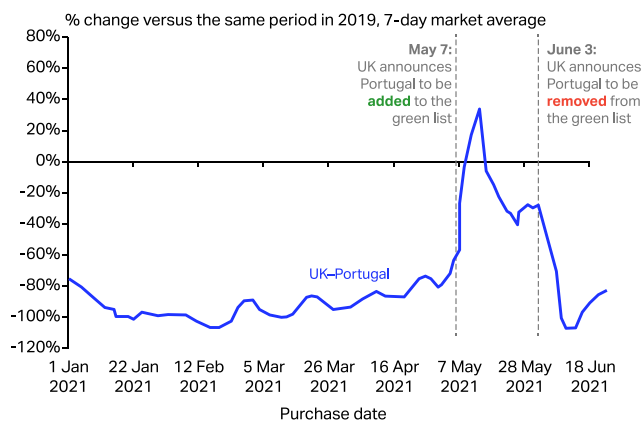
Vaccine rollouts are progressing, but emerging markets lag

The most recent COVID-19 wave proves that the widespread distribution of vaccines is needed to control the pandemic. Trends have been mixed so far. Vaccination has accelerated in many advanced economies in Europe and North America and in Asia, where distribution started late. Several large aviation markets have fully vaccinated at least half of their populations. Numerous emerging markets, however, lack vaccine doses despite coordination efforts, such as through the COVAX program. This means that it will take some time for international travel between advanced and emerging economies to reopen.



Pent-up demand is substantial but fragile; UK to Portugal bookings surge reversed in a month

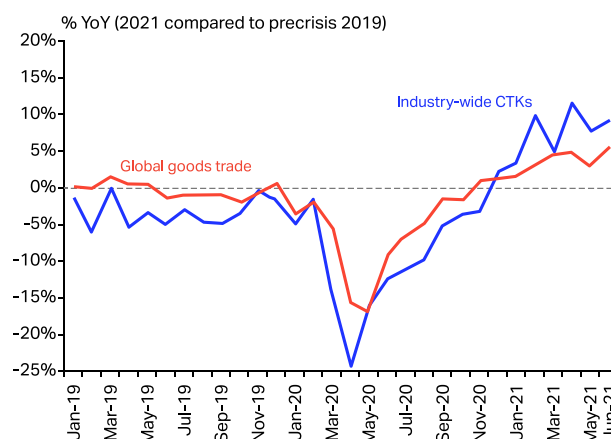
On a positive note, throughout 2020 we saw evidence of strong, pent-up travel demand supported by improved economic activity and accumulated savings. The desire in consumers to vacation abroad or to visit friends and relatives has been displayed on several occasions, with a surge in bookings when restrictions were removed on certain international routes, for example, the UK-Portugal market. This is reason for optimism that passenger traffic will recover fully and rapidly once the pandemic is better controlled and people feel comfortable traveling freely again.



Cargo

Air cargo demand has rebounded strongly, outperforming other modes on restocking cycle and price

The strong upward trend in air cargo traffic observed in the second half of 2020 has continued into 2021. Cargo tonne kilometers (CTKs) from January 2021 to July 2021 were 7.9% above the same period in 2019. That also means that CTKs have surpassed their precrisis peak of August 2018 by nearly 5.0%. Air cargo has also overperformed global goods trade so far in 2021, a common pattern usually seen at the beginning of economic upturns, when businesses turn to air freight to rapidly restock inventories to meet rising demand. Air cargo also benefits from other supply chain dynamics, such as exceptionally long supplier delivery times and expensive fares for other transport modes.

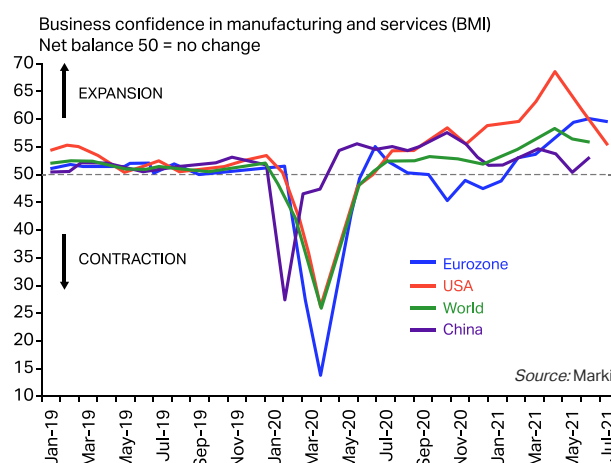


Source: IATA Economics and Netherlands Centraal Planbureau (CPB)

14

Air cargo benefits from high business confidence, but that confidence dipped in China, as the Delta variant created vulnerability

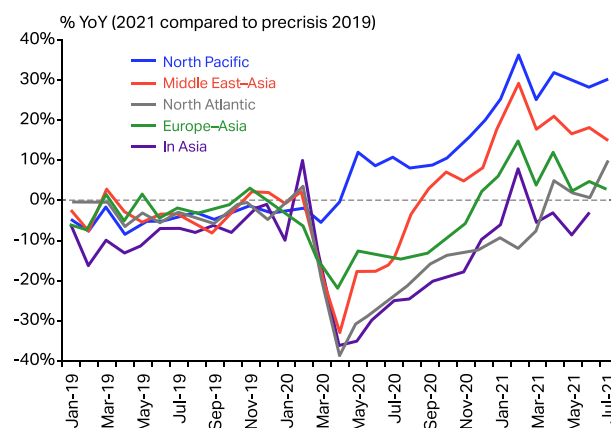
Air cargo's strength is a result of a V-shaped recovery in economic activity and business confidence experienced by certain sectors of the global economy, particularly manufacturing, that were less affected by renewed outbreaks and control measures than air passenger travel. That V-shaped recovery, though, is vulnerable given softening demand in China, congested global supply chains, and the spread of the Delta variant, all of which weigh on economic activity.



Source: Markit

Air cargo routes are improving overall but at different paces

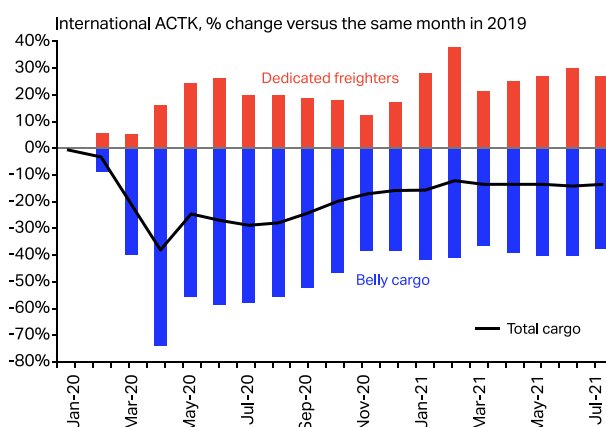
Upward-trending air cargo traffic globally has been reflected in major trade lanes, but there have been differences in the pace of recovery. The North Pacific has barely seen negative impact from the grounding of passenger aircraft and travel restrictions, such that the large freighter fleet of North American carriers has been unable to meet demand. On many other routes, such as the Middle East-Asia, high cargo yields have made it profitable to use passenger aircraft carrying few or no passengers. That said, the absence of international passenger travel has weakened upward trends in air cargo traffic on routes that are highly dependent on belly capacity, such as Asia and Europe-Asia.



Source: IATA Economics and Netherlands CPB

Air cargo capacity sees slow improvements

Air cargo capacity has seen a slow but consistent climb, with significant progress made to date in 2021 compared with 2020. For the January–July 2021 period, however, industry-wide available cargo tonne kilometers (ACTKs) were still well down, 12.4%, from the same interval in 2019. The lack of international travel, particularly for long-haul trips using widebody aircraft, limits belly capacity, which represented around 60% of international air cargo capacity prior to the pandemic. Airlines, though, are using passenger aircraft to transport cargo and have increased their dedicated freighter capacity significantly. The size of the global freighter fleet increased around 12% from January 2021 to July 2021 compared with the precrisis, January–July 2019 period.



Source: IATA Monthly Statistics

Cargo 2020 snapshot

Industry CTKs

↑ **7.9%**

Industry ACTKs

↓ **12.4%**

Size of global freighter fleet

↑ **12%**

Cargo growth in 2021 up

↑ **13%**

Air cargo is doing brisk business—a lifeline for many airlines.

Capacity is the problem, as international travel restrictions limit belly space.

