IATA

IATA

Annual Review 2024

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IATA

International Air Transport Association
Annual Review 2024
80th Annual General Meeting and
World Air Transport Summit, Dubai, United Arab Emirates

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Global standards are the bedrock

Airlines performed well in 2023. Profitability improved. By several parameters, it was aviation's best year ever on safety. And there was no let-up in the industry's determination to achieve net zero carbon emissions by 2050.

Financial performance

By February 2023, domestic markets had fully recovered from the pandemic shock. And the recovery of long-haul markets was largely complete by year-end. All told, airlines lost about four years of passenger growth as a result of the pandemic. The expectation is that 2024 will see travel exceed 2019 levels and progress toward an average annual growth rate of 3.8% to 2043.

The cargo business also transitioned to a more normal level of activity in 2023. After seeing extraordinary demand in 2021, followed by a sharp drop in 2022, a gradual strengthening set in during most of 2023. Cargo rates experienced a different pattern and are continuing their downward correction to normality after unprecedented highs during the pandemic.

It is also notable that both air cargo and passenger traffic have defied a challenging macro-economic environment. Despite consumer inflation, people continue to travel in growing numbers. And emerging opportunities, such as time and-temperature sensitive cargo and e-commerce, are strong air cargo performers even as international trade faces headwinds.

05

Persistent supply chain issues continue to affect the maintenance of existing fleets and the delivery of new aircraft. This is an enormous frustration for airline planning and operations, the impact of which extends to airline financial performance. Solutions must be found.

Latest estimates indicate a $27.4 billion profit for 2023 with the expectation of strengthening profitability in 2024. Considering the enormous losses of 2020-2022, achieving this level of profitability is a major achievement. But with net profit margins of just 3.0%, sustainable profitably continues to elude airlines at the aggregated industry level.

Safety

The airline industry's safety performance recorded "best-ever" results by several key measures. In 2023, there were no fatal accidents involving any IATA member airline. And there were no fatal accidents by any airline on the registry of the IATA Operational Safety Audit (IOSA).

There was a single fatal accident involving a turboprop. And that is a reminder that safety is a continuous challenge. A key tool that is helping address that challenge is IOSA. In 2023, IOSA marked the 20th year since the first airline joined the registry. Carriers on the registry have consistently outperformed those not on the registry by a significant margin.

Several initiatives are further improving safety, notably a Safety Leadership Charter, the strengthening of our data capabilities with the advancement of the Global Aviation Data Management (GADM) initiative, and the progressive transition of IOSA to a risk-based approach that will deliver even more meaningful results.

Sustainability

A major focus for 2023 was on progressing the industry's goal to achieve net zero carbon emissions by 2050.

"Latest estimates indicate a $27.4 billion profit for 2023 with the expectation of strengthening profitability in 2024."

IATA estimates that 65% of the carbon mitigation needed for net zero by 2050 will come from Sustainable Aviation Fuels (SAF). The industry has purchased and used every drop of SAF produced. But in 2023 that was just 0.2% of total fuel used. The problem is simply that not enough SAF is being produced.

In November 2023, governments, through the International Civil Aviation Organization (ICAO), set an aspiration for aviation to achieve a 5% reduction in CO_2 emissions through SAF. This emphasizes the urgent need for those same governments to be more effective with policies to support the scaling-up of SAF. And it highlights the need for policies to support the other decarbonizations levers, such as direct air capture, which will be needed to complement SAF.

For its part, IATA will establish the IATA SAF Registry to accelerate the uptake of SAF by authoritatively accounting and reporting emissions reductions from SAF. The Registry will help meet the critical needs of all stakeholders as part of the global effort to ramp-up SAF production. Some of the key capabilities of the Registry are:

- *Wide geographic scope* The Registry will allow airlines to purchase SAF regardless of where it is produced. Each batch's certified environmental attributes can be tracked and assigned to the purchasing airline. By ensuring that the environmental attributes of SAF are properly recorded and transferred between parties, airlines and their customers can report emissions reductions accurately, aligning with any reporting obligations and international standards.
- *Broad application and neutrality* The Registry will be neutral with respect to regulations, types of

SAF, and any other specificities under relevant jurisdictions and frameworks, making it capable of handling all such user requirements.

