Annual Review
2019

IATA

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Mahan Air
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Malindo Air
Mandarin Airlines
Martinair Cargo
MasAir
Mauritania Airlines
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Pegas Fly
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PIA Pakistan International
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Q

Qantas
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Ravn Alaska
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Royal Air Maroc
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S7 Airlines
Safair
SAS
SATA Air Acores
Saudi Arabian Airlines
SaudiGulf Airlines
SCAT Airlines
SF Airlines
Shandong Airlines
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Silk Way West Airlines
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Solomon Airlines
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    Airways
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SunExpress
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Surinam Airways
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TACA
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U

Ukraine International Airlines
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Ural Airlines
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UTair
Uzbekistan Airways

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Vietnam Airlines
Virgin Atlantic
Virgin Australia
Vistara
Volaris
Volotea
Vueling

W

Wamos Air
WDL Aviation
WestJet
White Airways
Wideroe

X

Xiamen Airlines
XL Airways France

New Members

IATA's membership continues to grow. Between June 2017 and May 2018, 13 airlines joined IATA's ranks, from all parts of the globe and representing a multitude of business models.

In Africa, Congo Airways, the flag carrier of the Democratic Republic of Congo, applied for and gained membership.

Asia-Pacific and North Asia boasts seven new members. Fuzhou Airlines, Kunming Airlines and Urumqi Air are passenger-focused airlines. Hong Kong Air Cargo, meanwhile, concentrates on the cargo market. Thai Smile, a wholly-owned subsidiary of Thai Airways, flies regional routes out of Bangkok, Spice Jet from India, and Solomon Airlines, the national carrier of the Solomon Islands, make up the remainder of Asia-Pacific's latest IATA members.

In Europe there were four new IATA members. Air Dolomiti, part of the Lufthansa Group, accompanied Cyprus Airways, Germania Flug AG, and XL Airways France in joining.

Ravn Alaska, a US-based airline that specializes in serving smaller communities in its home state of Alaska, also became an IATA member.

Future air travel must be effortless and sustainable

H.E. Akbar Al Baker, Chair, IATA Board of Governors & CEO Qatar Airways

What were your top priorities as IATA Chairman?

It was to represent, lead, and serve our industry with strength and humility.

IATA plays a very important part in our industry. As a crucial instrument for airlines, it is important that members, governments, and the general public perceive IATA in the right way. This is not just a rubber stamp organization. But we've started the process to improve the association's activities and it was my privilege and duty during the past year to make sure that we kept on developing initiatives while providing greater accountability and enhanced oversight.

Together with the board of governors, there was a continued effort to ensure that these improvements endure in the long term.

Where do you see the most important future innovations for the airline industry?

IATA has a number of important projects underway. New Distribution Capability, One ID, and Radio Frequency Identification (RFID), for example, are innovations which will make future travel effortless and seamless for passengers. And they will do so while also bringing efficiencies into our industry and letting airlines keep their brand and identity.

An effortless travel experience will be so important going forward. Travelers are becoming tired of overregulation, the endless processing they must suffer, and the laborious security checks. Let me be clear, I don't blame the authorities for these thorough processes when our world is passing through a very difficult time. But the industry, through IATA, can speak in one voice and help authorities and regulators achieve our shared security goals, while improving the passenger experience.

What steps should the industry take to earn a better reputation for sustainability?

The most important thing is the leadership with CORSIA. The industry has long been a leader in environmental efforts and aims to halve net carbon emissions by 2050 compared with 2005.

It is important to the future of our industry and to the future of our children and grandchildren that there is enough investment by aircraft manufacturers, engine manufacturers, and other supply chain partners to produce equipment that promotes sustainability and makes our industry more efficient.

There is growing pressure on the environmental performance of aviation and the industry must continue to do all it can. But people who shun aviation or who think aviation should be taxed don't realize what an economic collapse would happen. Aviation supports 65 million jobs and $2.7 trillion in global GDP. Without this unique means of transportation, people will not be able to cross the world to do business, to boost local economies, or to meet their loved ones.

Do governments fully appreciate the contribution of aviation?

Governments are using aviation as a cash cow. For example, they collect taxes for the environment but what do they do with the money? Nobody knows. If governments were really serious about the environment, they would comply with the international agreements that they sign. Instead, they hit aviation with so-called green taxes to meet general budgetary requirements and do nothing for the environment. So they are taking the money from us but doing very little.

Governments must reinvest the money from environmental taxes in the industry to help us achieve further sustainability success.

Any final thoughts on the year?

I'd like to thank all my colleagues on the IATA Board for their active participation throughout the year, and their commitment to building a safer, stronger, and better industry. I must make a particular mention of Mr. Yang Ho Cho, Chairman and CEO of Korean Air, who sadly passed away in April. He will be much missed from the IATA Board, by his airline colleagues, and most of all by his family and friends. His contribution to aviation and to Korea was incalculable.

IATA Board Of Governors 2018–2019

CHAIR OF THE BOARD
Akbar Al Baker
Chief Executive Officer
QATAR AIRWAYS

MEMBERS
Ahmed Adel
Chairman and Chief Executive Officer
EGYPTAIR HOLDING CO (representing EGYPTAIR)

Yuji Akasaka
President
JAPAN AIRLINES

Saleh N. Al Jasser
Director General
SAUDI ARABIAN AIRLINES

Enrique Cueto
Chief Executive Officer
LATAM AIRLINES

German Efromovich
Chairman
AVIANCA

Pieter Elbers
President and Chief Executive Officer
KLM ROYAL DUTCH AIRLINES

Mohamad El-Hout
Chairman and Director General
MIDDLE EAST AIRLINES

Luis Gallego Martín
Chief Executive Officer
IBERIA

Tewolde GebreMariam
Group Chief Executive Officer
ETHIOPIAN AIRLINES

Goh Choon Phong
Chief Executive Officer
SINGAPORE AIRLINES

Rickard Gustafson
President and Chief Executive Officer
SAS

Robin Hayes
President and Chief Executive Officer
JETBLUE AIRWAYS

Pedro Heilbron
Executive President and Chief Executive Officer
COPA AIRLINES

María José Hidalgo Gutiérrez
Chief Executive Officer
AIR EUROPA

Rupert Hogg
Chief Executive Officer
CATHAY PACIFIC

Harry Hohmeister
Chairman
AUSTRIAN AIRLINES

Alan Joyce
Chief Executive Officer
QANTAS

Liu Shaoyong
Chairman
CHINA EASTERN AIRLINES

Sebastian Mikosz
Group Managing Director and CEO
KENYA AIRWAYS

Pham Ngoc Minh
Chairman
VIETNAM AIRLINES

Oscar Munoz
Chief Executive Officer
UNITED AIRLINES

Christine Ourmières-Widener
Chief Executive Officer
FLYBE LIMITED

Douglas Parker
Chairman and Chief Executive Officer
AMERICAN AIRLINES

Calin Rovinescu
President and Chief Executive Officer
AIR CANADA

Benjamin Smith
Chief Executive Officer
AIR FRANCE / KLM (representing AIR FRANCE)

Carsten Spohr
Chairman and Chief Executive Officer
LUFTHANSA

Wang Changshun
Chairman
CHINA SOUTHERN AIRLINES

ALSO SERVED
(To June 2018)
Safwat Musallam
Chairman and Chief Executive Officer
EGYPTAIR

(To October 2018)
Franck Terner
Chief Executive Officer
AIR FRANCE

(To November 2018)
Tan Wangeng
President and Chief Executive Officer
CHINA SOUTHERN AIRLINES

(To March 2019)
David Bronczek
President and Chief Operating Officer
FEDEX CORPORATION

(To March 2019)
Naresh Goyal
Chairman
JET AIRWAYS

(To April 2019)
Yang Ho Cho
Chairman and Chief Executive Officer
KOREAN AIR

Aviation is an amazing industry. I call it the business of freedom

Alexandre de Juniac, Director General and CEO

In 2018 the world's airlines provided about 4 billion passengers the freedom to travel over a global network of some 22,000 routes. The average cost of this transport was half that of two decades ago. And since 2010 the carbon footprint per passenger has reduced by aboout 2.8% per year.

Last year, airlines also enabled the freedom to do business globally by transporting 64 million tonnes of cargo to markets around the world. This activity supported a third of global trade by value, generated 65 million jobs and underpinned $2.7 trillion of GDP.

In 2018 the world's airlines earned a collective net profit of $30 billion. Industry revenues topped $812 billion and 8% return on invested capital was generated.

In each year since 2010 the airline industry earned an aggregate profit. And since 2015 that profit has exceeded the average cost of capital. While some airlines continue to face financial challenges, this nine-year profitability streak at the industry level marks a major shift from the sector's historic boom-bust financial cycle.

The industry's newly found financial resilience enables it to weather shifts in the operating environment without plunging into crisis. Nonetheless, we expect profits to be squeezed in 2019 as a result of oil price volatility, rising costs for labor and infrastructure, ever-increasing taxation, and a tapering of demand.

The threat of trade wars and protectionist activity also looms large. Globalization has made our world more prosperous. And aviation will play a central role in enabling a more inclusive globalization that spreads its benefits more evenly. But we must be firm in insisting on borders that are open to people and to trade, or the benefits of aviation will be severely curtailed.

Over the next two decades, the demand for air transport is expected to double. The ability to successfully meet this demand will require the industry to excel in several areas. And, as aviation remains a highly regulated industry, governments will play a key role. With the 40th ICAO Assembly scheduled for late in 2019 we have an important opportunity to engage government action at the global standard-setting level.

Safety
Air transport is the safest form of long-distance travel. And all involved with aviation are committed to making it ever safer. That was confirmed again in 2018 when the industry's safety performance showed marked improvement on the ten year average. But two tragic crashes with the newly introduced Boeing 737 Max have knocked the industry's heretofore impressive reputation.

We can be fully confident that a technical solution will be found to address the issues that have been identified. But there are critical questions still to be answered. What more can be done to ensure the safe introduction of new technology? How can we reinforce collective international confidence into state certification systems? And how can authorities and the industry coordinate better to maintain public confidence?

Security
Security is an equal partner to safety. Flying is secure. But the level of international cooperation and information sharing by governments who have the primary responsibility for security continues to lag behind that of safety. Moreover, many states struggle to implement the baseline international security standards in Annex 17 of the Chicago Convention.

The industry strongly supports the development of the Global Aviation Security Plan through ICAO as a means of taking a major forward.

Sustainability
The October 2018 publication of a UN assessment of the world's progress towards containing climate change to the Paris Agreement's aims raised alarm bells. Aviation, along with all industries, is coming under even greater environmental scrutiny. In Europe, the pressure is particularly intense.

We must not forget that aviation was among the first industries, if not the first, to outline a plan to achieve carbon neutral growth (CNG). And we are committed to achieve it from 2020.

Preparations for CNG took a giant step in January 2019 with airlines beginning their emissions monitoring for the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Agreed by the International Civil Aviation Organization (ICAO) in 2016, CORSIA was approved with the full support—indeed with the urging—of the aviation industry.

CORSIA is just one pillar of the industry's commitment to stabilize net carbon emissions from 2020, and to cut its net carbon footprint to half the 2005 level by 2050. And science tells us that fulfilling this will be consistent with the 1.5-degree-goal of the Paris Agreement.

But there is urgent need to more concretely demonstrate the ambition of our commitments. And we must be relentless in our efforts to insist that CORSIA is effectively implemented, that strategic investments are made to commercialize sustainable aviation fuels and that the bottlenecks in air traffic management are sorted. Together with continued investment in greener technologies, these will deliver a significant reduction in aviation's carbon footprint.

Infrastructure
Meeting the demand for connectivity depends on availability of infrastructure. In many parts of the world we already struggle with the physical limitations of available airports and airspace. As demand grows that will only get more acute.

Reminding governments to work with the industry to build sufficient infrastructure at affordable cost will continue to be a long-term top priority. And in the short term there is enormous potential to deliver greater efficiency and a better customer experience with the infrastructure we currently have.

The industry agenda is broad. Travelers will appreciate the technology driven innovations such as the One ID program to smoothly move travelers through the airport with a single biometric token, and plans to enhance baggage tracking. Parallel efforts to modernize slot allocation rules, reform airspace management and find better means to fund infrastructure development will deliver less visible but equally important gains.
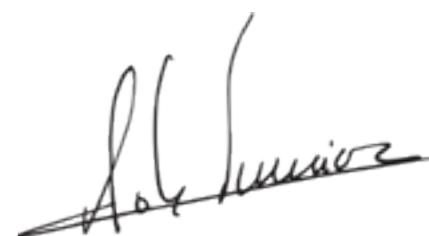
People
People are the key resource to take aviation forward. Our industry provides high quality jobs that add value to economies in which they are located. Aviation careers are attractive, but there is growing concern about how the industry will find sufficient technically skilled employees quickly enough to keep pace with demand.

There are no easy answers, but it is clear that increasing female participation in the industry is a tremendous opportunity. Finding ways to balance gender diversity in all job categories will provide huge potential to strengthen our business and ensure the people we need to sustain the industry.

Your association
The industry counts on IATA. Global standards developed by our members through IATA underpin day-to-day operations worldwide. Our efficient settlement systems now settle over $460 billion annually. And IATA's products and services are tailored to help the success of our members while funding industry activities. As your trade association, IATA's global workforce is fully focused on adding value to the businesses of our members.

IATA is proud to lead, represent and serve the airline industry as we address these and other issues with governments and industry stakeholders. Our vision is to work together with our almost 300 member airlines to shape the future growth of a safe, secure and sustainable air transport industry that connects and enriches our world.

Alexandre de Juniac
Director General and CEO

01 Industry story

Empowering industry profitability despite challenges

Air transport connected more cities at lowered cost

In 2018, airlines continued to increase the number of city-pair routes globally. Almost 22,000 city pairs are now regularly serviced by airlines. This is an increase of 1,300 over the number of city-pair connections in 2017. Strong improvements in connectivity and in costs over the past two decades—the real, inflation-adjusted cost of air transport has halved in the past 20 years and declined further in 2018—help to ensure that aviation, the "business of freedom," continues to distribute its array of benefits to consumers, suppliers, and economies globally.
■ **Chart 1**

Air transport supported economic growth and prosperity through tourism and trade

Air transport is central to world tourism and trade. Tourists traveling internationally by air are estimated to have spent about $850 billion in 2018, an increase of more than 10% over 2017. The additional number of city-pair connections and the lower cost of air transport also boosts trade in goods and services and heightens foreign direct investment and other important economic flows. Air transport accounts for only a small, less than 1%, proportion of world trade by volume but for a much larger share by value, of about 33%. In 2018, the value of goods carried by air is estimated to have been $6.7 trillion.
■ **Chart 2**

Air travel was more accessible for more people

Worldwide air passenger numbers continued to rise, exceeding 4.3 billion journeys in 2018. Connecting cities directly cuts the cost of air transport by saving time for shippers and travelers. Combined with cheaper fares, this enables more people to fly more often. In 2000, the average citizen flew just once every 44 months. In 2018, the time between trips had halved, to just 21 months.
■ **Chart 3**

Passenger demand was again robust

Demand for air passenger services remained strong in 2018, with industry-wide revenue passenger kilometers (RPK) increasing 7.4%. This represented a slowdown from the decade-high pace recorded in 2017, of about 8%, but still exceeded the long-run industry average growth rate by around 2 percentage points. Air passenger demand was underpinned by a generally solid global economic backdrop, especially earlier in the year, which, in turn, supports jobs, incomes, and business activity, and by fierce competition in the industry, which helps to ensure airfares remain affordable to travelers.
■ **Chart 4**

China added the most passenger journeys

There were close to 4 billion origin-destination (O-D) passenger journeys worldwide in 2018. Among them, domestic routes within China again provided the largest incremental increase in passenger trips, adding just under 50 million journeys. The domestic markets of the United States and India once more ranked second and third, with around 30 million and 18 million more passenger journeys, respectively. Of the main markets that IATA regularly tracks, India's domestic market showed the fastest growth in passenger numbers, which increased 18.5% in 2018. That India recorded its 50th consecutive month of double-digit, year-on-year growth in RPK in October highlights the consistently strong performance of its market
■ **Chart 5**

The US O-D passenger market remained the world's largest

Although China's domestic market added the most passenger journeys in 2018, the US domestic market—where almost 590 million passenger journeys were undertaken in 2018—continues to be the world's largest single O-D market. China comes second, with 515 million, followed by India some distance back, at 116 million. Unsurprisingly, domestic markets dominated the rankings. The top 12 markets accounted for almost half of the total number of O-D passenger journeys in 2018.
■ **Chart 6**
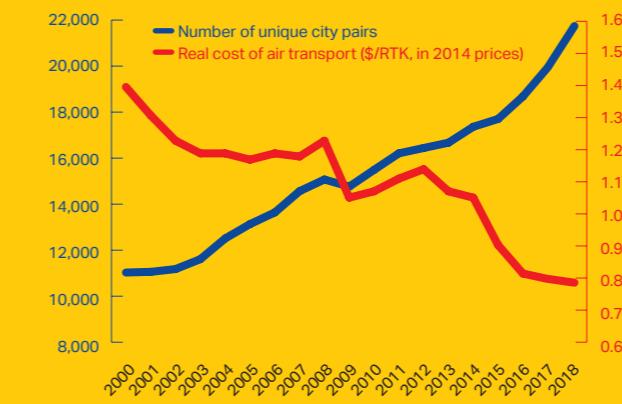
Air freight demand growth eased