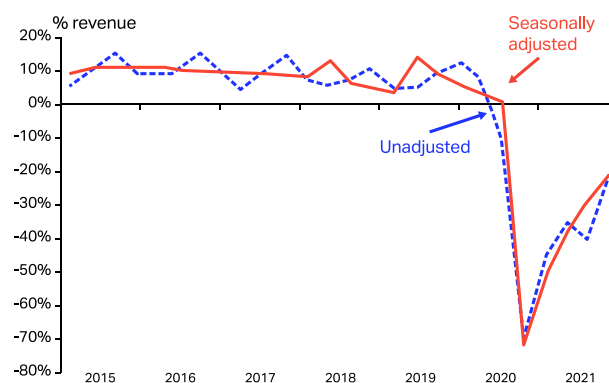
2020 cargo revenues:

\$128.8 billion

Airline finances

Airline industry financials are improving but remain negative

Airline industry net operating losses have diminished since the lockdown of 2020. Airlines have cut their costs and, amid domestic market recoveries, have begun gradually generating revenue. Cargo revenues have remained strong, improving around 50% in the first half of 2021 compared with the precrisis period of the first half of 2019. The strength in cargo revenues, however, has only partially offset the loss in passenger revenues. Overall, operating revenues for the air transport industry have declined more than 60% in the second quarter of 2021 compared with second quarter of 2019. Travel restrictions in many markets continue to affect airline revenue generation. The airline industry is still posting operating losses at about 20% of revenues.



Source: IATA Economics, using data from *The Airline Analyst*

16

Industry losses continue but are several times less than in previous year

A significant reduction in industry losses is expected in 2021, largely as a result of cost cuts and revenue growth, albeit slow. Large differentiation between regions will continue.

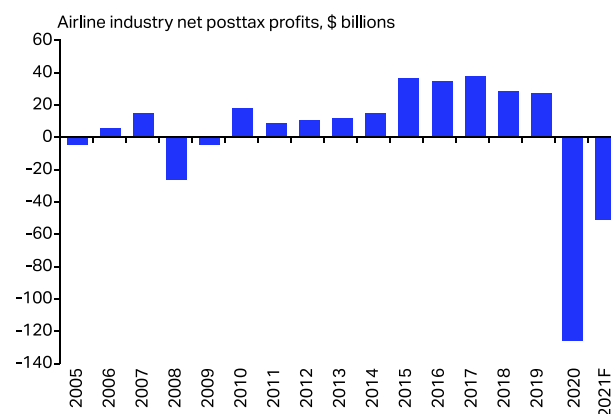
North American airlines, in particular in the United States, will benefit from a rapid vaccination rollout and an enormous home market.

European carriers will also benefit from widespread vaccination, but a lack of coordination between governments in Europe will limit their improvement.

The **Asia-Pacific** region remains mixed. Airlines in China benefit from good virus control and a large home market. But a risk-averse approach to travel restrictions means that little recovery of international passenger revenues is expected.

In the **Middle East**, airlines have the advantage of widespread vaccination in their key home markets. They suffer, though, from the slow opening of the long-haul international markets that connect through the region's hubs.

Latin American airlines should benefit from their large domestic markets, but the outlook for those markets is clouded by the challenge of controlling an infectious variant of the virus and by a slow rollout of vaccines relative to other regions of the world.



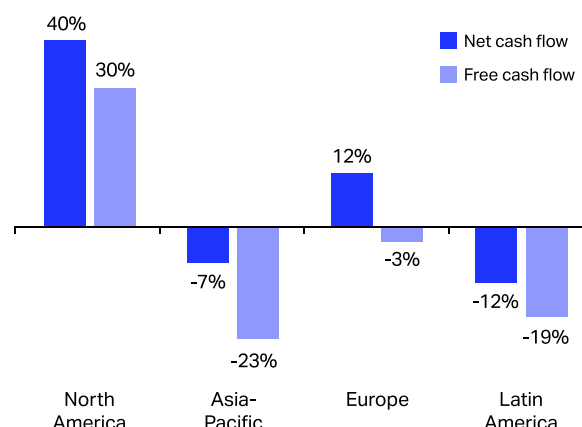
Source: IATA Economics Airline Industry Financial Forecast update, August 2021

Africa has more relaxed international travel restrictions than other regions, but vaccination rates continue to be low. So this is likely to restrict the rebound of its international travel and limit gains by its air carriers. A slowed fall in losses is the best to be hoped for in this region.

Industry is transitioning to cash flow generation but unevenly

A resurgence in bookings for forward travel resulted in industry cash flow turning positive. Nevertheless, there were significant differences regionally. North American carriers outperformed carriers in all other regions. They had positive operating and free cash flow generation amid a rebound in US domestic travel. European carriers, too, turned cash positive as they reveled in the pickup in summer peak season travel demand. And Asia-Pacific carriers' cash outflows had diminished by the second quarter of 2021 on the success of Chinese carriers. Chinese airlines have returned to breakeven and are generating positive cash flows amid the fast recovery of their giant domestic market. On the other hand, Latin American carriers are still suffering from negative cash flow, as some of them are restructuring.

Net cash flow from operating activities (dark color) and free cash flow (light color) in 2021 second quarter, % of revenues (40 airline sample)



Source: IATA Economics, using data from *The Airline Analyst*

Airline 2020 snapshot

Domestic RPKs
↓ 30.2%

Industry-wide RPKs
↓ 64.5%

International RPKs
↓ 83.9%

Available seat kilometers (ASK) globally
↓ 63.8%

Airport pair routes
-50% **1/3** of the global fleet is currently grounded

(April 2021 compared to April 2019)

The message is simple.

The performance of international travel markets is not where it needs to be.

We expect significantly reduced losses in 2021, largely due to cost cuts and slow revenue growth.

2020 industry losses:

-\$137.7 billion

Operating safely in the midst of a pandemic

Safety

18

After a 20-month grounding and modifications, the Boeing 737 MAX was returned to service in December 2020 following one of the most thorough safety investigations in aviation history. This was among the few positive developments during a period when COVID-19 and government actions to slow its spread had a devastating impact on air passenger numbers and flight operations.

Another bright spot was that pandemic notwithstanding, 1.8 billion passengers traveled safely on 22 million flights in 2020. This, understandably, was well down from 4.5 billion passengers and 46.8 million flights in pre-pandemic 2019. Also

down was the total number of accidents, which decreased to 38 in 2020 from 52 in 2019. Total fatal accidents likewise decreased, from 8 to 5.

The industry's all-accident rate was 1.71 accidents per million flights. This was higher than the five-year (2016–2020) average rate of 1.38 accidents per million flights. But the accident rate among IATA member airlines declined.

The severe reduction in flight numbers naturally magnified the impact of each accident when rates are calculated; however, the data reveal that there is work to be done in the area of safety. Adding to this are

specific challenges associated with restarting the industry:

- Thousands of highly skilled individuals have left the industry through layoffs and retirements.
- Many crews are still flying greatly reduced schedules, potentially affecting their proficiency.
- The task of retraining licensed personnel who are coming back from months of furlough and inactivity is huge.
- Equally enormous is the job of returning thousands of parked aircraft to service at a time when the maintenance, repair, and overhaul (MRO) and parts supply chains are stretched thin.
- All of these challenges must be addressed with reduced financial means.

As air traffic returns to pre-pandemic levels of growth, it is more important than ever to focus on safety to continue to drive down the accident rate and the absolute number of accidents.

In 2021, IATA is reviewing its safety strategy to be more responsive to rapid changes than ever. IATA is focusing on the following three pillars:

Safety Leadership, which aims to strengthen a safety leadership mindset among aviation executives and influence organizational behavior to embed and implement a positive safety culture. Through a network of Safety Champions, the Safety Leadership program will promote safety leadership behaviors, values, and practices enshrined in a Safety Leadership Charter. IATA's Aviation Safety Culture (I-ASC) Survey supports this pillar by providing airlines with a tool to measure and continuously improve their

	2020	2019	Five-year average 2016-2020
Accidents per one million flights	1.71 or 1 accident every 0.58 million flights	1.11 or 1 accident every 0.90 million flights	1.38 or 1 accident every 0.75 million flights
Total accidents	38	52	52.4
Fatal accidents	5 3 jet and 2 turboprop, with 132 fatalities*	8 with 240 fatalities	7.6 with an average of 222.4 fatalities yearly
Jet hull losses per one million flights	0.21 or 1 hull loss for every 4.8 million flights	0.15 or 1 hull loss for every 6.6 million flights	0.20 or 1 hull loss for every 5 million flights
Turboprop hull losses per one million flights	1.59 or 1 hull loss for every 0.63 million flights	0.69 or 1 hull loss for every 1.45 million flights	1.07 or 1 hull loss for every 1 million flights

*The shooting down of Ukrainian Airlines International 752 on 8 January 2020 by a surface-to-air missile is not included, as it was the result of deliberate action and is not classified as an accident.

Despite the pandemic, in 2020:

1.8 billion passengers flew safely on

22 million flights

safety cultures using a standardized methodology and key performance indicators.