- *Governance*
Independent governance will ensure the system's impartiality and robustness.
- *Cost efficiency*
Participation in the registry will be on a cost-recovery basis to avoid adding unnecessary cost barriers to the SAF ramp-up.

The Registry is being developed in consultation with airlines, government authorities, international organizations, OEMs, fuel producers and suppliers, airports, and corporate travel management companies.

Global standards
Global standards have always been important for aviation. They are the bedrock of our strong performance on safety, and they will be a key to success on the way to net zero carbon emissions by 2050.

A focus of IATA's advocacy efforts over 2023 has been defending global standards, for example:

- IATA resisted plans from the Dutch Government to ignore the ICAO Balanced Approach on Noise and illegally impose a capacity-cut at Amsterdam's Schiphol Airport.
- IATA is opposing international corporate income tax proposals that would require airlines to report revenue in each location where it was generated. Currently, airlines report all revenue in their headquarters jurisdiction. There are no flags of convenience giving access to friendlier tax regimes, so governments will gain nothing from the change. But airlines would face enormous cost and complexity should the proposals be adopted.

IATA is also promoting standards that modernize business practices. This includes:

- Modern Airline Retailing to serve air travelers better, by replacing complex legacy processes with a system of "offers and orders" system that will parallel what most other retailers use.
- Working with aircraft and engine manufacturers to promote best practices recognizing that airlines own the operational data generated by their fleets and must be in control of how it is used.

Your Association
IATA's Financial Settlement Systems (IFSS) continue to process transactions between airlines and agents (passenger and cargo), efficiently, safely and on time. In 2023, the IFSS processed a total of $445.3 billion excluding $18.2 billion in refunds.

IATA's representativeness has expanded over the year. IATA's own finances are strong, and membership is growing. More than 30 carriers have joined the association since the 79th Annual General Meeting bringing total membership to 336 airlines.

Over this past year it has been a pleasure working with Yvonne Makolo, who has served diligently as the Chair of the IATA Board of Governors. Her guidance has been instrumental in navigating the challenges of the year. And her presence as the first woman to hold this office is an important inspiration for all as the airline industry seeks to address its historical gender imbalance, including through IATA's 25by2025 initiative.

Lastly, the IATA team is strongly motivated, highly skilled, diverse, and eager to serve our members by delivering reliable products, effective advocacy, and critical global standards.

**Willie Walsh
Director General
International Air Transport Association**

"IATA is opposing international corporate income tax proposals that would require airlines to report revenue in each location where it was generated."

YVONNE MANZI MAKOLO, CHAIR OF THE IATA BOARD OF GOVERNORS

Embracing change in a fast-moving, challenging world

Q **What has been the focus of your year as Chair of the IATA Board of Governors?**

It has been a real privilege to serve as the Chair of the IATA Board of Governors (BoG). During my tenure at the top of the agenda was decarbonization, improving safety, the transformation to modern airline retailing, and ensuring we have cost-efficient infrastructure. I was particularly pleased to be taking on this role as IATA launched Focus Africa with the aim of aligning the continent's stakeholders so that together we can strengthen the contribution of aviation to Africa's social and economic development.

Q **Over the course of your tenure as Board Chair have you seen sufficient support across the value chain and with governments to reach net zero carbon emissions by 2050?**

Support for achieving net zero remains strong and we have seen significant steps in the right direction as we push for our 2050 net zero carbon emissions goal. It's clear that the fastest way to make progress towards this target is through the use of Sustainable

Aviation Fuels (SAF). However, more needs to be done to produce enough SAF and reduce costs as production scales-up.

Even with the growth in production of SAF that we have seen in the past year, it still accounts for less than 1% of aviation's fuel needs. Governments need to prioritize policies to incentivize the scaling up of SAF production.

Q **For airlines, what areas do you believe hold the greatest potential for transformation with artificial intelligence (AI)?**

AI is revolutionizing industries worldwide and has the potential and capability to help transform almost every aspect of the aviation industry—in the air and on the ground—by improving safety, efficiency, and customer experience. For example, AI can help airlines optimize their pricing strategies, predict, and prevent maintenance issues, and enhance flight operations and air traffic management. AI could also help airports streamline their operations, security, and passenger services and provide travelers with personalized and seamless journeys.

Last year, IATA held an Innovation Day that assessed the potential for AI and examined the challenges and risks. Participants eventually agreed on ten topic areas that heralded the most promise. These included everything from disruption management to back-office support, better training, more personalized travel plans, and dynamic pricing. Although the possibilities are huge, human oversight and intervention will remain essential for safety and decision making in the aviation industry.