Air freight grew slightly in 2018 compared with 2017. Buoyed by the global inventory restocking cycle, industry-wide freight tonne kilometers (FTK) increased 9.7% in 2017. In 2018, FTK likewise grew, but a mere 3.4%. This was in line with global trade volumes, which trended broadly sideways in the first part of 2018 and contracted in the year's fourth quarter. The lesser increase for air freight also reflected the typical slowdown following an inventory rebuild.
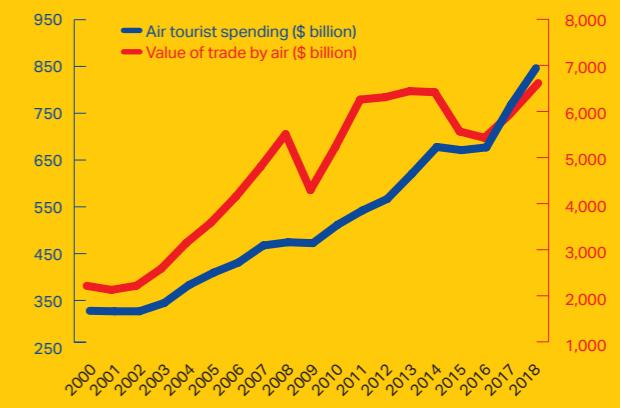
The second half of the year also saw the industry face a number of headwinds. There was a moderation in world trade—a result in part of the heightened trade tensions between the United States and China—and a deterioration in some leading indicators, such as the new export orders component of the global Purchasing Managers Index. Having said that, not all air freight sectors were equally affected. E-commerce and pharmaceuticals continued to perform strongly.
■ **Chart 7**
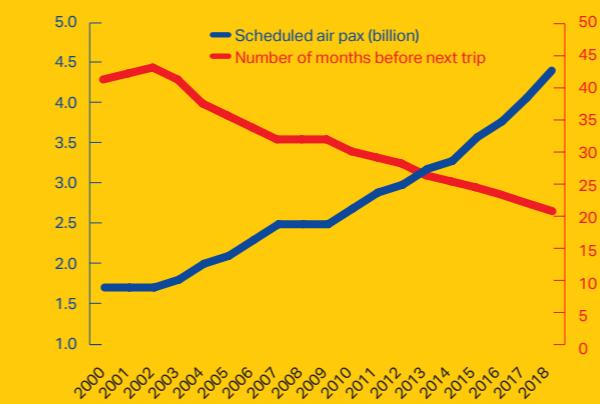
1. Unique city pairs and real transport costs

Legend: Number of unique city pairs — Real cost of air transport ($/RTK, in 2014 prices)
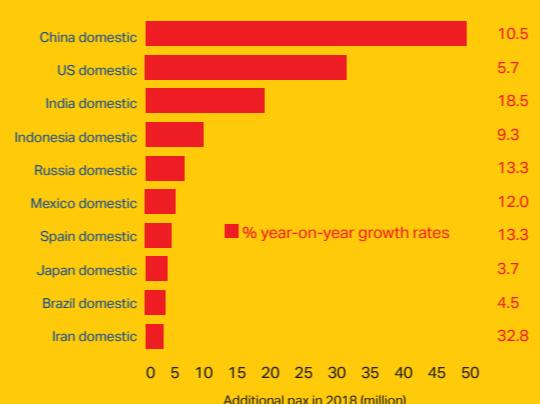
2. Air tourist spending and value of trade carried by air

Legend: Air tourist spending ($ billion) — Value of trade by air ($ billion)
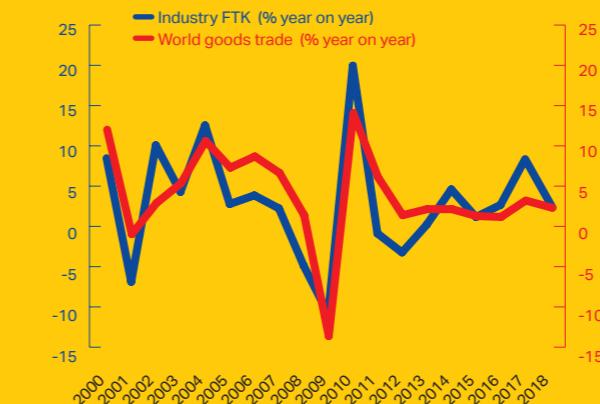
3. Accessibility of air travel

Legend: Scheduled air pax (billion) — Number of months before next trip

4. RPK versus world GDP growth

Legend: RPK (% year on year) — World GDP (% year on year)
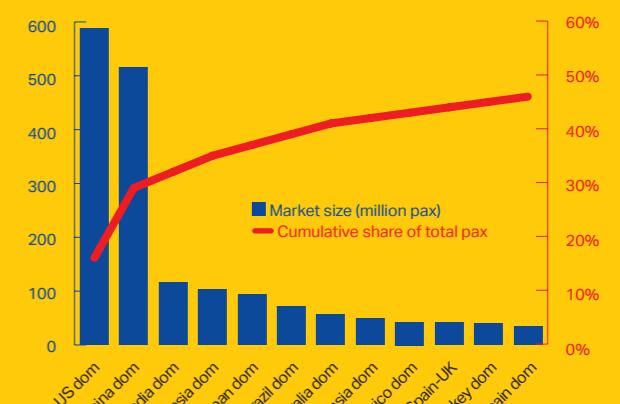
5. Top 10 increasing O-D markets

Market	% year-on-year growth rates
China domestic	10.5
US domestic	5.7
India domestic	18.5
Indonesia domestic	9.3
Russia domestic	13.3
Mexico domestic	12.0
Spain domestic	13.3
Japan domestic	3.7
Brazil domestic	4.5
Iran domestic	32.8

Additional pax in 2018 (million)

6. Largest O-D air passenger markets

Legend: Market size (million pax) — Cumulative share of total pax

US dom, China dom, India dom, Indonesia dom, Japan dom, Brazil dom, Australia dom, Russia dom, Mexico dom, Spain-UK, Turkey dom, Spain dom

7. Air freight versus global goods trade growth

Legend: Industry FTK (% year on year) — World goods trade (% year on year)

Regional outcomes for passenger and freight demand were mixed

Regions saw varied performance in passenger and freight demand in 2018. Airlines from Asia-Pacific led the way in passenger growth, which increased 9.5% in that region, followed by airlines in Europe and in Latin America. For freight, it was the Latin American carriers that outperformed, followed by carriers in North America. Freight volumes for African airlines were broadly stable in 2018, but this should be viewed in the context of their robust 24% growth in volume in 2017.
📊 **Chart 8**

Passenger load factor achieved a record as demand growth exceeded capacity

Available seat kilometers (ASK) increased 6.9% globally in 2018 compared with 2017, slightly lower than the 7.4% RPK increase in passenger demand. As a result, the passenger load factor (PLF) ticked up slightly to a record 81.9%. The PLF has risen more than 10 percentage points over the past 15 years. And this increase is behind the improved industry financial performance of recent years. Available freight tonne kilometers (AFTK), meanwhile, grew 4.5% year on year, easily outpacing the 3.4% growth in FTK. The freight load factor, therefore, fell about 1 percentage point in 2018, partly unwinding 2017's gain.
📊 **Chart 9**

Oil prices had a bumpy ride

The jet fuel price opened the year under review about $80 a barrel and was initially stable. At the end of the year's first quarter, though, the fuel price began to track upward, increasing more than 20%, to peak at $96 per barrel in October 2018. In November and December, however, market sentiment turned sharply down amid signs of a deteriorating global economy and strong supply from US tight oil producers. The price quickly tumbled, falling more than 25% to end the year averaging about $72 in

December. The price of jet fuel has subsequently begun to rise in the early months of 2019. But the sharp and unanticipated nature of the decline at year-end means that many airlines that hedge their fuel exposure are unlikely to have seen much benefit from the price adjustment so far.
📊 **Chart 10**

Airlines raised their achieved load factor and maintained a gap above the breakeven level

With oil prices, interest rates, and such other key costs as labor rising further in 2018, the estimate for the industry-wide breakeven load factor increased to 65.9%. Aided, however, by the record PLF cited previously, the combined achieved load factor also rose, enabling airlines to maintain a solid gap above the level required for financial breakeven. The gap between the breakeven and achieved load factors is driving profitability and returns and was again a critical contributor to the industry's financial performance in 2018.
📊 **Chart 11**

Another solid financial performance generated an above cost of capital return for the fourth consecutive year

The global airline industry experienced another year of robust financial outcomes in 2018. IATA estimates that airlines generated a net posttax profit of $30 billion on an operating (EBIT) margin of 5.8%. These outcomes are modestly lower than for 2017 and, as such, reflect 2018's more challenging business environment and particularly its rising cost pressures.

Despite a moderation in industry-wide returns, to 8.0%, the air transport's return on capital exceeded its average cost of capital, which increased to 7.3%, for the fourth consecutive year. Creating value for investors on a more sustainable basis than the industry has managed to do historically will be an increasingly crucial element in attracting the capital necessary to fund fleet renewal and replacement in the years ahead.
📊 **Chart 12**

Regional financial performance was again mixed
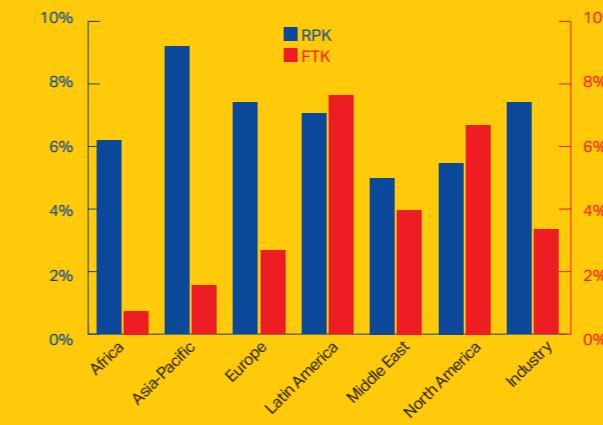
Regionally, the industry's financial performance remained considerably varied. The financial performance of the North American airlines continued to lead the way, delivering an operating (EBIT) margin of 9.1% in 2018. Airlines in Europe, Asia-Pacific, and Latin America also yielded solid profitability, while carriers in the Middle East and in Africa faced especially challenging operating environments.
📊 **Chart 13**
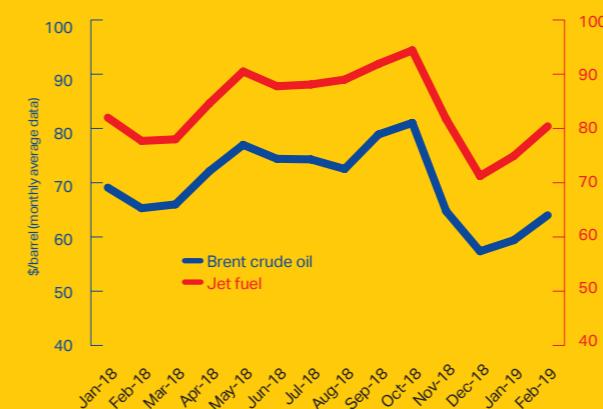
On a per passenger basis, the airline industry is a high-volume, low-margin industry. Considering net profits on a per passenger basis highlights this and presents an alternative perspective on regional airline profitability. By this measure, the industry generated a modest $6.85 per passenger in 2018. Regionally, the North American carriers were the best performers, earning $14.66 per passenger. At the other end of the spectrum were airlines in Africa and Latin America. In aggregate, they averaged a loss of $1.09 and $1.65, respectively, for every passenger they carried.
📊 **Chart 14**
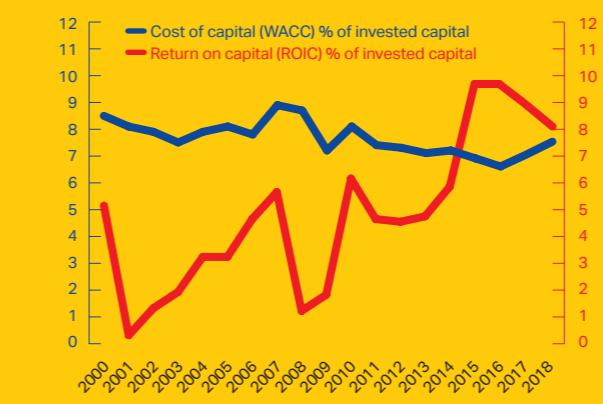
8. Regional passenger and freight demand outcomes

9. Industry passenger and freight load factors
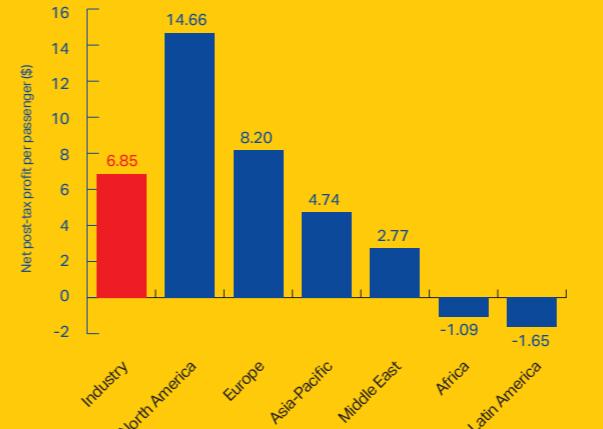
10. World oil and jet fuel prices

11. Breakeven and achieved load factors
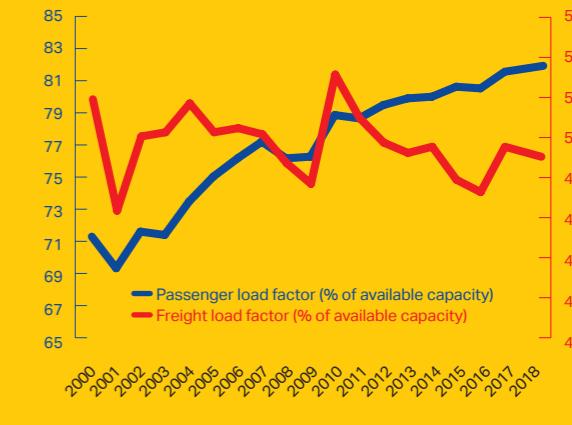
12. Industry return on investment and the cost of capital

13. Regional profit performance
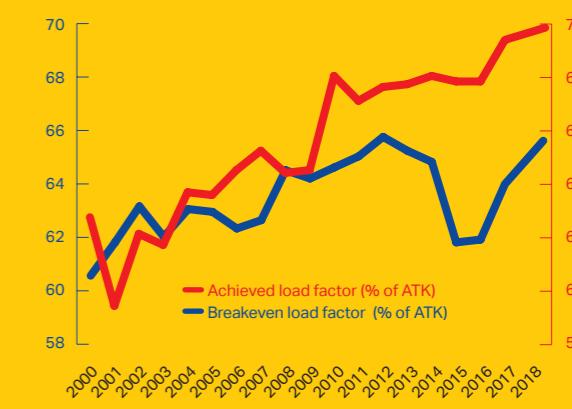
14. Airline profitability per passenger

02 Safety

Continuously working to improve safety

16

Over the past decade, the industry has witnessed a 54% improvement in its all-accident rate and a 78% improvement in its jet hull loss accident rate. The trend for the "business of freedom" is clearly toward fewer and less-lethal airline accidents. Fluctuations, though, do occur from year to year.

This was the case for 2018, when 4.4 billion passengers flew safely on 46.1 million flights. The jet and turboprop hull loss rates, the all-accident rate, and the fatality risk all improved compared with their performances over the preceding five years. The industry, however, did not match its extraordinary performance of 2017, its safest-ever year, during which there were 6 fatal accidents and 19 fatalities, none of which occurred in passenger jet operations.

Every accident, of course, is a tragedy. And that makes the aviation industry all the more determined to improve on its safety record each successive year.

Developments in 2018
In 2018, there were 11 fatal accidents that resulted in 523 fatalities among passengers and crew. This contrasts with an average of 8.8 fatal accidents and approximately 234 fatalities per year in the previous five-year period, from 2013 to 2017, and with 2017's record-low 6 fatal accidents and 19 passenger and crew fatalities. Notwithstanding 2018's higher numbers, the year's performance still means that on average a passenger could take a flight every day for 16,581 years before experiencing a fatal accident in which all on board perish.

The all-accident rate (measured in accidents per 1 million flights) in 2018 was 1.35, the equivalent of 1 accident for every 740,000 flights. This was an improvement over the all-accident rate of 1.79, or 1 accident for every 559,000 flights, in the 2013–2017 period, but a decline compared with 2017's record-low all-accident rate of 1.11.

17

The aviation industry is **determined** to improve on its safety record **each successive year.**

The same pattern held for major accidents. The 2018 rate for major jet accidents (measured in jet hull losses per 1 million flights) was 0.19, the equivalent of 1 major accident for every 5.4 million flights. This was an improvement over the rate for the previous five years, from 2013 to 2017, of 1 accident for every 3.4 million flights but not as good as the rate of 0.12 in 2017.