Safety Risk, a pillar that identifies new and emerging aviation hazards that put safety at risk and that offers potential mitigations captured from the industry's Safety Risk Management Framework. The Safety Risk pillar will interface with the IATA Global Aviation Data Management (GADM) platform, the world's most diverse aviation information exchange program, to ensure any intelligence, identified from data trends, is fed into the Safety Risk Management Framework to highlight emerging issues. The IATA Operational Safety Audit (IOSA) is core to the Safety Risk pillar. As the industry moves from a compliance-based to a risk-based approach to auditing, IOSA will provide safety insights from audits that will feed into the Safety Risk Management Framework.

Safety Connect, a pillar aimed at raising industry engagement in safety. It brings together industry knowledge, skills, and experience for the benefit of aviation safety.

IATA also continues to support the industry with tools to address specific safety challenges. For example, IATA's Turbulence Aware helps airlines mitigate the impact of turbulence, a leading cause of passenger and crew injuries and increased fuel costs each year. Turbulence Aware pools and shares anonymized, real-time turbulence data from multiple participating airlines and thousands of daily flights. The accuracy of that information enables pilots and dispatchers to choose optimal flight paths that avoid turbulence and maximize fuel efficiency, thereby also reducing CO₂ emissions. Since its test launch in December 2018, Turbulence Aware has expanded into a fully operational platform involving the sharing of real-time turbulence data by more than 1,500 reporting aircraft.

Not all aviation safety challenges, of course, are related to the pandemic or to weather. In 2021, the world was shocked when a commercial passenger plane overflying Belarus was intercepted and forced to land in Minsk. Belarus authorities alleged a bomb threat but used the opportunity to remove two passengers from the flight. IATA protested the actions of Belarus and the subsequent decision by the European Aviation Safety Agency (EASA) to forbid EU airlines from using Belarus airspace on the grounds of safety. "Two wrongs," said IATA director general Willie Walsh, "do not make a right." He added that "politics should never interfere with the safe operation of aircraft, and politicians should never use aviation safety as a cover to pursue political or diplomatic agendas."



Remembering 9.11 and the continuing challenges

Security

20

20th anniversary of 9.11

This year marks the 20th anniversary of the 9.11 terrorist attacks, a day that changed the world forever. The use of four civil aircraft as weapons in a terrorist plot was previously unthinkable. For the families, friends, and loved ones of the victims, the wounds may never truly heal.

The terrorist attacks on the World Trade Center and the Pentagon were not only assaults on the United States of America, they also were aimed at the global air transportation system—a facilitator of peace and freedom. Two decades later, the aviation industry, passengers, and governments are still living with their consequences, including a vastly expanded security and intelligence apparatus that overlays air travel.

Aviation is far more secure owing to the quick implementation of measures such as locked and armored cockpit doors, explosives detection screening, and other less-visible actions. There is also a much stronger political will by some governments to raise the bar globally, including funding capacity building so that countries with limited resources can meet their security obligations. And overall baseline security measures contained in Annex 17 of the Chicago Convention have been raised eight times to meet evolving threats.

These achievements keep flying secure, and while subsequent acts of terrorism against airports and aircraft have taken place there has been no repeat of an attack on the scale of 9.11.

However, the challenges continue:

- Passengers have paid a high price in terms of the added hassles at airport checkpoints. Although what are arguably the most intrusive post-9.11 changes—removing shoes, taking laptops and liquids out of carry-on bags, and strict limits on liquids and gels—are the result of subsequent, compounding terrorist plots, not 9.11 itself.
- Cooperation and information sharing among countries and with the industry is not yet sufficient to ensure risk-based measures are applied in a timely and efficient manner.
- Bilateral and multilateral trust in passenger checkpoints has not achieved critical levels to eliminate duplication.
- A risk-based model has not fundamentally replaced rules-based thinking.
- Unilateral countermeasures still find their way into national regulations, even without a clear link to risk or vulnerability, most recently with requirements around cockpit barriers.
- And reviews of security measures for continued relevance are far too rare.

Although aviation has come far since the tragedies of 9.11, new risks are emerging, and it is these tragic memories of significant events that will continue to motivate security stakeholders to do better, and to do more, in a well-chosen, coordinated way.

Conflict zones

The recent events in Afghanistan and tensions elsewhere in the Middle East and North Africa serve as a reminder that the risks associated with conflict zones continue to be a major concern for aircraft operators. Following the shooting down of flight PS 752 shortly after takeoff from Tehran in January 2020, Canada led the establishment of the Safe Skies Consultative Committee to address and prevent interference with civil aviation during conflicts and hostilities among and within nations. IATA is the secretariat for this initiative, which brings together the Notice to Airmen (NOTAM)-issuing countries for conflict zones.

Complementing IATA's work on the Safe Skies Consultative Committee, in 2020 IATA released a proof-of-concept security incident database that provides member airlines with a tool that collates a range of open-source information to help them formulate the required safety and security risk assessments. This Aviation Security Insight database will be made available to the industry in 2022.

Risk-based screening

Risk-based screening rather than rule-based-thinking was identified as a post-9.11 takeaway, and the implementation remains an ongoing process. IATA continues to maintain regular engagement with governments on the implementation of risk-based security for passenger and hold baggage security (HBS).

For example, IATA has continuously advocated through IATA's HBS initiative to increase the information sharing among airport operators

and governments on security measures. This will create the opportunity for airports and countries to examine ways to streamline security protocols based on risk, including reducing, and where possible removing, duplicative and redundant security protocols around transfer hold baggage. In fact, the major international airports, which handled up to 95% of the world's traffic (pre-Covid), have acquired advanced explosive detections systems (EDS) for hold baggage. Yet countries continue to screen transfer baggage, which has already been screened at the departure airport, adding cost and hurting operational efficiency.

The lack of progress on HBS is an example of the challenges facing the ICAO-driven [Global Aviation Security Plan](#) (GASeP), which seeks to enhance the effectiveness of global aviation security. The aspirational global targets set in the GASeP roadmap aim at 100% of countries reaching above 90% effective implementation of Annex 17 standards by 2030. Four years after GASeP was adopted, the only progress is a limited number of countries using the option of validation of equivalent processes for avoiding systematic rescreening at transfer (also known as one-stop security agreements).

IATA will be targeting the next ICAO Assembly (2022) for countries to report on progress in the implementation of long-standing core security standards and on putting tangible actions behind agreements to achieve higher levels of mutual recognition of the significant security investments that have been made.



Relief for the industry from COVID-19 shutdowns

Relief measures in 2021

Ongoing, government-imposed restrictions on travel aimed at controlling the pandemic continued to suppress air passenger demand and airline finances. As a result, the livelihoods of the 4.8 million people that Air Transport Action Group (ATAG) data says are supported by the air transport industry remain under threat. Furthermore, in many cases the industry once again is requiring government financial and regulatory relief.

Financial support from governments—but at a cost

By the end of August 2021, \$52.2 billion had been pledged by various governments worldwide to assist the industry, adding to the \$177.5 billion provided in 2020. As in 2020, levels of support have varied widely, and only a small proportion of pledged funds overall has been in the form of direct, nonrefundable cash injections.

Many, though not all, imminent airline bankruptcies have been averted through financial aid, which has been largely provided in the form of wage supports or loans. Loans have increased the industry's debt from \$430 billion in 2019 to \$550 billion in 2020 and, so far, to \$650 billion in 2021.

That burden makes it harder for airlines to invest in new routes and green aircraft and to reengage employees. Governments should cancel or restructure airline debt to

ensure that the industry has a financially secure base for its recovery.

Further relief for the air transport industry is a solid investment for governments looking to boost their economies. Each airline job saved supports 24 jobs in the broader economy. It is therefore in the interest of governments to provide ongoing aid to maintain a viable aviation industry. Preserving airline networks and the jobs of skilled industry workers is crucial if aviation is to continue to bolster global supply chains and effect a return to global economic growth and prosperity.

Infrastructure costs

As air transport gradually recovers from the crisis, controlling industry costs is essential. Restraining infrastructure costs—especially airport and air navigation service provider (ANSP) fees—is particularly crucial, as these constitute some XX% of airline costs.

A number of airports and ANSPs are seeking to increase their charges to cover their losses during the pandemic, claiming they have a "right" to recoup losses incurred during the pandemic, despite the fact they will be charging for services that were never provided. Airlines fundamentally reject this, which threatens to overload airlines, which are already suffering from weak demand and increased debt (see table for examples). Some \$2.3 billion in increased charges has been tabled by airports and ANSPs in 2021. Notwithstanding the year's \$2.4 billion in relief, the upward-trending charges are worrying, as they will hinder the air transport industry's recovery.