Another way to look at aviation's 2018 safety performance is to ask, what would have happened if the industry had performed at 2013 levels? The answer is that it would have experienced 109 accidents in 2018, rather than 62, with 38 hull losses, instead of the 12 that did occur, simply based on the greater number of flights operated in 2018. The industry's solid progress in
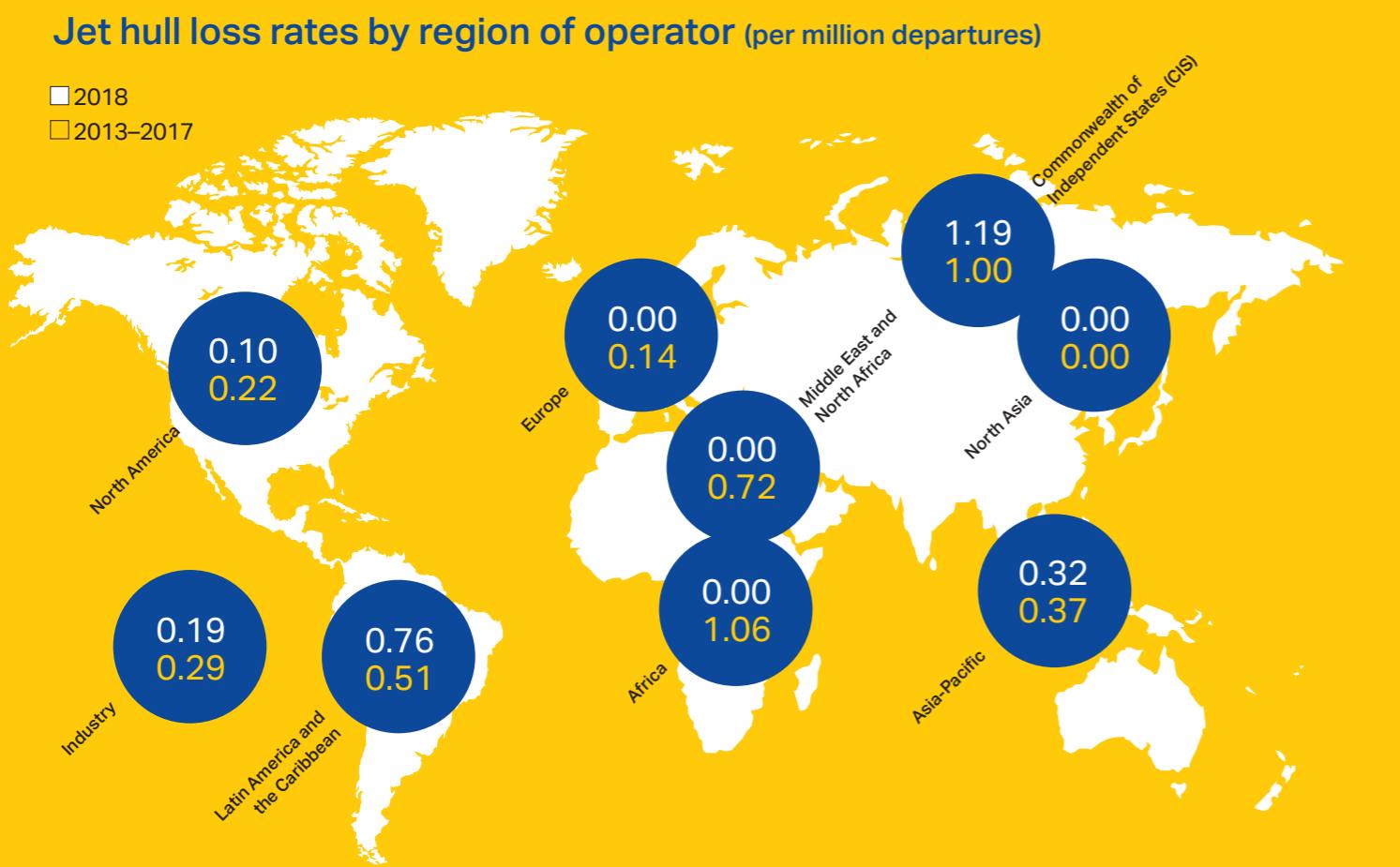
safety aside, everyone in air transport is shocked and challenged by the crashes of Boeing 737 MAX aircraft operated by Lion Air (29 October 2018) and Ethiopian Airlines (10 March 2019). These two tragedies, occurring only four months apart under what appear to be broadly similar circumstances, led to the global grounding of this model of aircraft.

IATA respects the decision of regulatory authorities globally to ground the 737 MAX. And though IATA has no role in the process, it looks to the aircraft manufacturer to cooperate with the US Federal Aviation Administration (FAA) and other safety regulators in developing a safe and robust solution that addresses all identified concerns. At the same time, there is no substitute for thorough and timely investigations of both accidents. Safety is a top priority in aviation, and what is learned from every accident investigation is vital to the efforts to further safety.

The regional story

With the exception of Latin America and the Caribbean and the Commonwealth of Independent States (CIS), every region globally reported improvement in its 2018 all-accident rate compared with the rates for the preceding five years. North Asia and Africa continued their excellent recent records of zero jet hull losses. Europe and the Middle East and North Africa (MENA) also had zero hull losses in 2018.

Turboprop operations still present a challenge. But it is important to note that turboprop operations in all regions except MENA saw improved performances compared with the previous five years—and the spike in the MENA rate was the result of only one accident. Turboprops, however, flew just 18% of the sectors in 2018 and yet accounted for 45%, or 5 of 11, of the fatal accidents globally.

Detailed information on the industry's safety performance can be found in the IATA 2018 Safety Report.

Industry and IATA activities in 2018 and early 2019

IATA's safety work is guided by a six-point safety strategy. Safety audits remain a cornerstone of measuring performance and expanding best practice to more airlines.

Unmanned aircraft systems

In 2018, there was an increase in the number of reported occurrences of small drone aircraft—so-called unmanned aircraft systems, or UAS—operating irresponsibly near airports and aircraft. The most significant events took place at London's Gatwick and Heathrow Airports before the Christmas holidays in 2018. The UAS sighting at Gatwick Airport resulted in the cancellation of 1,000 flights.

IATA supports the investigation of such incidents and the development of measures to safeguard against unlawful interference by UAS, such as the infringement of restricted or sensitive airspace in the area surrounding airports. Any measures should support continuous monitoring and should only be implemented following a risk assessment.

In 2018, IATA issued a technical bulletin highlighting key considerations for implementing technology. IATA is involved, meanwhile, in discussions within ICAO panels on runway incursions by, and the irresponsible use of, UAS near airports.

In 2019, IATA is intensifying its focus on raising safety awareness among UAS users, specifically regarding the irresponsible use of UAS in proximity to airports and aircraft. IATA will also expand its work on UAS integration into airspace in collaboration with UAS industry innovators.

LOC-I, CFIT Runway Safety and Midair Collisions

80%

10%

In 2018, loss of control–inflight (LOC-I) and controlled flight into terrain (CFIT) accidents accounted for **more than 80% of fatalities**, even though they represented **less than 10% of the accidents.**

There were **15 runway excursions**, two of which were fatal, with

52
fatalities

Lithium batteries in portable electronic devices

To better understand the level of passenger awareness regarding the safety risks of the lithium batteries used in portable electronic devices (PEDs), IATA surveyed passengers in three major markets in 2018. Passengers were queried on their understanding of and compliance with airline requirements for the safe handling of lithium battery powered devices on aircraft.
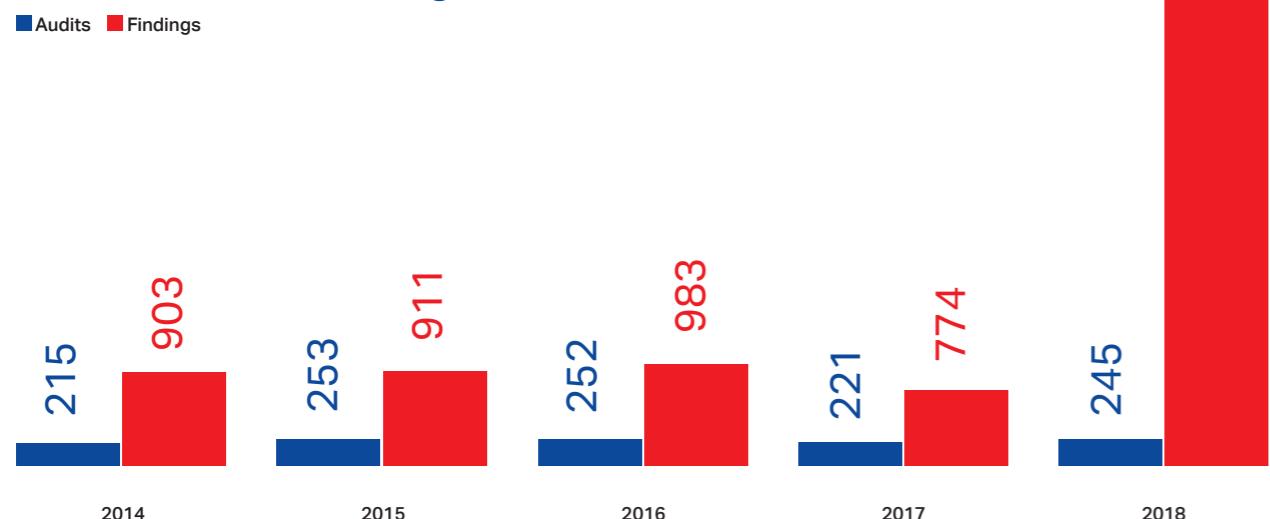
The majority of travelers felt that they were well-informed about the regulations. However, approximately one-third of travelers surveyed, particularly business travelers, were still packing spare batteries and power banks in checked luggage despite the safety prohibitions. In response, IATA launched a campaign to help airlines communicate to passengers the right and wrong way to pack PEDs before they arrive at the airport.

IATA Operational Safety Audit

The IATA Operational Safety Audit (IOSA) is a global standard for aviation safety. IOSA is mandatory for IATA membership, but fully 34% of the airlines on the IOSA registry are non-IATA members who appreciate the value of IOSA.

At the end of 2018, moreover, 14 authorities worldwide recognized IOSA as the complement to the national safety oversight programs of 63 countries. European Union (EU) regulations, for instance, accept IOSA as a means of safety compliance in the Third Country Operator authorization process.

Jet hull loss rates by region of operator (per million departures)

☐ 2018
☐ 2013–2017

Commonwealth of Independent States (CIS)
1.19
1.00

North America
0.10
0.22

Europe
0.00
0.14

Middle East and North Africa
0.00
0.72

North Asia
0.00
0.00

Industry
0.19
0.29

Latin America and the Caribbean
0.76
0.51

Africa
0.00
1.06

Asia-Pacific
0.32
0.37

ISAGO audits vs findings (As of December 2018)

■ Audits ■ Findings

Year	Audits	Findings
2014	215	903
2015	253	911
2016	252	983
2017	221	774
2018	245	4,776

IOSA is not a guarantee against an accident. Its efficacy is, however, evident when comparing aggregate safety performance levels. In 2018, the all-accident rate for airlines on the IOSA registry was more than two times lower than that of non-IOSA airlines, at 0.98 versus 2.16, and more than two and a half times better over the five years from 2014 to 2018.

The IOSA program is undergoing a digital transformation that will enable IOSA-registered airlines to monitor each other's safety performance and to benchmark their performance on a collaboration platform. In the long run, the digital transformation will also help to focus auditing on areas with the highest safety risks.

IATA Safety Audit for Ground Operations

The first audits in accordance with the new IATA Safety Audit for Ground Operations (ISAGO) model occurred in 2018. The new model introduced a number of significant changes:

◆ Moving to a corps of independent, professionally trained and certified auditors and away from a pool of voluntary auditors
◆ Restructuring the cost model to ensure a more even distribution of program expenses between ground service providers (GSP) and airlines
◆ Applying a new auditing methodology focused on standards implementation and the alignment of the ground operations processes between a GSP's headquarters and its network of ground operations

Some 245 audits of GSP were conducted by independent auditors trained and qualified by IATA as members of the IATA Charter of Professional Auditors. Stakeholder feedback confirmed that the new approach produced a higher-quality and more-thorough assessment of a GSP's management, oversight, and provision of ground services. The independent auditors raised an average of about 20 findings per audit (see chart above).

Auditors record their findings in a new style that results in a more informative audit report than in the past. And those reports are then made available to airlines, which use the information to complement their oversight obligations and risk management of outsourced ground operations.

Turbulence

Turbulence is a well-known safety hazard; passenger and cabin crew injuries related to in-flight turbulence are climbing. So, in 2018, IATA addressed this safety hazard with the introduction of Turbulence Aware, a global platform for sharing automatically generated turbulence reports in real time. A number of airlines are conducting trials of Turbulence Aware in 2019, and IATA plans to launch the platform globally in 2020.

IATA Turbulence Aware consolidates, standardizes, and accesses in real time objective turbulence data collected from multiple airlines worldwide. The platform's purpose is to grant airline pilots and airline operational center personnel a detailed, real-time awareness of turbulence. This IATA initiative is leading the air transport industry's shift to data-driven turbulence mitigation.

Ultimately, IATA's Turbulence Aware platform will provide an open solution that enables any operator to share its data through a global turbulence data repository. Every participating carrier will have access to every other carrier's real-time turbulence data, and greater preflight and in-flight situational awareness will be achieved. Additional benefits will include a decline in turbulence-related injuries and improved operational efficiencies, including reduced fuel burn, through more accurate flight planning.

Global Aviation Data Management

Because the number of accidents is in decline, techniques to improve aviation safety are increasingly shifting to data-driven analyses of trends and of the interaction between the links in the air transport chain. The goal is to expose potential risks and determine risk mitigation strategies.

This is the focus of IATA's Global Aviation Data Management (GADM) program. GADM is one of the world's most diverse aviation safety information exchange programs. It captures data from more than 470 industry participants, through accident and incident reports, ground damage occurrences, and flight data. The result is a comprehensive, cross-database analysis in support of a proactive, data-driven approach to advanced trend analysis and predictive risk mitigation.

All GADM data contributors have access to aggregated and de-identified reports and analyses, including

◆ industry accident and incident data and analysis and operational reports (pilot and flight attendant reports) in the Safety Trends Evaluation Analysis & Data Exchange System (STEADES);
◆ aircraft ground damage reports and analyses in the Ground Damage Database (GDDB);
◆ de-identified flight information from over four million flights in the Flight Data eXchange (FDX) and,
◆ with the imminent introduction of the Incident Data Exchange (IDX), enhanced data analytics and benchmarking capabilities with aggregated, de-identified global safety information.
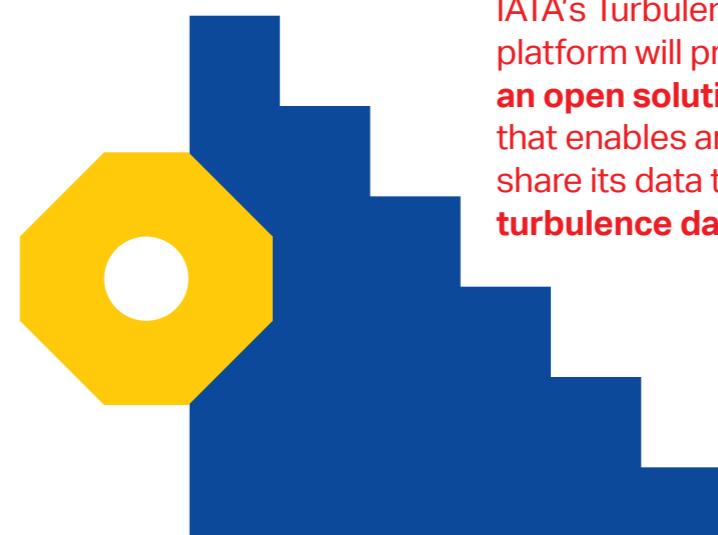
In addition, IATA has been working with more than 100 aviation safety professionals on the IATA Safety Incident Taxonomy (ISIT). ISIT will support the IDX and provide the ability to better identify global safety risks to a more granular degree than previously possible.

International Airline Training Fund

In 2018, the International Airline Training Fund (IATF) contributed to developing the skills and strengthening the capabilities of 3,435 aviation industry professionals from developing nations. Of the 160 training events delivered by the IATF during the year, 110 emphasized aviation safety, particularly in Africa.

In addition, under the auspices of the IATF, five new airlines benefited from the IOSA Implementation Training Initiative (IOSA-ITI). IOSA-ITI beneficiary Congo Airways, moreover, was admitted to the IOSA registry and became an IATA member. New programs launched by the IATF in 2018 support

◆ IOSA renewals by African carriers,
◆ carriers preparing for the IATA Standard Safety Assessment,
◆ network development in Africa, and
◆ developing the leadership potential of women in African aviation.

IATA's Turbulence Aware platform will provide **an open solution** to the industry that enables any operator to share its data through **a global turbulence data repository.**

Security is a government responsibility. But it is the partnering of government and the industry that ensures that air transport is not only the safest and most secure but also an accessible and convenient form of long-distance travel.

Even greater collaboration is needed, however, if the "business of freedom" is to thrive. This will enable risk-mitigation measures that maximize the protection of passengers and crew while minimizing disruption to passengers and economies.

Aviation security policy cannot rely on a one-size-fits-all approach. The industry must learn from evolving threats and anticipate the impact of the fast-growing levels of passenger and cargo traffic. IATA supports global standards, but an outcome-based approach is essential, as every location has a unique mix of challenges.