Governments and other industry stakeholders need to ensure the availability of direct financial relief for infrastructure providers, especially bearing in mind how they have benefited from good returns

Bankruptcy key points

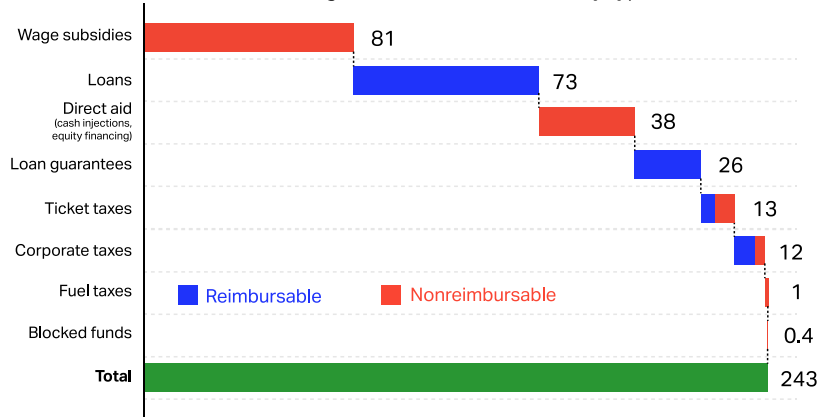
Asia-Pacific	Limited failures because of government support, creditors reluctant to take over aircraft Bankrupt: AirAsia Japan, Cathay Dragon, NokScoot, BekAir Administration: AirAsia X, Air Deccan
North America	Limited failures because of extensive aid and concentrated industry Bankrupt: Nantucket Express, Trans States Airlines, Compass Airlines, Air Georgian, Shoreline Aviation, JetLines, Paradigm Air, PenAir, Island Express Administration: ExpressJet, RavnAir, Miami Air
Europe	Failures limited to small airlines because of extensive aid Bankrupt: Germanwings, Level Paris, Atlas Global, Air Italy, Ernest Airlines, CargoLogicAir, Atlantis, Montenegro Airlines Administration: Flybe, LGW, Braathens, CityJet, Norwegian, Level Europe, Sun Express, Jet Time, Blue Air, Smartwings, Go2Sky, Czech Airlines
Middle East	Limited failures because of government ownership Administration: Wings of Lebanon
Latin America	Concentrated industry, but little government aid, so industry largely under administration Bankrupt: Avianca Peru, LATAM Argentina, One Airlines, Flyest, Tame EP, Austral Administration: LATAM Group, Aeromexico, Avianca Holdings, LIAT, Easyfly
Africa	Little government aid, so industry largely under administration Administration: South African Airways, South African Express, Comair, Kulula, Air Mauritius

Government aid

Figure 1 below shows the importance of the wage assistance provided by governments to the industry. Wage assistance accounts for \$81 billion of the \$230 billion provided since the start of the pandemic, more than two-thirds of which has gone to the sector in the United States. Most of the remaining aid has been loaned to airlines, raising their debt. In direct aid, only \$38 billion is nonreimbursable, compared with the \$73 billion that must be repaid. Some 68% of the aid funds overall are reimbursable, which is a significant debt burden on the industry.

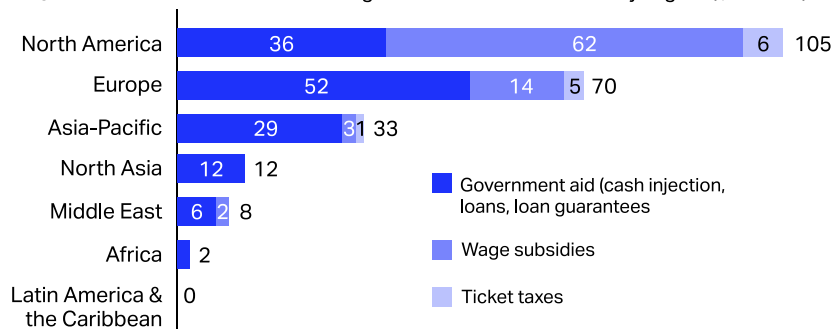
The regional spread of the aid (Figure 2) shows that the bulk of it has gone to North America, principally for wages. European governments have offered more direct cash and loans. The disparity is clear. Little aid has gone to airlines in developing regions.

Figure 1 COVID-19-related government aid to airlines by type (\$ billions)



Source: IATA Economics analysis

Figure 2 COVID-19-related government aid to airlines by region (\$ billions)



Source: IATA Economics analysis

86% of travelers

feel safe onboard owing to
COVID-19 measures

on investment from those providers in the pre-pandemic years. In addition, infrastructure operators with the ability to raise funds from the market at advantageous rates should do so. Private operators, meanwhile, should defer issuing dividends to shareholders to ensure that further burdens are not placed on airlines and passengers. In all cases, stricter cost control is a must that all partners in the value chain need to act on to ensure the sustainable recovery of the air transport industry.

occurring even before the pandemic, the financial situation of the airlines has brought this topic to the forefront once again.

In addition to the over \$4 billion in airline revenues that remain blocked in Venezuela, another approximately \$963 million in airline funds is being prevented by governments in nearly 20 countries from being repatriated. Four countries—Bangladesh (\$146.1 million); Lebanon (\$175.5 million); Nigeria (\$143.8 million); and Zimbabwe (\$142.7 million)—account for over 60% of this total, although throughout 2021 there has been some progress in reducing blocked funds in Bangladesh and Zimbabwe.

Preventing the repatriation of funds contravenes international conventions and could slow the recovery of travel and tourism in affected markets. Airlines will not be able

to provide reliable connectivity if they cannot rely on local revenues to support operations. That is why it is critical for all governments to prioritize ensuring that funds can be repatriated efficiently.

Regulatory relief from tax

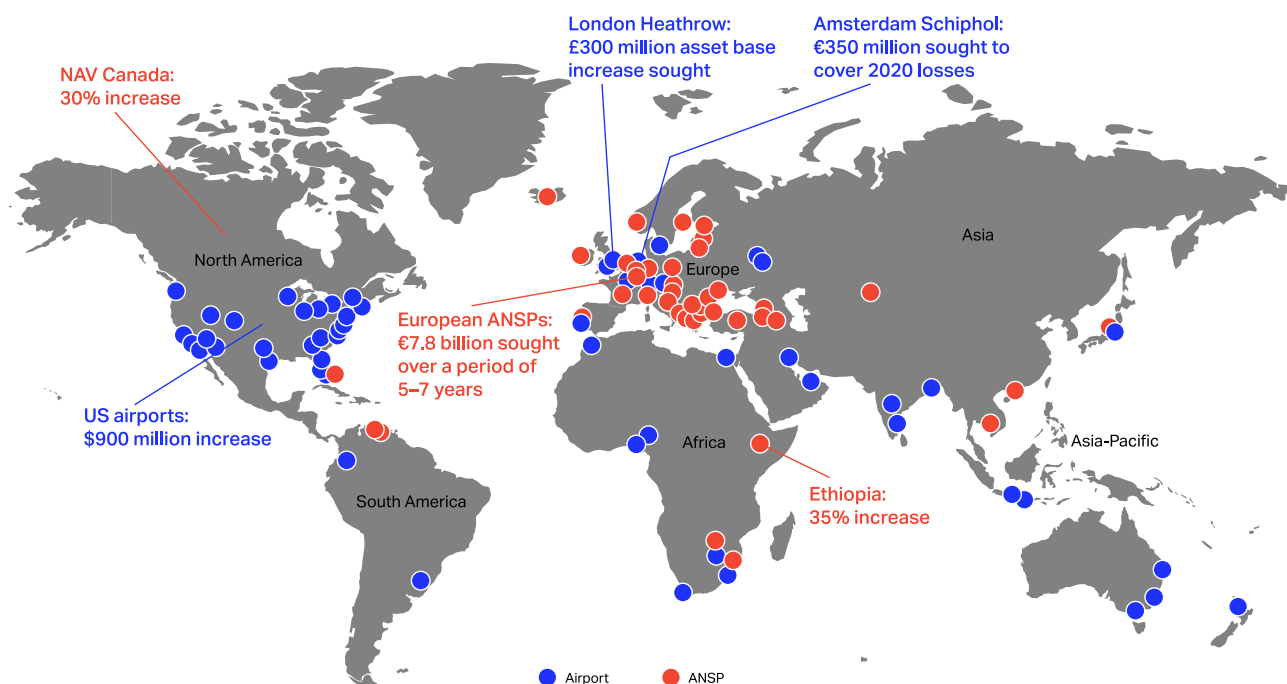
Tax authorities worldwide are increasingly demanding that airlines comply with new value-added tax (VAT) e-invoicing rules and technical systems. In response, airlines are focused on advocacy efforts that call for standard air transport e-documents, including e-tickets, electronic miscellaneous documents (EMD) issued for ancillary services, and electronic air waybills (eAWB), to be accepted as e-invoices. This is to avoid costly and often unnecessary system developments at a time when airlines and

24

Blocked funds

The nature of the airline business is such that varying percentages of revenues are generated outside an airline's home market and thus need to be repatriated. Although delays in this process were

Confirmed increases for airport and ANSP charges in 2021



89%

of travelers

believe protective measures are well-implemented

their customers can least afford them. International air transportation services generally are not subject to VAT, being either zero rated or exempt.

Slots

In addition to financial assistance, airlines need temporary regulatory relief. A global waiver on the use it or lose it 80% slot rule would be most helpful. Global uncertainty and unpredictability makes it more necessary than ever for airlines to have the flexibility to alter their schedules to meet demand without the pressure of being penalized for not using allocated slots.

Flexible slot-use rules would enable carriers to avoid having to fly empty aircraft to maintain slots that they have invested in for years to build viable networks that hub airports and passengers rely on. Flights could be operated in a sustainable manner under conditions that grant airlines the agility to return to their regular schedules as pandemic-related restrictions lift. The certainty that relaxed slot rules would give airlines would flow to airports, which would gain early confidence from airline planning, save millions of dollars in unnecessary costs, and again be able to present passengers with realistic flight schedules.

Slots waivers were granted in 2020, and discussions for their extension into summer 2021 occurred early in the year. The Worldwide Airport Slot Board of airport, airline, and slot coordinator representatives, however, proposed an alternative to waivers: a 50% slot-use rule with flexibility for early returns of slot series and alleviation from use so that other operators could have access should demand increase.

83%

of travelers

strongly support mask-wearing onboard

The European Commission (EC) was reluctant to commit to this industry-backed approach amid an anticipated summer rebound in traffic. The industry argued that continued uncertainty, especially over long-haul routes, meant that it was impossible to foresee how all series of held slots could be eligible for use and that the connectivity the EU relied on would be at risk if not protected. The EC countered that countries elsewhere were extending slot waivers or adopting the industry-led recommendation for summer that has proven successful against new variants, fourth waves, and continued restrictions.

After intense negotiations, the EC adopted its version of relief, which had less support than the approaches of other regulators. Ultimately, Europe's summer started late, the region's hoped-for industry recovery stumbled, and the EC implemented a blanket agreement to allow slot cancellations without penalty through the end of June 2021.

The EC's approach for winter 2021 is unfortunately again unaligned with those of many other regulators. The United Kingdom and nations in Asia, particularly China, recognize the continued uncertainty of international travel, the variations in vaccination levels, and the importance of preserving the route network that has done so much to increase global connectivity over the decades prior to the pandemic.

Unruly passengers

The biosafety measures introduced by the industry in early 2020 minimized the risk of the in-flight transmission of the coronavirus. Studies by Airbus and Boeing confirmed

86%

of travelers

want a strict enforcement of mask-wearing rules

this. Wearing masks and adhering to other health and safety protocols as directed by flight crews have kept crew and passengers safe. Evidence suggests that passengers support the industry's measures. The traveler survey conducted in June by IATA and Rockland Dutton Research & Consulting noted that

- 86% feel safe onboard owing to COVID-19 measures,
- 89% believe protective measures are well implemented,
- 90% believe airline personnel do a good job of enforcing the measures,
- 83% strongly support mask wearing onboard, and
- 86% support strict enforcement of mask rules.

A minority of passengers, however, have disregarded these and other measures, leading to an increasing number of unruly passenger incidents. IATA figures show a doubling of the incident rate in the first half of 2020, despite fewer passengers. These incidents are unacceptable, and IATA and its members are pursuing a zero-tolerance approach.

It is important that unruly behavior is deterred through enforcement. Government powers to prosecute have been enhanced by Montreal Protocol 2014 (MP14), which came into force in 2020. And IATA works closely with ICAO to encourage nations to ratify this treaty. In 2021, Botswana, France, Finland, Gambia, Russia, Switzerland, and the Netherlands ratified MP14, bringing to 32 the countries that are now party to it. IATA anticipates that the United Arab Emirates and the United Kingdom will also ratify MP14 within 2021.

Source: IATA Traveler Survey (June 2021)

The flight path to carbon neutral aviation

Sustainability and environment

Environmental action during the pandemic

Air transport's commitment to tackling its environmental challenge has not diminished amid the COVID-19 crisis. On the contrary, many airlines have pledged further action by targeting net-zero emissions; by purchasing sustainable aviation fuel (SAF); by retiring aged aircraft, such as the iconic Boeing 747; and by investing in the latest generation of fuel-efficient planes, including the Boeing 737MAX and Airbus A350.

Government policy support

To reduce aviation's impact on the environment, airlines and all aviation-related entities seek to work with governments on practical policies. Increased SAF production should be a government priority, as should a framework for greater investment in radical technologies. Blended-wing aircraft and zero-emissions electric or hydrogen propulsion offer environmental benefits every bit as substantial as SAF.

Government attempts to reduce demand through passenger taxes are a poor policy choice, as these are regressive and hit low-income groups hardest. Deterring passenger demand will diminish overall tax revenues. In any case, the money raised is never allocated for environmental technology, and the taxes can, in fact, reduce private investment in such technologies. In 2021, the European Commission (EC) proposed an EU ticket tax as

part of its EU Fit for 55 environment plan. The industry is vigorously opposing this proposal in favor of targeted, environmentally effective policies.

Developments in sustainable aviation fuel

The development and deployment of SAF is the biggest area of opportunity for long-term reductions in aviation emissions. SAF has the capability to reduce emissions 80% on a like-for-like basis with Jet A-1 fuel. Elevating the production capacity for SAF is therefore a priority for airlines. Current levels are too low, at around 0.02% of global demand, to significantly lessen emissions or to generate the economies of scale necessary to reduce costs to competitive levels. But production is beginning to increase dramatically. Within 2021, IATA anticipates the production and use of between 100 million and 120 million liters of SAF—an increase of more than 50% on 2020.

SAF facilities commissioned three to four years ago are coming online. An example is the Fulcrum Sierra Biofuel plant in Reno, Nevada, in the United States, which converts solid municipal waste into SAF. Numerous additional SAF production facilities will come online over the next four years, such that by 2025 approximately five billion liters of SAF could be available. That

would meet around 2% of global demand. By 2030, projections are for SAF availability to increase to cover at least 5% of demand globally.

Meeting and exceeding projections for SAF cannot be the responsibility of SAF producers and the aviation industry alone. Governments need to set in place supportive policy frameworks.

The EU Fit for 55 legislation of 2021, which aims to reduce EU carbon emissions 55% by 2030, is an example of just such a framework. It includes a proposal to mandate 2% SAF use by 2025 and 5% by 2030. But whereas a mandate sends a useful signal to investors, on its own it is not an efficient way to promote SAF unless accompanied by a comprehensive package of incentives, such as tax breaks, financial subsidies, and public-private partnerships. A mandate also poses a risk in distorting competition, which is negative for consumers. That risk for EU Fit for 55 can be substantially reduced by limiting the mandate's scope to intra-EU flights. IATA is pressing for discussions on global SAF uptake at ICAO, which is the appropriate global body to direct policy regarding SAF.

Progress on industry environmental goals

The aviation industry continues to make progress on its environmental goals:

- **Achieve carbon-neutral growth from 2020 (CNG2020).** The collapse in air traffic as a result of the pandemic has meant that the CNG2020 goal requires a flexible baseline to reflect the level of demand reached in 2019. ICAO has agreed to take the period 2019–2020 as its emissions benchmark for CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation). This results in a more stringent emissions target than would have been the case without the pandemic. But it also heightens leeway for the industry to return to growth and to restore much needed jobs and international connectivity.
- **Reduce net CO₂ emissions to half 2005 levels by 2050.** The industry has set out the pathway to meet its 2050 goal using a mixture of new technology, efficient operations, and improved infrastructure. The target of reducing net CO₂ by half is feasible through the aggressive deployment of SAF. Other proposed options include the accelerated development of small, zero-emissions aircraft for short-haul operations from 2035 and the use of offsets in the interim. These and other measures could also make it possible for the industry to meet an even more ambitious goal of net-zero carbon emissions by 2050.

European environmental taxes

Throughout Europe, energy and carbon taxation initiatives targeting aviation have emerged despite the pandemic and on top of other measures, such as the emissions trading system (ETS) and CORSIA. This was the case, for example, in Belgium, France, Italy, Portugal, and the United Kingdom. Included among the initiatives are the EU Fit for 55, which involves ideas for an EU fuel tax, and proposed revisions to Europe's Energy Tax Directive (ETD) to allow the taxation of aviation fuel used for intra-EU flights. Norway, which suspended until 31 December 2021 its Norwegian Air Passenger Tax linked to energy and carbon initiatives, proved a lone European exception to the trend.