Developments in 2018
In 2018, aviation security continued to stay ahead of evolving threats. As UN Security Council Resolution 2309 makes clear, governments have the primary responsibility for aviation security. But a secure industry can best be achieved when governments and the industry work together as equal partners. Governments have access to information that drives security measures. Airlines and airports have the operational know-how to ensure that these measures can be implemented to achieve the twin goals of increased security and minimal disruption.

This was the lesson that was relearned in 2017 when, with little advance notice or input from industry, the United States and the United Kingdom banned the carriage of large portable electronic devices (PEDs) in aircraft cabins on some flights originating in the Middle East. Passengers were confused, and airlines struggled to comply. A subsequent threat from weaponized powders witnessed a far smoother introduction of measures. Dialogue and collaboration among all stakeholders ensured that these measures aligned with the Global Aviation Security Plan (GASeP).

03 Security
Establishing a risk-based, outcome-focused approach

Global Aviation and Security Plan
Global aviation security efforts took an enormous step forward in November 2017 when a majority of national governments agreed to GASeP under the auspices of ICAO. GASeP identifies five priorities:

◆ Enhance risk awareness and response
◆ Develop security culture and human capability
◆ Improve technological resources and foster innovation
◆ Improve oversight and quality assurance
◆ Increase cooperation and support

Owing to GASeP, nations have—for the first time—a framework for aligning national aviation security efforts to address and mitigate threats. In a short period, GASeP has been the catalyst for a wave of improvements in aviation security.

Many nations, however, have not fully implemented the ICAO Annex 17 baseline requirements that underlie GASeP. IATA will support a resolution at the 40th ICAO Assembly in 2019 that underscores the responsibility of countries to meet global standards in their national aviation security programs.

There is, moreover, an urgent need for developed countries to provide more comprehensive assistance to their developing counterparts to ensure that the baseline security measures are applied. Provided the principles of GASeP continue to resonate with stakeholders, the industry will move ahead of the threat trajectory.

Information sharing
Information sharing among governments and particularly between governments and the air transport industry remains a challenge. There has been some improvement since the shooting down of MH 17 exposed gaps in the sharing of threat information. But many airlines still are forced to rely on commercially sourced intelligence. The information-sharing standard in Annex 17 is a step in the right direction. Yet it falls short of the degree of multilateral risk information sharing required for genuinely secure air travel.

The 40th ICAO Assembly in 2019 provides an opportunity to emphasize the importance of bringing governments and the industry together on the sharing of information regarding threats, vulnerabilities, and risks. In parallel, IATA is working with ICAO and countries in a further attempt at developing an online security application that facilitates the exchange of critical security occurrence data. This sophisticated, highly secure tool will provide the early detection of changes to security environments in different parts of the world. That, in turn, will enable the industry to deal with emerging threats and the impact of changes on security procedures.

The plan is to make this online security application available to all IATA members and registered IATA Operational Safety Audit (IOSA) carriers by late 2019. So doing will enhance their collaborative relationships with governments on threat and vulnerability information, and that will help all aviation stakeholders—public and private—prevent, detect, and respond to threats in a timely and effective manner.

Sustainable risk-based solutions
The investment in aviation security since 9/11 has without doubt made aviation more secure. Efficiency, though, has suffered. In IATA's Global Passenger Survey, passengers consistently point to airport security and border control as the worst part of traveling. Their biggest frustrations are having to remove personal items, such as laptops and PEDs, from cabin bags and the lack of consistency in screening procedures at airports.

Progress in security is welcome. Happily, 2018 saw the increased implementation of One-Stop Security. An agreement between Singapore and the European Union, for instance, helps passengers avoid a redundant check when they transfer flights at European airports that have elected to take advantage of the One-Stop Security program.

Technology makes the case for One-Stop Security especially compelling. IATA is working with the World Travel and Tourism Council on decentralized digital identity platforms using biometric and blockchain technologies. These technologies will make identity verification possible at all touch points along a passenger's journey. The partners believe that this will make security more efficient and travel more convenient (see One ID page 46).

Cybersecurity
The aviation industry demands the highest safety standards and precautions for aircraft systems. Modern aircraft are interconnected. Discrepancies; errors; or, worse, nefarious threats, such as a computer virus or malware, can travel from system to system by way of basic electronic communication. As the computerization and digital footprint of aircraft increase, there is an even-greater need to protect communication, data, and other critical information against intentional manipulations.

IATA is working alongside airlines, industry stakeholders, and other sectors to do just that. On behalf of these partners, IATA will deliver a strategy in early 2020 that will provide guidelines for a comprehensive approach to cybersecurity for the air transport industry.

The investment in aviation security since 9/11 has without doubt **made aviation more secure**

04 Regulation and taxation

Encouraging the right framework

Air transport cannot generate global prosperity and thereby fulfill its role as the "business of freedom" without an efficient and enabling regulatory system and, specifically, fair and reasonable taxation. Regulation should be developed and implemented using smart principles, and excessive or poorly targeted taxation should be avoided.

IATA's smarter regulations deliver clearly defined, measurable policy objectives in the least burdensome way. A policy framework based on smarter regulation principles positions a country for sustainable aviation growth.

Developments in 2018

Throughout 2018, the industry engaged in coordinated advocacy that resulted in adherence to smarter regulation principles in several countries. The Malaysian Aviation Commission introduced an airports quality service framework that ensures more transparent and objective policy setting and airline involvement in decision-making. And in Brazil, the government introduced guidelines for regulatory quality. ICAO, meanwhile, agreed to work with IATA on implementing good regulatory practices worldwide under the auspices of its "No Country Left Behind" initiative.

Specific regulatory improvements were wide ranging. They spanned the reduction of administrative burdens through better European Union (EU) agency collaboration in EU countries, the adoption of global standards for electronic communications in Brazil, and the introduction of globally harmonized ground-handling regulations in India.

IATA's launch of a regulatory competitiveness benchmarking toolkit will help to rank the "smartness" of nations' approaches to regulation across a number of policy areas. This will, in turn, inform industry priorities in 2019 and beyond (see "Regulatory Competitiveness Benchmarking" next page).

Consumer protection

Airlines have always worked hard to retain customers in an ultracompetitive marketplace. In an age of social media and citizen journalism, any incidents where standards of customer care are perceived to fall short can rapidly go viral. Airlines, therefore, are highly incentivized to offer good customer service and, if problems occur, to try to put them right.

Airlines have agreed to core principles for passenger rights. When the circumstances of a flight delay or cancellation are within an airline's control, airlines agree that passengers have the right to care and assistance in the case of delays and rerouting and to refunds or other monetary compensation in the case of cancellations.

Numerous actions were undertaken in 2018. Industry advocacy dissuaded the government of Mexico from applying domestic aviation consumer laws to international carriers. Malaysia was induced to abandon a proposal to cap ticket fares. And further regulations were opposed in South Africa; in the Arab Civil Aviation Commission (ACAC) region of the Middle East;, and, as a result of the FAA Reauthorization Bill, in the United States. In all such cases, IATA partnered with local industry and stakeholders to lobby for smarter regulation principles to be used to inform decision-making. It is particularly vital that governments, regulators, and the flying public understand the balance between protecting consumer rights and providing sustainable air services.

Aviation's growth

IATA's 20 Year Passenger Forecast predicts a doubling of passenger demand over the next two decades. Harder to predict are the challenges of that growth and of the then global political environment. IATA, therefore, produced its Future of the Airline Industry 2035 report to assist airlines and policy makers with strategy development. The report has been used by a number of carriers and governments (New Zealand's, for example) in framing policy and strategy.

Brexit

Throughout 2018, the industry warned the UK government and EU authorities of the implications for air transport of a "no-deal" exit of the UK from the European Union. The concern was that failure of the British parliament to accept an interim Brexit agreement would result in cancelled flights and chaos for the industry and passengers.

Regulatory Competitiveness Benchmarking

Although the economic benefits of aviation connectivity are well documented, the link to providing governments with policy guidance to maximize those benefits is less well understood. IATA prepared a regulatory competitiveness benchmarking tool in 2018 that is designed to provide governments with an analysis of the principal areas of aviation competitiveness and with the priorities they should focus on to improve their air transport–related competitiveness. The first dozen reports, focused on European nations, are planned for release in 2019.

The five competitiveness benchmarks are

1 Passenger facilitation

2 Cargo facilitation

3 Supply chain management

4 Infrastructure

5 Smarter regulations

Airline and IATA advocacy regarding slots and taxation

Slots
More than 200 airports worldwide are slot constrained, meaning that they have insufficient capacity to meet demand at all hours of the day. This number is set to rise substantially over the coming decades because airport construction is failing to keep pace with increased demand for aircraft movements. Globally applied rules for the use of what capacity there is at constrained airports will therefore become increasingly important.

IATA's *Worldwide Slots Guidelines* is the global standard for the policies, principles, and procedures of airport slot allocation and management. The independence of the slot coordinator and the harmonized, consistent application of the *WSG* provides for the certainty, sustainability, flexibility, and transparency that the industry requires and that passengers benefit from, including dependable services and an expanding route network.

Comprehensive strategic review of the *WSG* continued in 2018 in conjunction with Airports Council International (ACI) and the Worldwide Airport Coordinators Association (WWACG). The review also saw the start of a trial of an earlier slot return deadline to assess its feasibility and its benefits for slot planning. Further enhancements to the *WSG* will be made in 2019 and will include sections on slot performance monitoring and on airport capacity declaration (see map on opposite page).

Taxation
Excessive taxes on aviation affect the ability of air transport to meet demand and impede economic growth. Aviation taxes, moreover, should not be used to subsidize other modes of transportation or to make up budget deficits. IATA and its members are running active campaigns to this effect in numerous countries (see map on next page).

Industry advocacy and communication and pragmatic political and regulatory discussions resulted in the EU and UK agreeing to maintain the bulk of the current air services agreement for a period of up to a year, even in the event of a "no-deal" Brexit. In March 2019, the EU granted an extension to the UK's Brexit process to enable a political consensus to be found. It is unclear when or if Brexit will occur, but the industry remains vigilant to ensure that connectivity is maintained and disruption to passengers and cargo minimized.

Single African Air Transport Market
In January 2018, the Single African Air Transport Market (SAATM) was launched as an initiative of the African Union to implement the principles of the Yamoussoukro Decision and create a single unified air transport market in Africa. The SAATM's development continued throughout 2018, with industry support at the technical and political levels. As a result, the African Union incorporated and circulated, for example, the entirety of IATA's smarter regulation principles for use by regional economic organizations in devising the regulatory texts that underpin the SAATM.

Montreal Convention 1999
Montreal Convention 1999 (MC99) is an example of smarter regulation. MC99 sets out rules on airline liability during international carriage that deliver significant benefits for all stakeholders. It ensures protection for passengers and is a prerequisite to cargo transformation initiatives, such as electronic air waybill (e-AWB) and e-freight, that deliver shipments

faster and more efficiently than ever. MC99 also ensures that airlines benefit from streamlined claims management and heightened processing regarding their liability for passengers, baggage, and cargo.

During 2018, countries including Ghana, Nepal, Sri Lanka, Uganda, and Vietnam ratified MC99. The total number of parties to MC99 is now 136, representing just over 97% of passenger traffic. The campaign to promote MC99 ratification is effectively complete, though efforts to encourage countries that have not yet ratified MC99 to do so will continue.

Rebalancing the value chain
Original Equipment Manufacturers (OEMs) are crucial not only to the supply but also the maintenance of aviation equipment. But airlines believe that this market has been tipped for much too long in the OEMs' favor. In July 2018, following 18 months of negotiations, IATA announced an agreement with CFM, the engine manufacturing partnership of GE Aviation and Safran Aircraft Engines, that will ensure beneficial competition in the aftermarket for the maintenance, repair and overhaul of CFM's and GE's engines. The agreement includes important new Conduct Policies that will assure airlines of greater freedom to use non-CFM parts and to have maintenance work performed by third-party shops. The agreement demonstrates what can be achieved through pursuing legal options and collaboration to achieve a win-win outcome. IATA is encouraging other participants in the aftermarket for aviation equipment and services to adopt policies similar to those embraced by CFM.

Slots

1. Africa and the Middle East
IATA worked with the authorities in Iran in 2018 to introduce and train stakeholders in the principles of its *Worldwide Slot Guidelines* and to develop regulations based on the *WSG*. Progress has stalled, however, because of international sanctions on Iran.

2. India
Inconsistencies in airport slot coordination at airports in India where concession agreements have been awarded have led IATA to work with the Indian Ministry of Civil Aviation to encourage the harmonization of airport slot coordination. IATA is also working with the authorities in India to establish a single, centralized, independent slot coordinator tasked with slot coordination for all Level 2 and Level 3 airports.

3. China
IATA organized a session in March 2019 for airlines to discuss with the Civil Aviation Authority of China (CAAC) the CAAC's slot allocation regulation published on 1 April 2018. The intent was to foster understanding of the new allocation policy and of capacity management developments ahead of the opening of Beijing's new airport, Daxing International, in October 2019.

4. The Americas
Brazil followed its engagement with IATA with the decision to align with the *WSG* and eliminate the harmful links between punctuality and historic slots in Brazilian Slot Regulation Resolution 338.

Colombia worked in 2018 toward the full implementation of its slot regulation. That regulation is fully aligned with the *WSG* and was issued in 2017 to manage congestion issues at the country's airports.

Mexico recognizes the need to align with global standards. But the industry continues to await the country's full implementation of the WSG to benefit the management of congestion at its airports.

5. Europe
Europe remains the world's most significant region for congestion, accounting for just over 50% of all Level 3 coordinated airports. IATA has worked closely with the European Commission (EC) to see EU Slot Regulation 95/93 applied by all member states and to determine interest in reviewing the EU Slot Regulation.

The EC proposed in September 2018 to end seasonal changes to European daylight savings time from 2019 onwards while leaving member states free to decide whether to permanently apply summer time or winter time beginning in summer 2019. This proposal would have significant negative impact on flight schedules and planning. IATA as a result requested the European Council and Parliament and other stakeholders to either reject the proposal or to extend the period for implementation to permit the industry to adapt and to coordinate its approach.

Taxation

1. Bali
The Governor of Bali is considering the imposition of a $10 levy per foreign tourist to fund environmental and cultural conservation. No official proposal has been issued, but the idea was widely covered in the media. In an effort to preempt the levy, IATA submitted a protest letter in January 2019.

2. Bangladesh
Without warning, the Bangladeshi government removed air transport from the list of value-added tax (VAT) exemptions in its 2018 budget and levied a 15% VAT on international transport on a prospective basis and retroactive to 2009. IATA and the local Board of Airline Representatives are challenging the government to reverse this decision.

3. Bermuda
A pre-budget report from the Bermuda government suggested imposing a goods and services tax (GST) of 5% on all air tickets. In late January 2019, IATA argued in writing that the GST would contradict international taxation standards if imposed on air services to and from Bermuda and would negatively affect the local economy. The government's 2019–2020 budget statement of 22 February made no mention of the GST on air tickets.

4. Japan
Despite industry efforts to explain the negative consequences to the Japanese government, a tourism tax of ¥1,000 ($9) per passenger departing on international flights was introduced in January 2019.

5. Malaysia
In November 2018, the government of Malaysia announced its intention to introduce an air passenger departure levy on international passengers effective 1 June 2019 of RM 20 or RM 40 depending on passenger destination. IATA registered its concerns with the Ministries of Finance, Transport and Tourism, and Arts & Culture. The tax contravenes ICAO principles and negatively affects passenger demand and, consequently, Malaysia's economy.

6. Netherlands
Airlines and IATA responded to a public consultation on a green aviation tax in the Netherlands. IATA's protest letter to the Dutch Ministry of Finance notwithstanding, in February the Netherlands presented a paper on aviation taxation to the EU Finance Council. The paper invited EU members to consider a coordinated approach to aviation taxation within the EU and was supported by Belgium and Sweden. In the event the EU-wide tax does not happen, the Netherlands has announced that it will introduce a ticket tax in 2021.

7. Philippines
IATA held constructive discussions with the Philippines' Tourism Infrastructure and Enterprise Zone Authority to discuss a proposed travel tax for non-Filipino travelers.

8. Spain
IATA was instrumental in obtaining an important clarification from Spain confirming that domestic segments of international air transport were to be exempt from VAT. This ruling is in effect as of July 2018.

9. Sweden
On 12 December 2018, a coalition of Swedish Moderates and Christian Democrats adopted a budget proposal abolishing Sweden's aviation tax effective 1 July 2019. On 18 January 2019, however, the country's newly appointed government coalition stated that it would maintain the ticket tax after all.

10. Thailand
The Thai government is considering a mandatory travel insurance levy on foreign visitors. IATA is arguing, however, that this contravenes ICAO principles and that such a levy should be collected by tour operators where tourists engage in high-risk activities.

Unruly passengers
The unruly behavior of a minority of passengers cannot be allowed to compromise flight safety or disturb the journeys of the majority of customers. The industry takes a zero-tolerance approach to disruptive incidents.

In 2017—the latest year of available statistics—there were 8,731 unruly passenger incidents voluntarily reported to IATA. This amounts to 1 incident per 1,053 flights.