Council on Sustainable Aviation Fuels Accountability

The adoption of SAF took a step forward in 2021 with the formation of the Council on Sustainable Aviation Fuels Accountability (CoSAFA).^{*} CoSAFA represents a unified vision across all sectors of the aviation industry for ensuring the application of consistent, accurate accounting practices to document SAF production and utilization.

The organizing bodies of CoSAFA will develop standards of practice to efficiently match SAF supplies with demand, to transparently track the chain of custody and use, and to consistently ensure environmental and sustainability criteria. CoSAFA's mission is to work on an

orderly, global approach to providing the necessary transparency for SAF transactions. Increased SAF production requires well-designed protocols for SAF chain of custody throughout the supply chain life cycle to allow for

- product and transaction tracing,
- a means of verifying relevant data, and
- the appropriate accounting or claiming of environmental credits.

The standards of practice established by CoSAFA will be publicly available for voluntary use by any party in the aviation sector. This includes parties that supply fuel and related services to the sector.

“Governments must be active partners in achieving net zero by 2050. As with all other successful energy transitions, government policies have set the course and blazed a trail towards success. The costs and investment risks are too high otherwise. The focus must be on reducing carbon.”

Willie Walsh

^{*}CoSAFA includes representatives from Airlines for America (A4A); the European Business Aviation Association (EBAA); the General Aviation Manufacturers Association (GAMA); the International Air Transport Association (IATA); the International Business Aviation Council (IBAC); the National Air Transportation Association (NATA); and the National Business Aviation Association (NBAA).

Managing travel in the time of COVID-19

Health and passenger experience

30

Since the outbreak of COVID-19, huge advances have been made in the medical field in terms of understanding how the virus spreads, available treatments, measures to reduce and prevent transmission, and, above all, vaccinations.

Despite this progress, various forms of travel restrictions remain in place across the globe, with some countries still resorting to quarantine measures in an attempt to stop the importation of COVID-19.

And within the scientific community there is a growing consensus that COVID-19 is on the way to becoming endemic and that an elimination strategy is not possible. Hence, we need to learn to live with the virus.

With this in mind, we need to mitigate and manage risks and reopen borders to recommence international travel. From the outset of the pandemic, IATA has worked with ICAO on the development of guidance material and subsequent updates, including on the role of vaccination and prior infection in addressing importation risk.

IATA is also urging countries to follow the World Health Organization (WHO) guidance on a risk-based approach to international travel released in July 2021. This recommends that governments:

- not require proof of COVID-19 vaccination as a mandatory condition for entry or exit,
- relax measures such as testing and/or quarantine requirements for travelers who are fully vaccinated or have a confirmed previous COVID-19 infection within the past six months and are no longer infectious,
- ensure alternative pathways for unvaccinated individuals through

testing so that they can travel internationally, and

- implement test and/or quarantine measures for international travelers “on a risk-based manner” with policies on testing and quarantine regularly reviewed to ensure that they are lifted when no longer necessary.

The use of data will be another important part of the risk management process, and IATA has teamed with Airbus and Boeing to quantify the potential for different measures to manage the risks of COVID-19 to keep populations safe while restarting international connectivity. The Airbus modeling showed that the risk of virus transmission and translocation can be significantly reduced by adopting screening and protection measures in data-driven combinations to reflect conditions in different markets. The Boeing modelling and analysis revealed that testing and screening protocols offer an alternative to mandatory quarantine for many travel scenarios.

Vaccination

The quick development and roll out of effective COVID-19 vaccines was probably the breakthrough we had all been hoping for in the past year and a half. There was now hope that this scientific breakthrough would enable governments to begin lifting travel restrictions. To ensure that global connectivity for both passenger and cargo flights could be maintained, IATA called on governments to prioritize aviation workers for access to vaccination once the elderly, vulnerable groups, and health workers have been vaccinated. This was aligned with the proposal of WHO’s Strategic Advisory Group of Experts on Immunization.

Evidence continues to confirm vaccinations as highly effective at preventing severe cases, hospitalization, and deaths from COVID-19, even with the predominance of the Delta variant. There is also some reduction in both infection and onward transmission of COVID-19, so the risks associated with vaccinated travelers is significantly reduced relative to unvaccinated travelers. It is therefore reasonable for governments to exempt vaccinated travelers from self-isolation or quarantine, and that testing requirements be waived or modified for these travelers, in keeping with an assessment of the risks presented. This is aligned with the policy and technical guidance published by WHO. A growing number of countries have already removed or modified quarantine or testing requirements for fully vaccinated travelers and IATA urges governments to follow these best practice examples as part of a risk-based approach to safely restarting international air travel.

There are still travelers from locations with limited vaccine availability or other difficulties with access. Hence, vaccinations should not be a prerequisite for international travel. In such cases, travelers should be provided a pathway so that they are not prevented from travel.

Testing

Risk-based COVID-19 testing strategies will still be needed to enable quarantine-free international travel for unvaccinated persons. Modeling work, such as that carried out by Airbus and Boeing has shown that there are testing strategies that can reduce the risk of importation of disease to levels approaching those achieved by quarantine periods.

Passengers support digital health apps

There is widespread support among air passengers for digital solutions to manage COVID-19 health requirements for travel. An IATA survey of 4,700 travelers from 11 countries produced encouraging data that indicates traveler willingness to use a secure mobile phone app to manage personal travel health credentials. Four of five people surveyed expressed that they would use the IATA Travel Pass, and 87% voiced support for a secure digital system to manage health credentials.

87%
of travelers

support a secure digital system to manage health credentials

Source: IATA Traveler Survey (June 2021)





Passenger experience

The past two decades prior to COVID-19, the industry was focused on reinventing the travel experience by giving passengers more control of their journey through self-service processes. Arriving at the airport ready to fly was becoming the new normal.

Digital identity technology was central to transforming the passenger experience. Increasingly, even border control was being handled by self-service e-gates, and the result was a smoother, quicker, and more efficient and satisfying travel experience.

COVID-19, unfortunately, has undone much of the automation. The requirement for airlines to check passengers' travel health credentials—principally COVID-19 testing and vaccination certificates—is a mostly paper-based endeavor. And these document checks are forcing the reinstatement of manual check-in and border control processes. Bottlenecks at airports are already hampering passenger flows, even at the current low volume of passengers amid the pandemic. Automated solutions for COVID-19 documentation are crucial if even worse airport disruptions are to be avoided as air travel resumes.

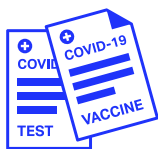
As it stands, the average processing and wait times per passenger from check-in through security, border control, customs, and baggage claim have risen from one and a half hours before COVID-19 to around three hours because of paper-based health documentation checks. Many airports worldwide deploy pre-pandemic levels of staffing to process a fraction of pre-pandemic volumes of passengers.

IATA is working on automating the health certificate processing before passenger traffic ramps up to ensure a smooth and scalable restart for the air transport industry. Efforts are focused on the further development of the IATA Travel Pass.

IATA Travel Pass functionality



Detailed listing of booked flights



Digital health certificates



Test/vaccine center finder



Travel restrictions



According to IATA's most recent traveler survey, 86% of respondents are willing to get tested. But 70% also believe that the cost of testing is a significant barrier to travel. The high cost of testing dampens the recovery when governments reopen borders. It is essential that authorities consider the use of cost-effective antigen tests as an alternative to more expensive PCR tests.

The new generation of rapid tests cost less than \$10 per test. WHO guidelines see Ag-RDT antigen testing as an acceptable alternative to PCR tests provided a confirmatory rRT-PCR test is administered for positive test results. States should also adhere to Article 40 of the International Health Regulations, which state that neither passengers nor airlines should bear the cost of testing when it is a mandatory requirement.

Certification

The digitization of the processes to check travel health credentials – both COVID-19 testing and vaccine certificates – is critical to the restart of international air travel. IATA continues to advocate for globally recognized, standardized, and interoperable digital certificates for COVID-19 testing and vaccination certificates. IATA is urging states to make the EU Digital COVID Certificate (DCC) their global standard for digital vaccine certificates.

Harmonization

Although many countries have reopened their borders to travelers from some or all markets, they have done so without consistency and with many variations of travel requirements. Countries must simplify and streamline their

travel requirements, to ensure that they are clearly communicated to both airlines and travelers and work together to align approaches across markets.

Regular review of measures

The response to the COVID-19 outbreak needs to evolve as we gain more knowledge about the virus. For example, the wearing of face masks was introduced when it was found to be effective in reducing COVID-19 transmission, and it is widely accepted by the traveling public.

From the beginning of the pandemic, IATA has stated that any public health measures applied to air travel should not be retained longer than necessary. The measures need to be regularly reviewed, and those which have no or limited health benefit but impose significant cost or operational impact should be removed.