The industry strategy for dealing with unruly passengers involves improving the prevention and management of incidents. This includes enhancing the legal deterrent. Montreal Protocol 2014 (MP14) provides legal deterrent powers, but 22 nations must ratify MP14 before it can come into force. In 2018, countries including Ghana, Kazakhstan, Kuwait, Malaysia, Senegal, and Singapore ratified the protocol. Turkey's ratification in March 2019, brings the total number of parties to MP14 to 19.

Irresponsible alcohol consumption remains one of the top three causes of unruly behavior. In the UK, IATA partnered with Airports Council International (ACI) and the Travel Retail Foundation on a campaign to discourage alcohol consumption at the airport and onboard. The industry also defended its right to serve alcohol responsibly in the face of calls for regulations to restrict this ability. A robust response, for example, was submitted to the UK Home Office Consultation on Airside Licensing at Airports in England and Wales.

Human trafficking
The trade in people is an illegal industry worth $32 billion a year that the United Nations Office of Drugs and Crime estimates involves the trafficking of almost 25 million human beings annually. A significant number of traffickers are suspected of taking advantage of the global air transport network.

The aviation industry is determined to play its part in preventing this and to help law enforcement identify traffickers and their victims. At the 2018 IATA AGM, a resolution was unanimously passed committing airlines to sharing best practice and to training staff to spot instances of human trafficking. The resolution also called for improved reporting protocols to be put in place by governments. Tutorials and guidance materials were published, and awareness raising through the media and social media continued throughout 2018, the focus, together with ACI, being on International Human Trafficking day on 30 July.

Solutions from IATA Consulting

IATA Consulting has comprehensive experience of the full array of aviation-sector business challenges. It draws on IATA's more than 70 years of service to the airline industry and thus is unrivaled in offering its clients the best solutions. IATA Consulting's depth and breadth of aviation industry knowledge enables it to help its clients maximize the value of their operating models, realize their growth ambitions, and gain insights that translate into sustainable competitive advantages.

IATA Consulting's projects in 2018:

145+ projects

90 countries

40+ airports

◆ Traffic studies
◆ Ground handling
◆ Passenger terminal optimization
◆ Security enhancement

15+ CAAs and governments
◆ Civil aviation restructuring
◆ Tourism and benefits of aviation studies
◆ Capacity enhancement

30+ airlines
◆ Strategic planning
◆ Safety enhancement
◆ Route analysis
◆ NDC consulting services

50+ aviation stakeholders
(financial institutions and ANSPs)
◆ Pharmaceutical handling
◆ Business planning

05 Infrastructure

Protecting the future of air connectivity

Airlines require access to sufficient, high-quality, and cost-effective infrastructure to meet the rising demand for air transport. This is essential if air transport, the "business of freedom," is to continue to deliver its many social and economic benefits globally.

Infrastructure development, though, is not keeping pace with an expected doubling of demand by 2037, and a crisis is looming. The industry's collaboration with infrastructure partners is critical to maximize customer service and to boost air connectivity.

In 2018, IATA campaigned to ensure that infrastructure investments are aligned to market demand projections. IATA made clear that the air transport industry requires infrastructure that

◆ accommodates growth in demand;
◆ drives cost-efficiency and lower charges at airports;
◆ promotes sustainable airport governance;
◆ aligns airport investment with airline capacity needs;
◆ secures a reliable supply of jet fuel at competitive and transparent prices;
◆ shapes a common vision of the airport of the future; and
◆ underpins modernized, efficient air traffic management (ATM) systems.

Too often, airport and ATM infrastructure investment is determined without the necessary input from airlines. Also problematic is political decision-making that slows down and increases the cost of developing much-needed infrastructure for airlines and consumers.

Developments in 2018

Airport privatization or corporatization is being pushed by many governments. The driver for this is often a focus on short-term cash gains for government coffers rather than improved efficiency, better customer service, and financing for infrastructure investment. Fortunately, a recognition of the risks of privatization involving aviation infrastructure monopolies is gaining traction, and an increasing number of proposed airport transfers to the private sector are being questioned.

◆ In Canada, concerns raised by airlines and consumer groups compelled the government not to pursue the privatization of airports.
◆ In France, the objectives and benefits of the proposed further privatization of Group ADP for Paris airports is being questioned.
◆ In India, the government continues to be challenged on selecting bids for privatization based on the best deal for the government and without balanced consideration of the impact on airlines and passengers.

A number of countries are responding to IATA and airline concerns to ensure that economic regulatory processes are in place to safeguard the interests of airlines and passengers. These include Bahrain, Brazil, Kuwait, Nigeria, and Saudi Arabia. Conversely, progress remains slow in ensuring fit-for-purpose regulations for airport privatizations in Australia and Portugal. This has resulted in increased costs for all airport users, including customers.

Political decisions

There are around 200 capacity-constrained airports worldwide. The lack of runway and terminal capacity is a major concern that urgently needs to be addressed. Airlines need functional facilities that balance capacity with demand to facilitate growth and that deliver adequate levels of service to improve operational efficiency, now and in the future.

And capacity expansion must move faster. In Europe, for example, Eurocontrol estimates a shortfall in capacity for up to one million flights a year by 2035. Any infrastructure investment, however, in Europe and elsewhere, must follow an airline-agreed airport master plan that guides infrastructure design and construction and triggers appropriately timed investments based on demand.

In 2018, two contrasting political decisions stood out in this respect. The UK parliament voted for a national airports strategy that paves the way for the long-overdue expansion of Heathrow Airport, although significant opposition remains and cost concerns have not been resolved. But in Mexico, disappointingly, the newly installed government decided to cancel the building of a new hub airport in Mexico City. This will prevent Mexico from becoming a competitive regional and international gateway.

A common vision of the airport of the future

The lack of major airport expansion in 2018 highlights the importance of maximizing the efficiency of existing infrastructure. New Experience Travel Technologies (NEXTT) is a joint initiative of IATA, Airports Council International (ACI), and other airport service providers to define how technology and additional advanced processes can expand capacity and raise the efficiency of ground operations at an airport.

A NEXTT-related cost-benefit analysis was undertaken to understand the impact of technology on aviation. The implementation of technology in airport infrastructure was compared with a scenario where airports respond to soaring demand on infrastructure with physical rather than technological change. The results were clear. Technology, delivered in a coordinated, holistic way in accordance with NEXTT, can deliver significant, long-term benefits. The leading drivers of cost savings include improved data sharing, analytics and processing, and automation.

NEXTT is planned as a three-year program. Its success will be defined by the provision of a forward-looking, aligned approach to investment in ground infrastructure that promotes seamless interoperability, operational improvements, and capacity growth.

In 2018, airports and a wide array of stakeholders showed strong interest in NEXTT. The initiative's partners generated awareness and buy-in through a webinar series, social media campaigns, and other communications. NEXTT implementation will help align airport investment to suit the needs and expectations of airlines and passengers.

A recognition of the risks of privatization involving aviation infrastructure monopolies is **gaining traction**

IATA activities in 2018

Sustainable airport governance

The provision of functional and efficient aviation infrastructure should be considered a fundamental public service and an essential economic generator for any country. Airports do not naturally or usually have competition. When they are privatized or corporatized, the pressure to maximize shareholder returns too often outweighs the core objective of delivering user and consumer benefits. Effective regulation must prevent a privatized or corporatized airport from becoming an out-of-control monopoly.

Privatization or corporatization in various industry sectors, if structured appropriately and carefully monitored, can deliver benefits, including improved customer service and increased efficiency, investment, and innovation. However, no airport privatization to date has met long-term expectations, primarily for lack of regulatory controls and balances. Too often, the driver for privatization or corporatization is raising quick cash for governments.

In June 2018, IATA member airlines unanimously passed a resolution at the 74th IATA AGM calling on governments to exercise caution in their airport privatization planning. A campaign was subsequently launched drawing attention to the increase of costs and the lack of investment stemming from poorly regulated privatized or corporatized airports. IATA's campaign focused on the positive aspects of governments retaining control of principal infrastructure and setting out the terms for privatized airports to adhere to, including

◆ ensuring airlines, as major stakeholders, are consulted on privatization or corporatization plans;
◆ confirming that the rationale for any privatization or corporatization is in the interests of the industry and users and customers;
◆ exploring alternative business models that do not necessarily involve the transfer of assets to private owners;

◆ following best practice public-private partnership models focused on efficiency and service levels should there be no alternative to privatization or corporatization; and
◆ ensuring governments put regulatory safeguards in place that protect the interests of airlines, passengers, and other airport users.

Cost-efficiency and fair charges

Infrastructure charges must be set at levels that are fair, justified, and reflective of a value service proposition for airlines and passengers. Economic regulation that promotes transparency, consultation, and productivity in establishing an equitable charges structure is the key to improving airport cost-efficiency. Yet, despite ongoing work by IATA to ensure that transparent consultation processes are in place for the establishment of fair infrastructure charges, many challenges remain.

Infrastructure providers often enjoy monopoly or quasi-monopoly status. So governments and regulators must maintain vigorous oversight of charges and development activities. (See map opposite).

IATA also continued to engage in various national airport charges consultations in Europe. A reduction of $48 million in charges was secured at Denmark's Copenhagen Airport in 2018. But attempts to reduce significant increases in charges at the Netherland's Amsterdam Airport Schiphol and at Sweden's airports were unsuccessful.

Aligning airport investment with airline needs

Building more infrastructure is essential. Any major investment in airport facilities, however, must be underpinned by a robust business case and thorough consultation with the airlines that fund the development of infrastructure.

It is critical to ensure that infrastructure development matches airline growth projections and operational requirements. Unnecessary infrastructure development results in additional costs and inefficiencies that can reduce demand for air travel and weaken the case for investment. Consultation with airlines from an early stage of infrastructure development is essential and should be mandated by regulators to ensure that capital investments are cost-effective and that airport facilities are aligned with airlines' needs.

In 2018, the ICAO Council unanimously adopted amendments to the *Annex 14 Aerodromes, Design and Operations Manual* to reduce runway and taxiway widths and to remove long-standing restrictions on large aircraft, enabling them to operate at many airfields and thereby reducing the expense of new facilities. The impact of these changes will save the industry billions of dollars in construction costs. (see map on p33).

Jet fuel supplied reliably at competitive and transparent prices

Jet fuel costs accounted for about 24% of airlines' operating costs in 2018. The precise cost to airlines varies because of a lack of competition in fuel supply and unjustified duties, fees, and taxes on jet fuel in some parts of the world.

It is important that airlines have access to a reliable supply of jet fuel priced transparently and competitively. In 2018, jet fuel prices in some countries in Africa, the Americas, and Central Asia were still significantly higher than the global average.

IATA, together with airlines and industry partners, has continued its efforts to help improve the efficiency of fueling operations for airlines and their service providers. One such endeavor is the digitization of the fuel management process. All messaging standards required for fully paperless operation have been developed, and the industry is focused on widespread implementation.

Cost-efficiency and fair charges

In 2018, IATA held numerous, effective campaigns against airport charges settlements worldwide, often working in concert with carriers and associations at local levels.

1. Africa and the Middle East
Following a recent campaign in Tanzania, security charges there were lowered, resulting in a $16 million saving. In South Africa, IATA and local association involvement in the airport charges setting process resulted in a significantly lower charges increase than proposed by the airport operator. This will lead to a cost avoidance of around $150 million by 2023.

2. The Americas
In Chile, the long-standing issue of high airport fees has been partly addressed, generating reductions of $418 million over four years.
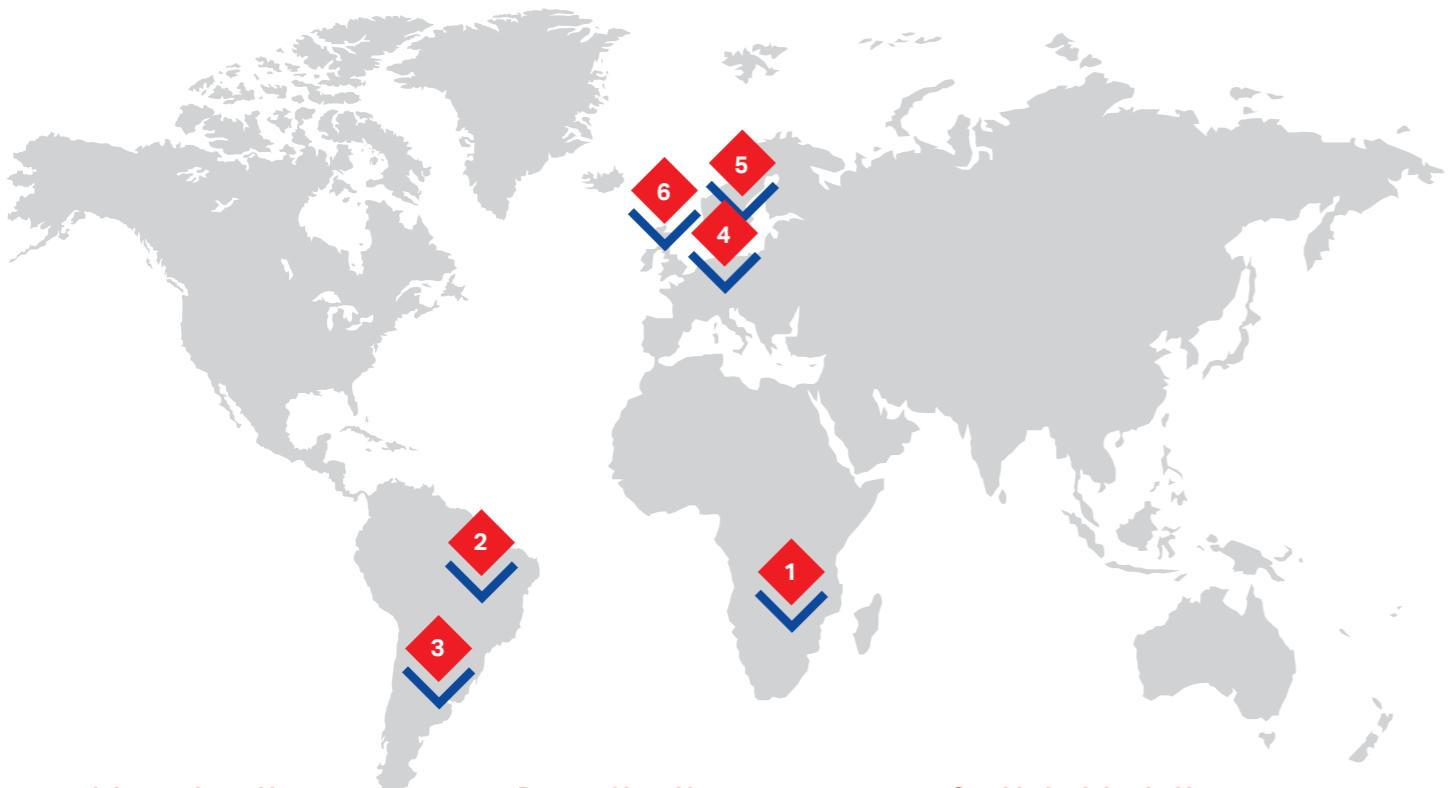
3. Asia-Pacific
Following a year-long consultation process in Japan, airlines concluded a new, five-year pricing agreement for Narita Airport. At India's Chennai Airport, meanwhile, reductions in landing and parking charges and in the user development fee yielded reductions of $135 million for 2018–19.

4. Europe
At a pan-European level, IATA continues to advocate for the replacement of the Airport Charges Directive with stronger regulation that ensures that effective pricing control is applied to airports with significant market power. IATA and Airlines for Europe (A4E) commissioned a study to develop a simple yet robust methodology to identify airports with significant market power and is advocating this methodology with European regulators.

Airport investments

IATA's work to align major infrastructure investments with airline needs resulted in some substantial benefits in 2018:

1. Johannesburg Airport
The Airports Company South Africa (ACSA)'s investment plan was prioritized based on airline requirements. This will speed up the addition of much-needed capacity and defer unwarranted investments in a $3 billion capital program.

2. Brasilia Airport
Revisions to the design plans of the terminal expansion were secured, improving capacity utilization and connection times and simplifying passenger flows through the flexible and efficient introduction of "swing gates" for international and domestic operations.

3. Buenos Aires Airport
Operational capacity improvements at Aeroparque Jorge Newbery Airport (AEP) resulted in passenger experience and level of service improvements without the need for infrastructure investment. A detailed review of airside, landside, and air traffic control operations resulted in 66 recommendations to improve operations, capacity, and passenger experience. It is projected that implementing all of the recommendations, targeted for 2020, could increase operational capacity at AEP as much as 35%.

4. Munich Airport
The Munich Airport investment plan was improved to increase capacity utilization, simplify passenger flows, and optimize design. This will ensure that the $400 million investment program is aligned to meet the needs of airlines.

5. Stockholm Arlanda Airport
Airport operator Swedavia removed US preclearance from its investment plan. This achieved a $50 million reduction in the airport capital program and resolved airlines' concerns on minimum connection times and capacity utilization.

6. Manchester Airport
IATA's involvement in and implementation of a consultation governance structure as part of Manchester Airport's £1 billion investment plan resulted in substantial improvements in the design and phasing of terminal piers, parking stands, and passenger amenities— without raising capital costs.

Fuel campaigns
Joint IATA and industry efforts to open up the jet fuel market for competition continue in many countries, including Australia, China, Cuba, Kazakhstan, and Mexico. Those efforts also continue to ensure the reliability of supply in such jurisdictions as Australia, New Zealand, Nigeria, and the United Kingdom. South Africa, meanwhile, decided in 2018 to implement a crisis management plan and to conduct a consultative process on storage capacity enhancement.

Industry campaigns to remove or prevent unjustified fees and taxes on international jet fuel are ongoing. In India, the regulating authority announced a reduction in the fuel throughput charge at Chennai Airport, saving airlines an estimated $30 million for 2018–19. The Indian government further announced a reduction in the excise duty on jet fuel for 2018, granting domestic operations savings of around $75 million.

ATM Developments
In 2018, IATA, ICAO, and other partners continued to drive operational improvements. Among them was a change to the requirements related to reductions in the separation between aircraft over oceans. The change involved transitioning to a performance-based standard requiring new equipment, authorizations from regulators, and additional training for pilots.

There was also ongoing work on safety mitigation related to unmanned aircraft systems (UAS). IATA collaborated with international organizations, regulators, member airlines, and other partners on the efficient integration of UAS into airspace. This includes IATA's continuing work with ICAO and more partners on UAS traffic management, which, in turn, involves engaging the UAS industry to develop new concepts for UAS operations.

Space operations, meanwhile, are anticipated only to increase. And the goal here, too, is to integrate these operations, which traditionally occur in segregated airspace, with civil aviation operations. IATA and others are working to reduce the impact the launch and recovery of space vehicles has on civil airspace.

Regional ATM activities
In Asia-Pacific and North Asia, IATA continues to advocate at every opportunity for the timely and widespread implementation of the Asia-Pacific Seamless Air Traffic Management (ATM) Plan. Failure to do so will significantly increase delays and fuel burn and emissions in the region. IATA is working especially hard on expanding its cooperation with the Civil Aviation Administration of China (CAAC). An example of IATA's success in this regard is the move of the IATA China Air Traffic Flow Management liaison desk into the Air Traffic Management Bureau headquarters in early 2019 to start work with the Operation Management Center.

In Europe, en route delays doubled in 2018 compared with 2017, to more than 19 million minutes. The principal causes for the increase were a lack of controllers at strategic times and places; an increase in controller strike action, primarily in France; and systemic delays from a lack of capacity. IATA responded by pushing a four-point plan for mitigating the impact of delays.

Longer term, the solution is to engage air navigation service providers (ANSPs) and governments in National Airspace Strategies (NAS). In 2018, two ANSPs in Poland and Italy, respectively, published strategy documents to this end. The governments of Bulgaria and Spain committed in 2018 to developing NAS, and the French government will publish its NAS strategy in the second quarter of 2019.
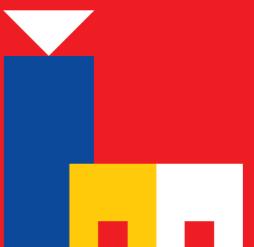
In the Middle East, geopolitical issues and a lack of capacity to meet the increase in traffic remain the key challenges. IATA continues its work with ICAO, airlines, and stakeholders in the region to ensure seamless operations in all situations. In Africa, IATA is continuing its work and advocacy for a Seamless African Sky that drives enhancements in the safety and efficiency of flight operations using collaborative decision-making.

Solutions for airports
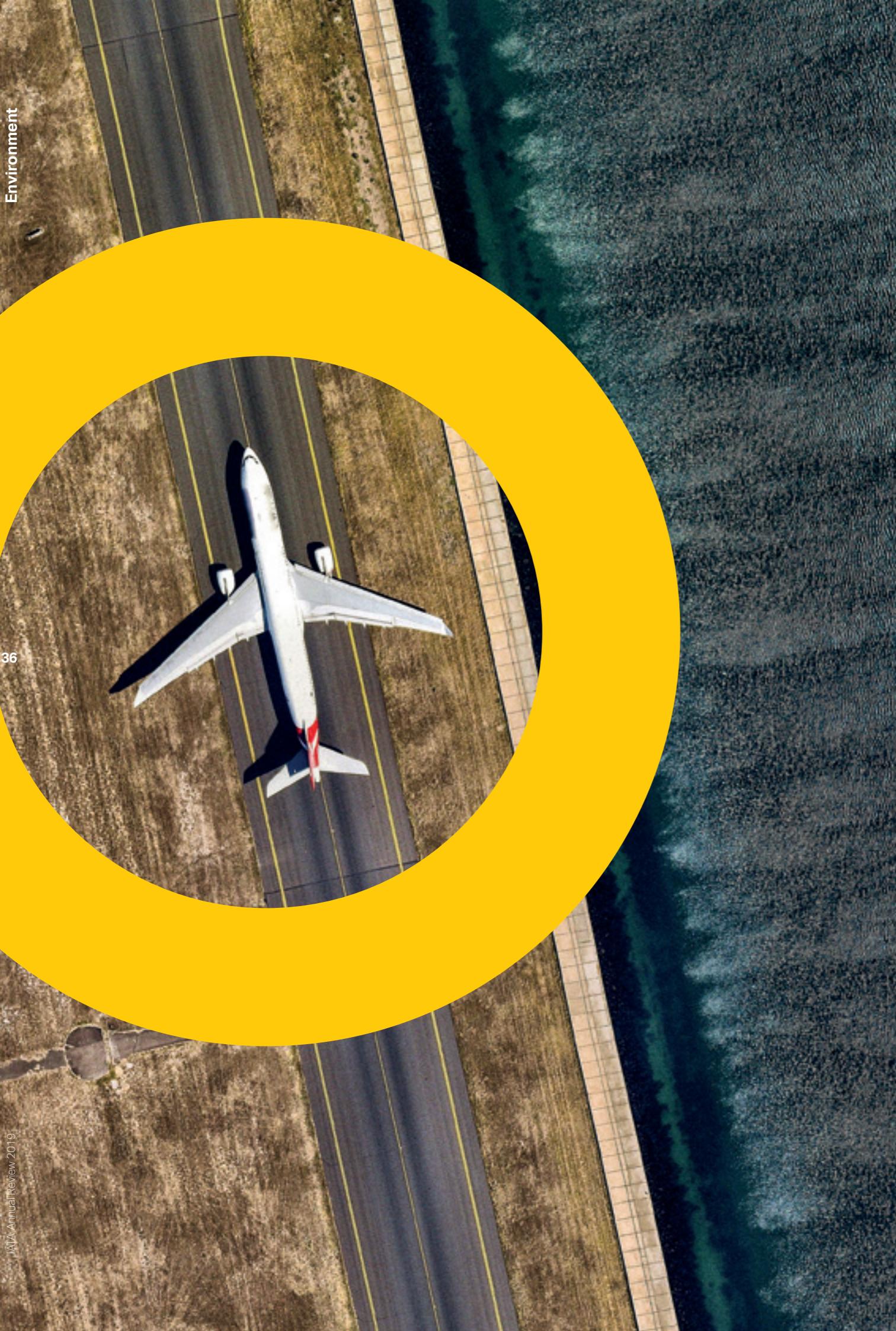
AirportIS

◆ AirportIS offers the most comprehensive passenger, schedule, and cargo traffic data available in the marketplace.

◆ It is a market leader in airport business intelligence and is used by over 100 airports and airport consulting companies globally for air service development activities.

◆ The latest version of AirportIS is powered by the Direct Data Solution and provides users unparalleled data quality.

At the 2018 year-end, AirportIS was in use at

OVER 100

airports and airport consulting companies.

06 Environment

Enacting policies that make a difference

Like all industrial sectors, air travel must be environmentally sustainable. With demand for air transport set to double over the next 20 years, pressure on the industry to minimize its environmental footprint will only intensify.

Air Transport, the "business of freedom," has made the world a better place by heightening its accessibility for ever-more travelers and shippers. To ensure that the opportunities made possible by aviation continue to be available, the industry must be committed to sustainable growth. The rise in anti-aviation media coverage and grassroots nongovernmental organization (NGO) activity in 2018 made this abundantly clear.

Fortunately, the industry has in place a robust strategy that ensures its continued delivery of benefits worldwide. That strategy enables increasing numbers of people to enjoy the social and economic benefits of air connectivity.

Aviation marked the 10th anniversary of its sustainability strategy in 2018. A core element of the strategy is the push for progress on operational, technical, and infrastructure improvements and the promotion of ICAO's global standard Carbon Offsetting Reduction Scheme for International Aviation (CORSIA). The strategy's aim is to deliver on industry commitments to stabilize net emissions by 2020, and to a net 50% cut in 2005 carbon emissions by 2050.

Developments in 2018

Fulfilling the latter commitment will be difficult, but there is pressure for the industry to attain even this tough target. The industry, therefore, will need to explore all environmental mitigation possibilities. To this purpose, the widespread employment of sustainable aviation fuels (SAF), which also marked its 10th anniversary in 2018, is crucial. The aim is for one billion passengers to travel on flights powered by a mix of jet fuel and SAF by 2025.

Beyond carbon reduction, other sustainability efforts are equally vital. Noise mitigation and waste management have long been industry priorities. Airlines are also committed to raising awareness of and preventing the illegal trafficking of animals and plants.

Carbon Offset and Reduction Scheme for International Aviation

CORSIA addresses any increase in CO_2 emissions from international aviation above 2020 levels. It is an economic measure that completes the industry's long-standing, four-pillar sustainability strategy alongside operational, technical, and infrastructure improvements.

It is forecast that CORSIA will mitigate around 2.5 billion metric tons of CO_2 and generate over $40 billion in climate finance between 2021 and 2035. Airlines asked for its implementation and will pay the bill.

As of 1 January 2019, all carriers are required to report their CO_2 emissions on an annual basis, although only flights between volunteering countries are subject to offsetting requirements in the initial stages of the scheme. By the end of March 2019, 79 ICAO member nations had volunteered to apply CORSIA.

To assist with CORSIA monitoring, reporting, and verification requirements, IATA developed the online reporting system FRED+. FRED+ facilitates the task of preparing emission reports, chiefly by pairing airline operators directly with their national authorities for the safe and secure transmission of emissions data. Coinciding with the start of the CORSIA baseline period, FRED+ went live on 1 January 2019 with all its core system functionalities fully implemented and tested.

CORSIA provides global standards for offsetting that have won the support of the entire industry and many national governments. There are, however, exceptions that seek to deviate from the agreed international standards for CORSIA and to use carbon pricing to justify levies on air transport. The European Union (EU) and China, for example, have adopted unilateral rules for monitoring and reporting emissions, and there are proposals to reintroduce environmental ticket taxes in the Netherlands and Sweden.

Such decisions could be perceived as a disavowal of CORSIA as the agreed, multilateral approach on aviation climate action. This is particularly disconcerting given that the governments behind such decisions were instrumental in reaching an agreement on CORSIA at the 39th ICAO Assembly—an agreement that recognizes CORSIA as the market-based measure for emissions from international aviation.

Sustainable aviation fuels
The 10th anniversary of the first airline flight using a blend of sustainable aviation fuels (SAF) occurred in 2018. In that decade, over 165,000 flights have flown with a SAF blend. SAF are sourced from a variety of renewable or recycled feedstocks and can deliver up to an 80% reduction in carbon emissions over the complete life cycle of the fuel.

The aviation industry is increasing its efforts to encourage the development and use of SAF. By the end of 2018, more than 40 airlines had used SAF. Other significant milestones in the production and uptake of SAF in 2018 included

◆ the first flight using jet fuel derived from alcohol by Virgin Atlantic and LanzaTech;
◆ the introduction of SAF into the hydrant system at Brisbane Airport, using the isobutanol to jet fuel pathway produced by Gevo;
◆ major new SAF investments, the two most notable being more than $600 million by Fulcrum BioEnergy for a production facility in the United States and over $1 billion by Neste to substantially increase the SAF potential of its Singapore refinery; and
◆ a $9 million commitment from Japan Airlines to invest with municipal waste to jet fuel producer Fulcrum BioEnergy.

The main challenge for SAF usage is to ensure enough volume is produced to achieve a competitive end-user price. IATA continually engages with governments to develop policy frameworks that reduce SAF production risks and facilitate access to funding for SAF production. User-friendly SAF accounting methods; a global, mutual recognition of sustainability standards; and the recognition of SAF within the ICAO CORSIA scheme are equally important policy enablers.

In 2018, there were several examples of policy improvements regarding SAF. The UK's Department for Transport allowed aviation to participate in ground transport incentives. The EU, meanwhile, agreed to apply an enhanced incentive for aviation compared with ground transport under its Renewable Energy Directive II, beginning in 2020.

Additionally, IATA remained at the front of sustainability developments at ICAO. IATA also represents the industry in two leading sustainability organizations: the Round Table on Sustainable Biomaterials and International Sustainability and Carbon Certification (ISCC).

Illegal wildlife trade
The trade in endangered animals and plants is the fourth-largest illegal trade after drugs, weapons, and human trafficking. Although the responsibility for prosecuting traffickers lies with governments and their customs, border, and wildlife protection agencies, the aviation industry is committed to playing its part in raising the awareness of and in preventing the appalling trade in wildlife.

Helping the industry in this regard is the Joint Passenger Services Conference (JPSC). In 2018, the JPSC adopted a recommended practice (RP) on the carriage of prohibited wildlife in baggage. The JPSC also included guidance on the safe handling of escaped animals in the cabin in its *Cabin Safety Best Practice Guide*.

The aviation industry's three emissions goals

Improving fuel efficiency an average of 1.5% annually to 2020

Capping net emissions through carbon-neutral growth from 2020 (CNG2020)

Cutting net carbon emissions in half by 2050 compared with 2005

CORSIA will mitigate around

2.5 bn

metric tons of CO_2
2021-2035

and generate over

$40 bn

in climate finance

During 2018, a further 15 airlines signed the Buckingham Palace Declaration. That initiative from the United for Wildlife (UfW) foundation set up by the Royal Foundation includes a transport task force. To date, some 60 airlines and other aviation stakeholders have joined IATA in signing the declaration.

IATA's involvement in the ROUTES Partnership, which entered its third year in 2019, continued in 2018 with a variety of activities related to combating the trade in wildlife. Among them was the integration of an independent certification into the IATA Environmental Assessment; the development of a reporting application for aviation staff; the application of strengthened protocols, standards, and procedures; and the raising of awareness of this issue through, for example, passenger-focused video and an e-learning module and posters for baggage handlers.

Waste and environmental management
Increasingly, attention is being drawn to better waste management by business sectors globally. Plastic waste in the oceans has become an issue of particular concern. Airlines seek to improve their rates of recycling and to overall reduce waste, but they are prevented in many cases by highly restrictive laws and regulations regarding the separation and removal of waste that has any organic contamination. Such waste is usually burnt or sent to deep landfill. For the same reasons, the substitution of plastic utensils with alternative materials does not improve their recycling rate.

Changes to international laws and regulations are needed to help airlines reduce and deal with their onboard waste. IATA is working to establish best practice procedures. It is also undertaking to advocate with authorities worldwide for the relaxation of regulations and laws where appropriate to improve airlines' waste reduction and recycling.

IATA Environmental Assessment
IATA leads the application of the ISO 14001 international standard for environmental management systems to the airline sector through the IATA Environmental Assessment (IEnvA). IEnvA improves airlines' environmental performance by helping them implement best practice and comply with domestic and international standards and obligations.

As of 1 March 2019, 18 airlines have achieved IEnvA Stage 1 certification and another 5 are preparing for Stage 1 assessment. A single airline is in preparation for IEnvA Stage 2 assessment and, once certified, will join the existing 6 IEnvA Stage 2 airlines.

07 Cargo

Unleashing the power of data in cargo processes

Air cargo plays a significant role in ensuring aviation is the "business of freedom". Enabling global trade stimulates economic growth and promotes a better quality of life for all people in every part of the planet, irrespective of them ever boarding a plane.

Developments in 2018

The operating environment for air cargo, however, is increasingly challenging. Demand for air cargo experienced a notable deceleration in 2018, growing 3.4% compared with its extraordinary 9.7% growth in 2017.

This softening of demand has continued into 2019, and IATA predicts 2.0% growth in freight tonne kilometers (FTK) for the year.