IATA Travel Pass

IATA Travel Pass is a mobile app that enables travelers to check and comply with all COVID-19 travel requirements. The necessary health credentials, such as vaccination and test certificates, can be stored on the app, and the app allows passengers to decide how they wish to share their information at documentation checkpoints throughout airports. The app also provides information on the availability and locations of COVID-19 testing facilities for travel.

IATA Travel Pass sources data on COVID-19 related travel rules and regulations from Timatic, IATA's longtime and well-established global database. Most airline check-in systems rely on Timatic

for validating a passenger's compliance with passport and visa regulations. The addition of COVID-19 compliance information to Timatic assures IATA Travel Pass users of quality data derived from a single data source and covering all their travel requirements.

As international air travel recovers, a potentially enormous scale of testing and vaccination verifications will need to be securely managed. IATA Travel Pass will facilitate the transition from the largely manual processing of health-related documents to the imperative more efficient and secure automated management of health requirements at airports globally.

This puts IATA Travel Pass in the forefront of digital health pass solutions development. The app features critical levels of data privacy and security so that passengers always remain in control of their health information. Governments, meanwhile, can confidently rely on IATA Travel Pass to ensure that passengers traveling to or through their jurisdictions who receive an "Ok to Travel" status from the app are indeed in full compliance with the COVID-19 travel requirements.

Numerous airlines on all continents have IATA Travel Pass under extensive trial use. For IATA, the priority outcome of those trials is to secure acceptance of the app by governments worldwide so that air passengers are again able to travel seamlessly across borders.

The air cargo lifeline—for airlines and public health

Cargo

34

Air cargo has proven to be a lifeline for society and for aviation during the COVID-19 crisis. Critical medical supplies and vaccines were flown across the globe, international supply chains upheld, and revenues generated while passenger flights ground to a halt. In 2020, air cargo generated \$128 billion, which, at 34%, represented approximately a third of airlines' overall revenues, an increase of 10–15% compared with precrisis times.

Innovation has been a hallmark of air cargo's response to challenges throughout the crisis. Aircraft were reconfigured to carry cargo in the passenger cabin, and freighter operations were expanded as best as possible. Safe new ways of operating were implemented, from accelerating digitalization to expanding contactless processes. In addition, the air cargo industry quickly developed standards to safely meet society's expectations.

Air cargo survived 2020 in better shape than the passenger business. For many airlines, air cargo became a vital source of revenues, despite the 8.7% decline in 2020 global demand for air cargo compared with 2019. Global passenger demand plummeted a massive 65.9% in the same timeframe. Air cargo's global capacity, meanwhile, shrank 21.1% in 2020 compared with 2019, more than double its contraction in demand. This contributed to increased yields and revenues and supported airlines and some long-haul passenger services in the face of collapsed passenger demand.

The air transport industry worked with governments in 2020 to ensure that the world's vital supply lines remained open, efficient, and effective. Specifically, the industry strove to make sure that air cargo

operations were excluded from COVID-19-related travel restrictions; that standardized measures were in place so that air cargo could continue to move worldwide with minimal disruption; and that economic impediments to efficient air cargo operations, such as overfly charges, parking fees, and slot restrictions, were removed. The industry also prioritized the removal of operating hour curfews for cargo flights internationally to facilitate flexible global air cargo network operations.

Vaccine transport

The safe transport to points all over the globe of billions of doses of COVID-19 vaccines—among them vaccines that must be maintained in deep-frozen state—involved hugely complex logistical challenges across the supply chain. To counter those challenges and as a reflection of their complexity, IATA partnered with a broad range of stakeholders to produce and release guidance to support the large-scale handling, transport, and distribution of COVID-19 vaccines. [IATA's Guidance for Vaccine and Pharmaceutical Logistics and Distribution](#) provided recommendations for governments and the logistics supply chain on how to contend with the largest and most sophisticated global logistics operation ever undertaken.

Comprehensive engagement

The crisis saw unparalleled coordination and cooperation among all stakeholders within the supply chain. IATA worked with the European Commission (EC) to develop the EC's *Guidelines on*

Facilitating Air Cargo Operations during COVID-19 Outbreak, with the World Customs Organization (WCO) to ensure that cargo blockages at borders were responded to immediately, and with ICAO to issue a series of letters urging ICAO member nations to expedite air cargo flows during the pandemic. Air cargo's heightened application of digital and contactless processes played an important role in facilitating reliable and safe supply lines.

IATA also developed industry-specific operational and regulatory guidance regarding COVID-19:

- The [Air Cargo COVID-19 Action Page](#) provides updated information covering all aspects of regulatory and operational information related to air cargo during the crisis.
- The [IATA TACT COVID-19 Operational Impact Portal](#) features up-to-date information on airlines' air cargo operational status to help ensure shipper access to capacity.
- The [IATA quick reference for ground handling during COVID-19](#) offers guidance for ground handling during the pandemic.
- The [IATA guidance on the safe carriage of cargo in the passenger cabin](#) details issues to be considered in performing a safety risk and operational assessment when utilizing passenger aircraft for cargo-only operations.

Air cargo has emerged from the pandemic even stronger and more agile than previously. As such, it is well positioned to support the global economic recovery and to meet future challenges.



750,000 tonnes of PPE

transported by air in 2020

>3%

of all goods

carried internationally by air in 2020

73%

of PPE carried

was exported from China to Europe
and North America

76%

of PPE carried

were medical or washable face-masks

35

*Source: Seabury Cargo Global Air Trade database,
Seabury Cargo analysis (September 2021)*

COVID-19
Vaccine
SARS-CoV-2 vaccine to prevent
coronavirus disease. Injection only.
Vial contains 5 d

Withstanding the COVID-19 stress test

Financial services

Since 1971, IATA Financial Settlement Systems (IFSS) have been the back office of the global air transport system, enabling the swift, secure, and reliable movement of funds among the participants in the air travel and trade value chain. With the notable exception of cargo operations, settlement activity fell significantly in 2020 and continues to do so in 2021. This is in line with greatly reduced ticket sales and flight operations and related transactions and with an unprecedented level of ticket refunds processed through the Billing and Settlement Plan (BSP).

36

Challenges notwithstanding, the IFSS continued to perform at high levels of efficiency, reliability, and security. In 2020, the IFSS reduced its cost base by some \$20 million and processed \$156.3 billion, net of refunds.

IATA's Billing and Settlement Plan (BSP) expedites and simplifies the selling, reporting, and remittance procedures of IATA-accredited travel agents and improves financial control and cash flow for approximately 400 airlines. In 2020, the BSP processed \$51 billion, compared with \$237.1 billion in 2019. The figure for 2020 was net of \$25 billion in refunds, without which the amount processed would have been \$76 billion. At the close of 2020, there were 153 BSP operations covering 181 countries and territories. Their overall, on-time settlement rate was 99.996%, compared with 99.994% in 2019.

IATA's Cargo Account Settlement System (CASS) simplifies the billing and settling of accounts between airlines and freight forwarders. It operates through CASSlink, an advanced, global, web-enabled e-billing solution. In 2020, CASS processed \$42 billion, with an on-time settlement rate of 99.995%. This contrasts with \$32.7 billion and an on-time settlement rate of 99.996% in 2019. At the end of 2020, 91 CASS operations were serving 245 general sales and service agents (GSSAs) and ground handling companies and over 240 airlines.

The IATA Clearing House (ICH) provides fast, secure, cost-effective settlement services to 463 airlines and associated companies in the value chain. In 2020, the ICH processed \$20.4 billion and had a financial settlement rate of 99.977%, which rose to 99.990% at the end of the second quarter of 2021 following multiple recoveries. In 2019, the ICH processed \$62.5 billion and had a financial settlement success rate of 99.996%.

IATA Currency Clearance Services (ICCS) offer global cash management that enables more than 305 airlines to centrally control and repatriate their BSP and CASS sales, including from countries with severe currency liquidity issues. The ICCS processed \$16 billion in 2020 compared with \$37.3 billion in 2019.

IATA's Simplified Invoicing and Settlement (SIS) is a cost-effective electronic invoicing platform that removes paper from the invoicing and settlement of industry services. In 2020, SIS had more than 2,746 participants, including 446 airlines, 350 suppliers, and 1,950 other entities. SIS processed over 1.25 million interline and supplier invoices during the year and settled more than \$25 billion compared with \$76 billion in 2019.

IATA's Enhancement & Financing (E&F) service gives air navigation service providers (ANSPs) and airports access to IATA's globally trusted systems and processes for accurate billing data, standardized e-invoices that can be automatically validated, and secure fund collection. E&F helps airlines avoid late payment penalties, reconciliation headaches, and disputes through a standardized billing process with a single point of contact for questions or disputes. In 2020, E&F processed \$1.9 billion, compared with \$4.2 billion in 2019.