The rise of protectionist policies looms large over the sector and, indeed, over the global economy. The prosperity that globalization generates and to which air cargo contributes is dependent on borders that are open to people and trade.
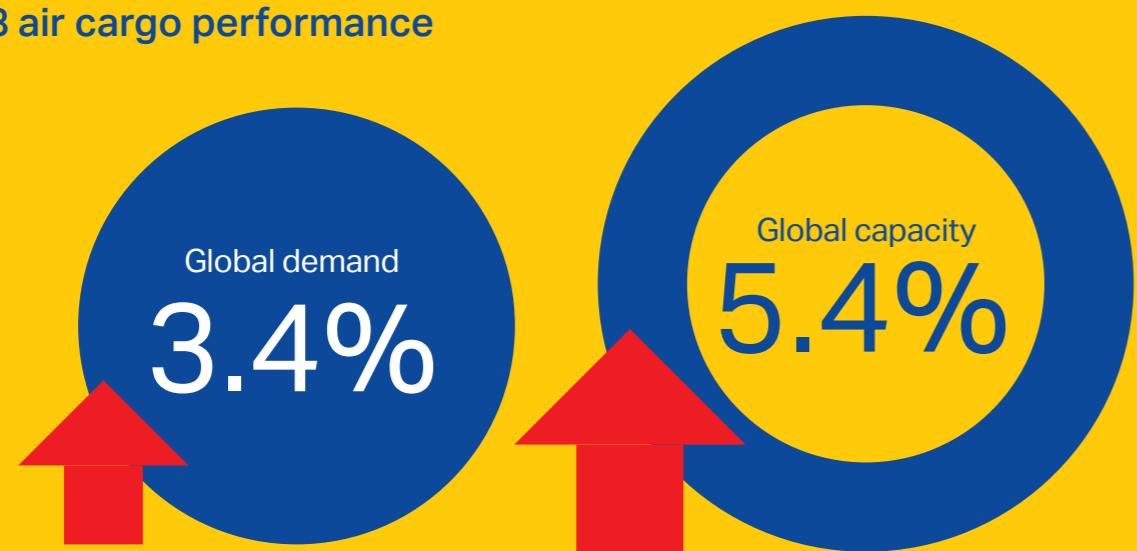
Demand for air cargo, though, is also affected by other elements. These include the end of the business restocking cycle; weak global economic activity; the contraction of the export order books of all major exporting nations, with the exception of the United States; and wavering consumer confidence. And with most if not all of these elements in play, the macroeconomic outlook has deteriorated such that global GDP and trade forecasts have been revised downward.

The greatest opportunities in air cargo are in e-commerce and special needs cargo, such as time- and temperature-sensitive shipments. To capitalize, however, it is critical that air cargo modernizes its processes significantly.

2018 air cargo performance

Global demand
3.4%

Global capacity
5.4%

Region	Market share	Demand	Capacity
Total Market	100%	▲ 3.4%	▲ 5.4%
Africa	1.7%	▼ 1.3%	▲ 1.0%
Asia-Pacific	35.4%	▲ 1.7%	▲ 5.0%
Europe	23.3%	▲ 3.2%	▲ 4.3%
Latin America	2.6%	▲ 5.8%	▲ 3.4%
Middle East	13.3%	▲ 3.9%	▲ 6.2%
North America	23.7%	▲ 6.8%	▲ 6.8%

Key points in 2018 air cargo performance

Air freight demand ended 2018 up **3.4%**, despite softening late in the year.

Freight capacity was up **5.4%**, outpacing annual demand growth, but yields remained robust.

Weakness in the global economy and consumer confidence affected growth.

Global standards

Global standards will ease modernization efforts, guarantee the flow of commerce, and secure the air cargo supply chain. Other cargo initiatives that will benefit from global standards include quality management, trade facilitation, enhanced safety measures, and special cargo handling.

The goal is to make trade simpler, cheaper, and faster. Critical in this regard are the universal ratification and implementation of Montreal Convention 1999 (MC99); the revised Kyoto Convention; and the World Trade Organization (WTO) Trade Facilitation Agreement (TFA).

Meanwhile, the Pre-loading Advance Cargo Information (PLACI) initiative by the Technical Experts Group on Air Cargo Security (TEGACS) will help to secure the supply chain. IATA supports PLACI's implementation in the United States and welcomes the requirement for it in Europe from 2021. PLACI standards are laid out in the well-established World Customs Organization (WCO) *safe Framework of Standards to Secure and Facilitate Global Trade.*

Dangerous goods

Global standards are especially vital for the safe transport of dangerous goods, including lithium batteries. ICAO's technical standards and IATA's *Dangerous Goods Regulations (DGR)* provide the necessary guidelines.

Properly labeled and packaged in accordance with those guidelines, dangerous goods can be shipped safely. IATA's DG AutoCheck product even checks the shipper's declaration for compliance with the *DGR.*

Complementing ICAO's technical standards, the *DGR* and DG AutoCheck is IATA's e-Dangerous Goods Declaration (e-DGD). The e-DGD leverages industry initiatives to digitize data and to embrace data-sharing platform principles. It enhances transparency, traceability, and data quality.

Compliance with the DGR is especially important in the case of lithium batteries. Passenger awareness (see page 19) must be matched with shipper adherence to the regulations. But rogue shippers that ignore global standards and products compromise the safety of air transport.Governments must do more to enforce the rules.

IATA and industry action

Modernization

The needs of today's shippers can only be met with the sector's modernization. IATA initiatives underlie air cargo's innovation, and the industry came to a resolution on the sector's modernization at the 73rd IATA AGM in 2017.

The e-air waybill (e-AWB) is a cornerstone of the industry's digital vision. Although progress has been slower than hoped, the e-AWB has reached critical mass, standing at 61% penetration at the end of 2018. Resolutions and recommended practices continue to be amended to make the e-AWB the default on enabled trade lanes.

Work is also ongoing to ensure that IATA's Cargo-XML messaging standard—which expedites business between airlines and cargo stakeholders—achieves universal adoption. The standard has already been integrated in two important customs systems: the WCO's Cargo Targeting System (WCO CTS) and the Automated System for Customs Data (ASYCUDA) World, a system used by 90 countries.

The common data language of Cargo-XML will enable the IATA ONE Record program, which grants supply chain stakeholders direct access to shipment data using modern web standards. The first standards for end-to-end supply chain data connectivity were agreed to in March 2019.

Digital data will, moreover, assist the efforts of IATA's Cargo iQ quality management group. Cargo iQ helps airlines and freight forwarders monitor and benchmark delivery performance against their service promise, define common processes and procedures, and promote best practices. Its Smart Data portal provides analytics on shipment performance and allows members to compare their performance with the performance of others in the air cargo community. Such capabilities will be increasingly relevant as e-commerce grows and as shippers demand ever-higher service standards.

Special cargo

IATA initiatives in special cargo operations continue to ensure airlines' compliance with the latest regulatory requirements and with shippers' growing demands.

IATA's Center of Excellence for Independent Validators in Pharmaceutical Logistics (CEIV Pharma) addresses issues related to pharmaceutical transport, and IATA's Center of Excellence for Independent Validators for Live Animals Logistics (CEIV Live Animals) improves the safety and welfare of animals transported by air. And as of 2018, they are joined by IATA's Center for Excellence for Independent Validators for Perishable Logistics (CEIV Fresh).

CEIV Fresh advances the handling and transporting by air of perishable products. The specific time and temperature requirements for food and plant products makes them a challenge for air cargo. The CEIV Fresh program meets their exacting requirements based on IATA's *Perishable Cargo Regulations (PCR)*.

In early 2019, the Airport Authority Hong Kong (AAHK); Cathay Pacific; Cathay Pacific Services Limited (CPSL); and Hong Kong Air Cargo Terminals Limited (HACTL) took a community approach to being the first organizations to put the CEIV Fresh program to the test and to become CEIV Fresh certified.

Solutions for cargo

CargoIS

◆ CargoIS is the leading source for air cargo business intelligence.

◆ Its information spans the entire supply chain: airlines, general sales agents (GSA), freight forwarders, ground handlers, airports, and many others.

◆ CargoIS gets its data from two sources:
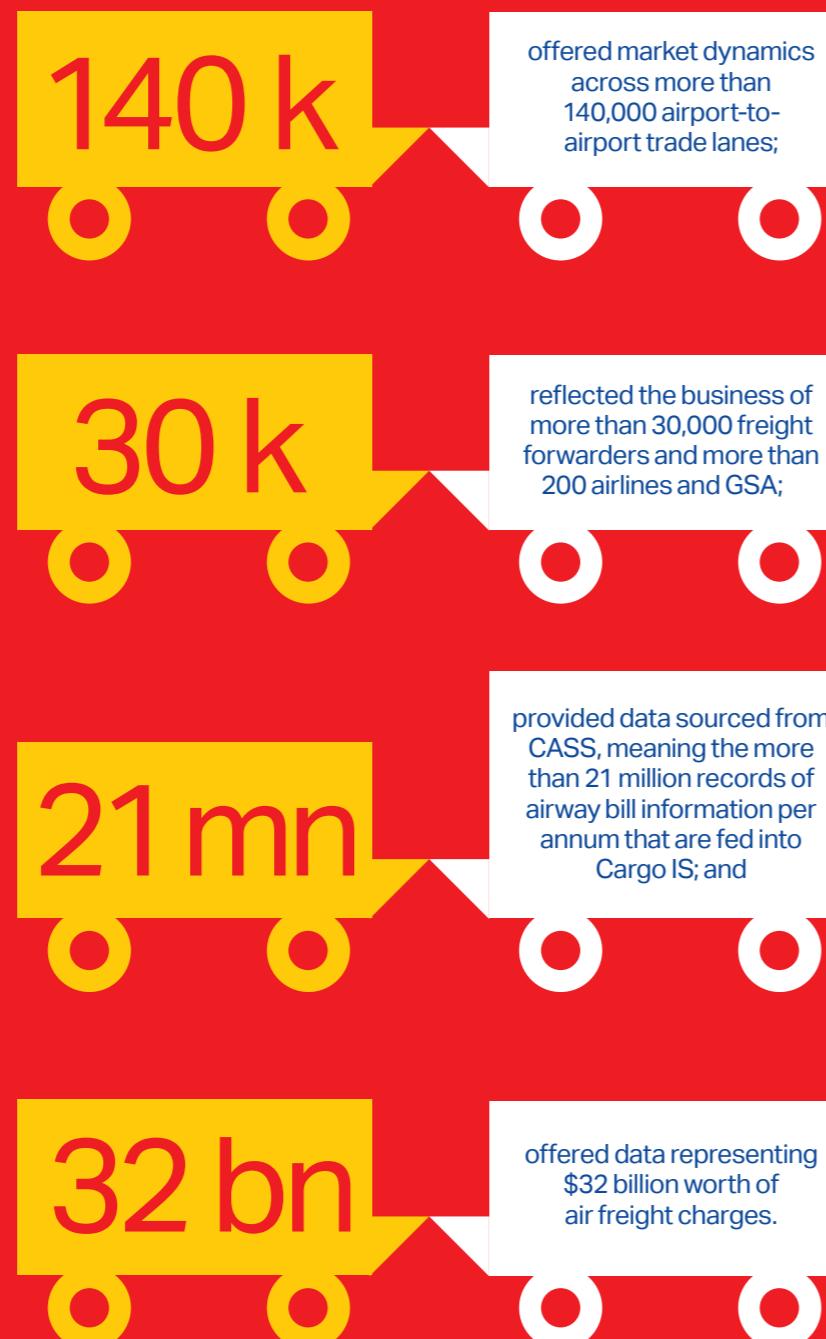
◇ CASS, the Cargo Accounts Settlement Systems operated by IATA and used by airlines to settle with freight forwarders and once the sole data source for CargoIS, and

◇ contributing airlines, through a new data source, CargoIS Direct Data (CDD), that complements CASS data.

◆ CargoIS is the only air cargo intelligence solution combining the advantages of actual transactional data with voluntarily contributed data, resulting in the best data quality on the market. And now, with the CDD source, subscribing airlines can access commodities transported and benefit from unrivaled market coverage.

In 2018, CargoIS

140 k offered market dynamics across more than 140,000 airport-to-airport trade lanes;

30 k reflected the business of more than 30,000 freight forwarders and more than 200 airlines and GSA;

21 mn provided data sourced from CASS, meaning the more than 21 million records of airway bill information per annum that are fed into Cargo IS; and

**32 bn** offered data representing $32 billion worth of air freight charges.

71 origin countries have subscribed to CargoIS.

IATA Net Rates

◆ IATA Net Rates connects airlines and freight forwarders to securely manage and distribute cargo rates. Airlines can automate the creation, management and distribution of their rates, while forwarders are able to access all airlines' rates in one system.

◆ The platform supports the distribution of a variety of rate types, including market rates, contract rates and spot/ad-hoc rates. It is accessible via the web or can be integrated into customer's rates management systems using web services.

Dangerous Goods Regulations

◆ The *DGR* are the global reference for shipping dangerous goods by air.

◆ The *DGR* has been the only standard recognized by the global airline industry for almost 60 years.

◆ It is the most complete, up-to-date, and user-friendly reference for dangerous goods handling in the industry.

OVER 100,000

units of the *DGR* are shipped worldwide every year, demonstrating its widespread adoption and industry compliance.

DG AutoCheck

◆ DG AutoCheck is an acceptance validation tool.

◆ It automates the checking of dangerous goods against the *DGR* without slowing the check-in process.

◆ It provides the acceptance checker with an image of the shipment for physical inspection.

◆ DG AutoCheck makes significant process, cost, and safety improvements to the acceptance process for dangerous goods.

Before DG AutoCheck's launch in 2018, it involved
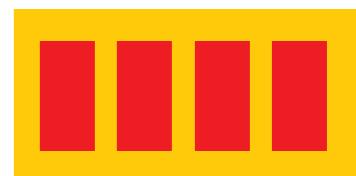
11 signed test customers and an industry working group of **OVER 25** companies from across the supply chain.

Center of Excellence for Independent Validators in Pharmaceutical Logistics

◆ IATA's in Pharmaceutical Logistics CEIV Pharma aims to improve the handling of pharmaceutical products by introducing a standardized pharmaceutical-handling process at airports globally that complies with pharmaceutical manufacturers' requirements.

CEIV Pharma's numbers for 2018 were as follows:

764 people trained

228 entities certified

At year-end 2018, there were 21 CEIV Pharma Communities:

North America
Miami
Dallas/ Ft. Worth
Edmonton
Anchorage

Europe
Amsterdam
Athens
Barcelona
Basel
Brussels
Frankfurt

Liege
Madrid
Paris
Rome
Warsaw

Asia
Hong Kong
Singapore
Osaka
Taipeh
Mumbai
Seoul

08 Passenger experience

Meeting increasing demand with improved service

Passengers no longer simply buy an air ticket; they purchase a travel experience. Improving that experience—from booking and check-in, through security, to collecting luggage—is the focus of an array of airline initiatives.

Prominent among those initiatives is the automation of a growing number of airport processes, improved baggage handling and tracking, a single identity token for all travel processes using biometric identification, real-time flight information sent directly to personal devices; and seamless border control.

These and other solutions will also help the industry deal with a doubling of demand over the next two decades. Delivering an ever-higher degree of personalized and convenient experience that puts the passenger in control will therefore not only benefit travelers but also facilitate the most efficient use of constrained airport infrastructure.

Developments in 2018
Fast Travel provides a seamless experience for passengers from terminal door to aircraft seat. The program offers passengers self-service options at six points of contact with airport functions: self- or automated check-in, self-tagging of baggage, self-checking of documentation, self-rebooking of flights, self-boarding, and self-recovery

of baggage. By the end of March 2019, 48% of travelers had access to the complete Fast Travel experience.

The Fast Travel experience, though, varies by region. Africa and North Asia have focused on mobile boarding pass and self-tagging options. The more mature markets of North America and Europe have emphasized end-to-end biometric self-service implementation.

IATA's focus in 2018 continued to be on removing obstacles that prevent airlines from implementing Fast Travel solutions. There is great incentive to clear the way for Fast Travel. It is estimated that Fast Travel will reduce industry costs by $2.1 billion when fully implemented.
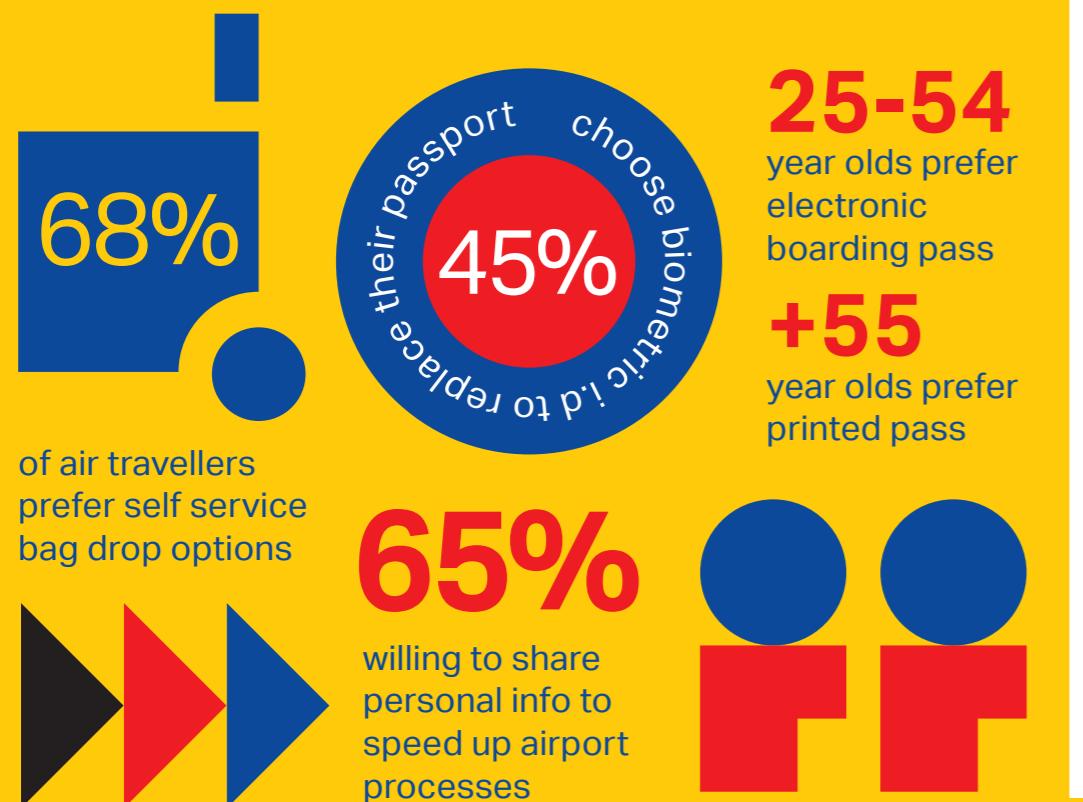
Travel facilitation
IATA is calling on governments to intensify their efforts to spread the economic and social benefits of aviation. It is in particular seeking the removal of onerous barriers to the free movement of people across borders. Barriers to travel range from visa restrictions to the inability of airport processes and infrastructure to deal with the growing numbers of air travelers.

IATA has developed a comprehensive open borders strategy that will help governments maintain the integrity of their national borders and that will eliminate the inefficiencies preventing the industry from satisfying travel demand. Its four main components are as follows: reviewing visa requirements and removing unnecessary travel restrictions, making travel facilitation a part of bilateral and regional trade negotiations, linking registered-traveler programs, and using advance passenger information (API) effectively and efficiently.

To further traveler convenience, IATA launched One ID in 2018, an initiative that aims at seamless and secure processing for passengers from airport door to flight gate. One ID introduces a collaborative identity management platform that covers all processes and stakeholders in a passenger's journey. The passenger's identity is validated early with trusted digital biometric recognition technology, and the validation data is then made available to the relevant stakeholders on an authorized-to-know basis. One ID removes the need for passengers to present different travel tokens to different stakeholders.

2018 Global Passenger Survey Key Results

68%

of air travellers prefer self service bag drop options

45%

choose their passport choose biometric i.d to replace

25-54
year olds prefer electronic boarding pass

+55
year olds prefer printed pass

65%

willing to share personal info to speed up airport processes

TOP 3
things people want to notified about

1 Flight status

2 Bag info/ wait time for delivery

3 Wait time at security/ border

For travelers, NDC means greater transparency when shopping with a travel agent, online travel seller, or self-booking tool. They also have the option either to be recognized by and to receive customized offers from the airline or to shop anonymously. Travel agents, meanwhile, can access an airline's entire product portfolio, including ancillaries and promotional fares, using NDC.

The NDC initiative advanced further in 2018. By year-end, some 65 airlines and 65 information technology (IT) providers and aggregators, including all three global distribution systems, had attained NDC certification. Involvement in NDC is ongoing in 2019, with 144 companies certified as of 20 March.

Widespread NDC implementation by airlines, travel sellers, and IT providers has ushered in a change of focus for NDC. The emphasis now is for a critical mass of NDC-based transactions from their still small volumes. To spearhead this effort, IATA established the NDC Leaderboard of 21 airlines seeking to rapidly grow their NDC volumes. Each of these 21 airlines targets having 20% of its sales powered by an NDC application program interface by 2020.

As the NDC strives for critical mass, NDC Leaderboard airlines in the vanguard, IATA is introducing changes to its NDC certification program to support the industry through this phase of NDC's rapid volume growth. The changes include recognizing the ability to process service messages, such as flight changes and cancellations, using NDC. Additionally, a new designation, NDC@Scale, is being introduced. NDC@Scale will recognize the ability to process large volumes of NDC-supported transactions and will grant special recognition for the ability to meet business travel needs through NDC.

IATA's outreach on behalf of the NDC to the overall travel community continues apace through advisory groups representing the travel buyer and travel management communities. Engagement with the travel industry also occurs at the annual Business Travel Summit, an invitation-only event for the business travel value chain that is in its fourth year. NDC is also widely represented at the annual Airline Industry Retailing Symposium (AIRS).

ONE Order
IATA's ONE Order program builds on the digital transformation made possible by NDC. In short, ONE Order replaces a paper-based framework with digitized order management processes. E-tickets, passenger name records (PNR), and electronic miscellaneous documents (EMD) have been digitized for some time. But until ONE Order, they remained mired in the rigid booking, ticketing, delivery, and accounting methods designed for the paper era.

ONE Order instead generates a single customer record holding all the data required for air travel order fulfillment.

For travelers, that means simplicity. They will no longer need to juggle different reference numbers and documents when checking in or making changes to their itinerary. With a single reference number, travelers will be easily recognized by all service providers. Disruptions and rebookings will be easier to manage as well.

Travel agents, too, will benefit from ONE Order. They'll be able to employ a single, identical process to book flights and products for all airlines regardless of an airline's business model or technological capability.

Airlines, meanwhile, won't have any further need of relying on the time-consuming and expensive reconciliation of different reference numbers. This will help them streamline their reservation management and financial processes, eliminate their dependency on industry-specific accounting solutions, and simplify their interlining delivery and accounting processes. Airlines also will be able to seamlessly sell, account for, and track the delivery of flight and non-flight products and services in a fashion similar to that of any retailer.

The first ONE Order message schema was released in September 2018 following the conclusion of the ONE Order trials that commenced at the end of 2017. To date, nine ONE Order trials have been conducted.

And in January 2019, IATA launched the ONE Order certification registry. The registry ensures the transparency of ONE Order deployments, validates the capabilities of the program's supporting IT providers, drives ONE Order's innovation, monitors the program's progress, and bolsters ONE Order adoption.

The move to ONE Order is a large-scale transformation project encompassing airlines' internal processes and procedures and their organizational structure. It also impacts also interactions between airlines and other industry partners including passenger service system suppliers, airline e-commerce platforms, travel agents, global distribution systems and others. As such, it appears likely that there will be a transition period, during which airlines will need to operate with both existing legacy processes as well as the new standards.

In 2018, four groups of experts were formed to evaluate One ID's deliverables. Those groups applied their expertise to examining the initiative's business case, operational processes, legal situation, and technological roadmap. They then authored the *One ID End State* and Key Principles paper, which was published in December 2018.

Baggage
Airlines carry approximately five billion bags annually. The majority of those bags arrive on time with their owners. Over the past decade, baggage mishandling has dropped around 70%. In 2018, however, the mishandling rate for baggage rose 2.2%, to an average of 5.69 mishandled bags per 1,000 passengers emplaned. The cause of the increase was the heightened demand that the growing number of passengers is placing on baggage handling system capacity at airports worldwide. With passenger volume expected to double by 2037, more attention than ever will need to be paid to baggage operations to ensure that passenger's high expectations for convenient travel are met.

Baggage tracking
Awareness is high within the industry that 84% of passengers expect to have their bags tracked and that IATA Resolution 753 requires IATA members to track passengers' baggage at key points in passengers' journeys. To date, 78% of IATA members track bags in some way, whether with optical systems, barcodes, radio frequency identification (RFID), or manually. That so many IATA members are tracking passenger baggage is laudable. But their use of so many disparate tracking options undermines the common capability that the industry requires.

For this reason, IATA is proposing to make RFID the standard method of tracking baggage. This will set the direction for baggage handling system design specifically and infrastructure improvements in general to include RFID as a default tracking technology.

New Distribution Capability
The New Distribution Capability (NDC) is transforming the way airline products are retailed by addressing limitations such as the following in the third-party distribution of products:

◆ The inability of airlines to differentiate product offerings
◆ The excessive time to market for new products and services
◆ The impediments to consumer comparisons of the full value of an airline's offerings rather than, as is typically the case, only its base fares

NDC's success in overcoming such limitations is largely attributable to the development and introduction of its XML Internet language as the standard for communications between airlines and travel agents. The XML standard enables airlines to display and sell ancillary products and services through travel agency and other third-party channels just as they do on their own websites. This was difficult to impossible for airlines to do owing to limitations in the pre-Internet language that power most travel agent systems.

For travelers, **ONE Order means simplicity**. They will no longer need to juggle different reference numbers.

Solutions for passengers

Airs@t

◆ Airs@t Passenger Satisfaction Benchmark study is the industry reference for airline benchmarking.

◆ It tracks passenger satisfaction on detailed travel attributes giving airlines actionable insight on the entire travel experience: pre-flight , in-flight and post-flight.

◆ Airs@t uses scientifically proven and unbiased methodology to collect a sample that would represent the actual population of the respective airline's passengers. Random selection of the respondents and multiple control measures included in the survey process help to ensure that collected data is of highest relevance. The same methodology is followed for all airlines to guarantee reliability of benchmark data.

◆ With unlimited potential for customer data analysis, Airs@t acts as a support tool to complement the Customer Insight activities at the airlines.

Airs@t at year-end 2018 included

+80
detailed travel attributes

5 global routes

30 airlines

+62,000 passengers

Timatic

◆ Timatic is the industry's definitive source for ensuring airlines' compliance with passenger travel document requirements.

◆ Its flexibility allows it to be integrated into airlines' departure control systems and into kiosk and mobile check-in procedures.

◆ Timatic is updated at least three times daily throughout the year to ensure its application of the latest regulations.

Timatic's highlights in 2018 were as follows:

650 million
passengers had their documents checked

320
airlines used Timatic

85
airlines employed automated document verification powered by Timatic AutoCheck

1,600
government and airline sources gave information

52

53

09 Financial services

Streamlining the financial services

The landscape for payments worldwide has undergone major changes, first with the introduction of online payments and, more recently, through the advent of mobile payments. New regulations to keep pace with the evolving technologies have an equal impact on the payments landscape. The European Union (EU)'s Payment Services Directive 2 (PSD2) Application Programming Interfaces (APIs) enable instantaneous payment for consumers.

IATA is negotiating the altered payments terrain with significant investments to maintain the relevance of its payment and settlement services—making them safer, faster, and more cost-effective than ever. The backbone of those services, IATA Financial Settlement Services (IFSS), facilitates payments to airlines from travel agents and freight forwarders,

from airlines to airlines, and from airlines to suppliers. In 2018, IATA enhanced the IFSS's management of credit risk, through the launches of the New Generation IATA Settlement Systems (NewGen ISS) and the introduction of Transparency in Payment (TIP).

Also in 2018, the IFSS, which operates on a cost-recovery basis in accordance with rules agreed to by system participants, processed $466 billion. The vision is to move from its largely conventional processing of payments to digital payments that are 100% safe; 100% instant; and 100% frictionless—meaning zero cost—for all stakeholders. IATA will achieve this vision by leveraging the latest technologies, such as API and blockchain, and by working closely with its industry partners.

IATA settlement systems

IATA's Billing and Settlement Plan (BSP) facilitates and simplifies the selling, reporting, and remitting procedures of IATA-accredited travel agents and improves the financial control and cash flow for approximately 400 participating airlines. The BSP processed $248.8 billion in 2018 and at the close of the year boasted 136 operations in 181 countries and territories. Their overall on-time settlement rate was 99.997%.

One of the main benefits of the BSP is that it generates significant cost savings for its participants through economies of scale. The greatest benefits, naturally, are delivered to the largest users of the BSP, although no airline to date accounts for more than 6% of total transaction volumes. The 743 million transactions processed through all BSPs in 2018 resulted in an average cost per transaction of $0.07, with the cost of some transactions as low as $0.04. IATA is determined to lower this even further, the aim being to reach zero cost per transaction in return for higher volumes of transactions from IATA members.

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 2018, CASS processed $37.2 billion and had an on-time settlement rate of 99.996%. CASS featured 92 operations serving 235 airlines, general sales and service agents (GSSA), and ground handling companies at year-end 2018.

The IATA Clearing House (ICH) provides fast, secure, cost-effective settlement services to 445 airlines, airline-associated companies, and airline travel partner participants. In 2018, the ICH processed $62.1 billion and had a financial settlement success rate of 99.999%.

IATA Currency Clearance Services (ICCS) offers global cash management that enables airline treasurers to centrally control and repatriate their worldwide sales. The ICCS is used by more than 320 airlines and is available through over 200 IATA BSP and CASS operations worldwide. The ICCS was responsible in 2018 for repatriating over $815 million from countries with severe currency liquidity issues, such as Zimbabwe; the nations of West Africa, including Nigeria, and of Central Africa; and Trinidad and Tobago. CASS operations globally also supported IATA members in markets where liquidity can be complex and repatriation delayed. Overall, the ICCS processed $39.1 billion in 2018.

IATA's Enhancement & Financing (E&F) ensures that air navigation service providers (ANSP) and airports have access to IATA's globally trusted systems and processes for the generation of accurate billing data, standardized e-invoices that can be automatically validated, and secure fund collection. The E&F also helps airlines avoid late payment penalties, reconciliation headaches, and disputes by standardizing the billing process and providing a single point of contact for questions or conflicts. In 2018, the E&F processed $4 billion.

IATA's Simplified Invoicing and Settlement (SIS) is a cost-effective electronic invoicing platform that removes all paper from the invoicing and settlement of industry services. SIS is streamlining processes by enabling the exchange of electronic data among airlines and between airlines and direct operating cost suppliers. The use of a single messaging standard, the ISXML, simplifies business activity for the industry and allows suppliers to use one invoicing standard for all of their airline customers.

In 2018, SIS had more than 2,483 participants, including 426 airlines, 313 suppliers, and 1,744 other entities enabled as receivers of SIS e-invoices to maximize efficiency on the invoice sender side. SIS processed over 1.6 million interline and supplier invoices and settled $74.82 billion in volume during the year under review.

NewGen ISS

Since its launch in 1971, IATA's BSP has eased, secured, and made safe the distribution and settlement of funds between travel agents and airlines. Its rules, however, were established in an era of paper ticket stock, brick-and-mortar travel agencies, limited payment methods, and extensive airline industry regulation. The rules required updating to address today's business realities, including the increasingly complex risks of airlines and travel agents.

The IFSS processed

$466 billion.

◼ Direct Data Solutions

◆ Direct Data Solutions (DDS) is a game-changing, industry-sponsored program that provides the travel industry with timely, accurate, cost-effective access to global airline market data.

◆ Participating carriers gain easy access to the most comprehensive global data set, aggregated from such multiple sources as ARC Air Logistics, Inc.'s area settlement plan (ASP) transactions, IATA's available BSP transactions, and carriers' contributions.

◆ No matter what business intelligence you require - network planning to fleet planning, revenue management, sales and marketing, or business and product development - the DDS delivers.

As of December 2018, the DDS encompassed the following:

1.91 bn
TICKETS
with YoY increase of 7%

2.19 bn
PASSENGERS,
with YoY increase of 7%

89,000+
TRAVEL AGENTS
from indirect channels

90 AIRLINE
contributers

The NewGen ISS was launched by IATA to ensure the continued relevance and value of its BSP to airline and travel agent customers. For airlines, the NewGen ISS means faster settlement, safer funds processing through an enhanced risk management framework, and a lower cost of distribution. For travel agents, the NewGen ISS offers more products and services, greater flexibility, and new and more cost-effective solutions.

The NewGen ISS is built on four pillars that enable it to best serve the needs of airlines and travel agents:

◆ It offers three levels of travel agent accreditation and the ability for agents to select the level that best suits them and to move between levels as their businesses evolve.
◇ GoGlobal Accreditation is a "one-stop shop" for agents with operations in multiple BSP markets. Multicountry agents will be able to accredit all of their locations worldwide under a single passenger sales agency agreement.

◇ GoStandard Accreditation corresponds most closely to the accreditation specifications in place at this time and is for agents operating in a single country.
◇ GoLite accreditation is "entry-level" accreditation and involves tickets issued with IATA EasyPay or a customer card.

◆ It features a modern risk management framework that ensures enhanced security for its participants, including a remittance holding capacity (RHC) for cash sales outstanding to the BSP.

◆ It encompasses IATA EasyPay, a new, voluntary e-wallet solution for travel agents' issuance of airline tickets in the BSP. IATA EasyPay provides agents with a fail-safe way to continue selling even if they reach their RHC and grants airlines a low cost per transaction and fast settlement. It is also designed for GoLite travel agents.

◆ It includes Global Default Insurance, a financial security option for travel agents that presents a cost-effective, flexible, and collateral-less alternative to bank guarantees and other types of security.

The NewGen ISS is being progressively rolled out in all BSP markets and has been implemented in some 50 areas to date. The intent is to implement it in markets representing 90% of total BSP cash remittances in 2019 and 100% in 2020.

IATA is also introducing an initiative called Transparency in Payments (TIP). TIP is focused on providing airlines with increased transparency and consent regarding travel agents using their own cards for funds settlement. As it stands, airlines only see the payment settlement costs after the fact, if at all. No method of settlement is barred by TIP, but agents can only use methods consented to by an airline.

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Offices based in
57
countries

Gender split
53%
male

47%
female

Employees from
99
nations

Partnerships and Training

IATA Strategic Partnerships

◆ IATA Strategic Partnerships is a community of more than 400 partners worldwide who share ideas and collaborate to improve aviation practices and technologies.

IATA Training

◆ IATA Training puts participants from around the world through realistic business scenarios and gaming situations to promote industry standards; to help aviation-related businesses operate safely, efficiently, and sustainably; and to foster career paths in support of the more than 62 million jobs related to aviation.

◆ It carries ISO 9001:2015 certification in recognition of its high quality and its solid quality management system.

In 2018, IATA Training

trained more than
100k
people from 1,000-plus organizations in 150-plus countries;

offered over
350
courses and more than 40 diploma programs; and

worked with
450
resellers and partnering institutions, including

20+
regional training partners,

270+
authorized training centers, and

170+
accredited training schools.

annualreview.iata.org