BSP 400 participating airlines

153 BSP operations

181 countries and territories

99.996% on-time settlement rate

\$51 billion processed
net of \$25 billion in refunds

37

CASS 240+ participating airlines

91 CASS operations

245 GSSAs and ground handling companies

99.995% on-time settlement rate

\$42 billion processed

Continuing the 25by2025 initiative

Diversity and inclusion

Aviation continues to lack gender diversity, particularly within upper management. Only 3% of airline CEOs and 5% of airline pilots are female. IATA launched its 25by2025 initiative in 2019 to bridge this gap in male to female representation and thereby turn aviation into an increasingly gender-balanced industry.

Before the outbreak of COVID-19, the industry was clearly committed to increasing the number of women in senior management positions and in under-represented areas up to a minimum of 25% by 2025. The pandemic brought to a temporary halt most of the efforts in this regard. But at the end of 2020, some airlines were restarting their attempts to improve the industry's gender balance. This trend is continuing in 2021, with a growing number of airlines committing to 25by2025. As of September 2021, the number of signatories to that initiative was 76, which represented 41% of total air traffic.

Early in 2021, IATA also reintroduced the IATA Annual Diversity & Inclusion Awards, which annually attract high-caliber nominations from all parts of the industry worldwide. These prestigious awards recognize and celebrate excellence in driving the diversity and inclusion agenda in three categories of leadership: inspirational role model, highflier, and diversity and inclusion team. The latest award winners will be announced at IATA's 2021 Annual General Meeting in Boston.

The COVID-19 pandemic has not stopped aviation's agenda on diversity and inclusion.

In fact, it has been an opportunity to redouble our efforts to improve our performance.

Transforming distribution gears up another level

NDC and ONE Order

40

Despite the catastrophic downturn in air travel caused by the COVID-19 pandemic, the air transport industry's drive toward airline retailing accelerated in 2020 and has continued to do so in 2021. The NDC (New Distribution Capability) is a critical component of that drive. NDC certifications in the past 12 months grew 25% to reach 203. This reflects the extent to which airlines, technology providers, and travel sellers have maintained retailing as a core strategy throughout the pandemic. Furthermore, the 21 [NDC Leaderboard airlines](#) collectively reached the 2020 industry target of 20% NDC-powered indirect sales.

Further NDC market development is being driven by new commercial models that are even emerging between some airlines and the global distribution systems (GDS). Several new entrant aggregators, in fact, are offering their services, and direct connects are increasingly common.

The ambition for NDC is for airlines to deliver the best customer experience and to unlock maximum value creation opportunities from airline retailing. This requires shifting from legacy standards and artefacts, such as e-tickets, electronic miscellaneous documents (EMD), and passenger name records (PNR), to offers and orders like those of online retailing.

Crucial in this respect is ONE Order, a program that simplifies the airline fulfillment, servicing, delivery, and accounting processes for airline products and services. These processes have largely remained unchanged from the era of paper tickets, even though paper tickets have all but disappeared.

The ONE Order certification registry provides transparency on ONE Order deployments, validates the capabilities of supporting IT providers, drives innovation and monitors progress, and promotes the adoption of ONE Order.

Although COVID-19 has slowed ONE Order implementations, some airlines have begun to revive their ONE Order projects given the high degree to which ONE Order and NDC complement each other. IATA is therefore pivoting ONE Order and making it an integral part of transitioning to airline retailing rather than maintaining it as a stand-alone program. This involves a world of offers and orders aligned with today's online retailing best practices and requires the vital simplification and customer service that ONE Order assures.

New certifications in the past 12 months



Airlines:

17



Airlines:

55

Total to date*:

203



Airlines:

5

Total to date*:

31

*Including all company types



Supporting the recovery with timely products

Products and services

Timatic

As governments began imposing travel restrictions in their bid to limit the spread of COVID-19, having an accurate and reliable source where to find this information in an aggregate format, gained in importance for airlines and travelers alike.

IATA's Timatic was the ideal platform for this. Ever since the 1960's, Timatic has been the source that airlines, travel agents and travelers have relied on to check what documentation is needed for travel to a destination, including all en route transit points.

Providing users with reliable and real-time information on the various government-imposed travel restrictions required expanding the sources from which the data was obtained, handling an increasing number of updates without delay, and adding channels through which the Timatic information could be accessed.

To maintain the information stored in the database, IATA relies on a variety of sources, including governments, airlines, and airports. The accuracy of this data is key to

ensuring that the correct information is provided to airlines and passengers alike. Since the onset of COVID-19, IATA has added more than 200 sources for this data, thereby increasing the accuracy of the data.

The ever and rapidly changing government-imposed travel restrictions also led to a doubling of the daily updates to the Timatic database. On average, around 200 changes per day need to be processed, including COVID-19 test and vaccination requirements. To ensure that these are reflected in Timatic without undue delay, adjustments to the staffing and working hours of the Timatic team had to be made.

Travelers can now easily access the COVID-19 travel requirements for their destination using the [Timatic Widget](#), which any service provider along the travel value chain can now opt to offer.

Timatic is also the source of one of the key functionalities of the IATA Travel Pass app. It provides users the information on the entry requirements and check's the uploaded health credentials — COVID-19 vaccination and testing certificates—against these.

As COVID-19 vaccinations increasingly play a role in re-starting international travel, Timatic is already being updated to keep on providing clarity to travelers during these uncertain times.

Training

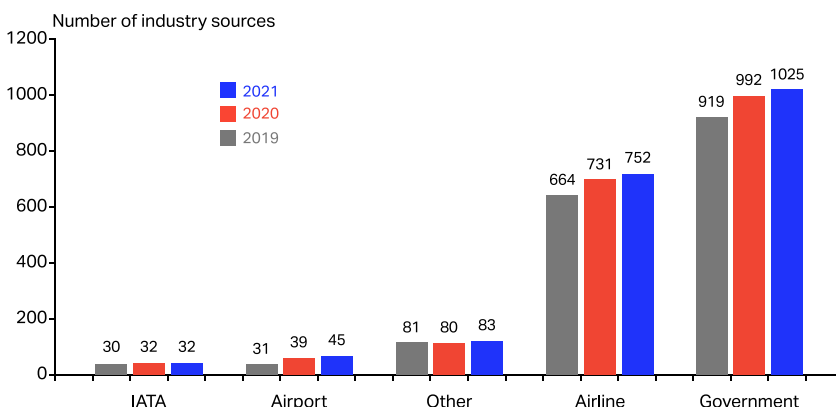
As the industry begins to recover, training will be essential to ensure the post-pandemic aviation sector workforce possess the correct skills. According to a [global survey](#) of some 800 human resources (HR) leaders in the aviation industry responsible for learning and development, right skilling existing workers and enabling new hires from outside aviation to quickly acquire the necessary skills, will be key to successfully building the post-pandemic workforce.

To achieve this, training programs will need to be adapted. Around half the HR respondents state that their priority is to assess available workforce skills and map these against their organization's competency requirements. This will form the basis for the required training curriculums. The pandemic forced many airlines and other companies in the value chain, including ground service providers, to assess what overall skills their employees possessed to adapt to new operational requirements. A case in point was the need to load cargo in cabins of passenger aircraft repurposed to carry cargo only.

With demand for passenger flights once again on the rise, companies are bringing back employees but will also hire from outside the industry. Results from the survey identify safety, operations, security, and economic disciplines as the main areas where training will be required to master the current situation.

42

Expansion of the Timatic sourcing network (2019–2021)





Safety was highlighted as particularly critical for airlines, ground service providers and airports.

In training delivery, the focus will shift to digital methods as opposed to conventional classroom training.

36%
of respondents

have already moved their training focus to distance / e-learning

85%
of respondents

believe online learning including virtual classrooms will play an important role in the recovery

Digital learning options have already played a key role in some of the initiatives IATA offered in supporting the industry during the pandemic, such as:

- a special online training course for former cabin crew to help them realize their potential outside the industry,
- virtual classroom training for temperature-controlled cargo operations to support the vaccine transport,
- an eLearning module for the transport of pharma products and vaccines by air,
- ground support equipment for training ground handlers in managing their supply during the pandemic and enabling maintenance of vital equipment,
- critical training courses—such as dangerous goods—transformed into a virtual format to enable attendance in the face of travel restrictions.

As aviation rebuilds, topics such as sustainability and digitalization will gain in importance. IATA is already working with several academic partners to design courses on sustainability to attract talent and help shape the future of aviation. Furthermore, a new cross-functional Aeronautical Skills IATA Working Group will ensure that future training requirements are in line with the needs brought about by the digital transformation of the industry.



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International Air Transport Association

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Boston, USA, October 2021