Q **What opportunities do you see for biometric identification to improve efficiency in the passenger experience?**

IATA has been working with industry and government partners,

including RwandAir, on awareness of the potential to transform the travel process under the One ID initiative. Through the concept of contactless travel, we believe that One ID will enable passengers to go through the airport with biometric recognition simply by sharing their biometric image and journey details in advance.

We see three opportunities for improving efficiency.

The first is through an improved passenger experience. One ID would allow passengers to arrive at the airport 'ready to fly' and eliminate the need to present physical documents repetitively. This advanced sharing of personal ID will rapidly reduce airport queues.

Secondly, staff productivity will improve as the need for manual ID and travel document checks diminishes.

Thirdly, biometric identification will strengthen security and enhance facilitation with more accurate

passenger information. This will, in turn, reduce the number of inadmissible passengers with improper documentation and the chances of human error in letting wrongly documented passengers fly.

Q **How is the Focus Africa initiative different from previous efforts to support aviation on the continent? What has this achieved so far? And ultimately what will be its contribution to the future development of African aviation?**

There have been many attempts to boost the African aviation sector, and it is not hard to understand why. Despite being home to over one billion people and nearly a fifth of the world's population, Africa has a very limited presence in the aviation industry and accounts for just 2% of global air passengers. This means there is enormous potential for growth in Africa, which could, in turn, bring huge economic benefits to the continent if we dramatically increase air traffic and flying capacity.

"By aligning the continent's stakeholders we can strengthen the contribution of aviation to Africa's social and economic development."

"One ID would allow passengers to arrive at the airport ready to fly and eliminate the need to present physical documents repetitively."

It is widely agreed that the sector needs a major injection of capital to improve its infrastructure, build and modernize airports, improve air traffic control, and increase connectivity between regions and countries.

That's why IATA's Focus Africa initiative aims to improve safety; facilitate an efficient, secure, and cost-effective aviation infrastructure; enable greater connectivity through the Single African Air Transport Market (SAATM); accelerate secure, effective and cost-efficient financial services and modern retailing standards; support the net zero carbon emissions by 2050 targets; and promote aviation-related career paths and ensure a steady supply of

diverse and suitably skilled talent to meet our industry's future needs.

Q It's been great for women in the industry to see a female lead IATA. Is 25by2025 making a difference in promoting gender diversity in aviation?

In Rwanda, we have a long legacy of gender equality, but the aviation sector has been traditionally dominated by men. As the first female Chair of IATA's BoG, I was aware of the optics and responsibility it conveyed on me as an agent of change.

That's why I have been so strongly supportive of IATA's 25by2025 voluntary global initiative, which is designed to change the gender balance within aviation. Over 180 companies—from airlines to aircraft manufacturers and airports— have signed up to this initiative, committing them to increasing female representation in senior roles in areas traditionally under-represented by women.

IATA recognizes the incredible level of female talent available and how vital it is that we, as a global industry, create real opportunities for women to allow them to grow and thrive. Airlines can help lead the way to make our sector diverse and fully inclusive and embrace the extraordinary talent of women around the world.

Q In addition to promoting gender diversity, what do today's industry leaders need to do to ensure that aviation remains a desirable career choice for future generations of talented leaders?

We need to continue positioning aviation as a forward-thinking sector that seeks to attract the brightest and the best. There is a huge range of job opportunities within aviation, from customer service to engineering, from IT to the flight deck, and from government relations to revenue management. We need to encourage airlines, airports, and manufacturers to create schemes to

identify, attract, and develop new talent through apprenticeship programs for every sector within aviation so we can create long future career flight paths.

Our business is hugely dynamic and exciting, taking place within a real-world environment that is subject to change and immediate response every day. It allows those who embrace change to thrive in a fast-moving and challenging dynamic. We need flexible and fast-acting forward thinkers. And I know this sector will make them feel both at home and out of their comfort zone—often simultaneously! We are also an industry that greatly emphasizes safety and risk management. This duality makes aviation uniquely attractive as a career choice for future generations of talented leaders.

**Yvonne Manzi Makolo
Chair of the IATA Board
of Governors**

MEMBERSHIP OF THE BOARD OF GOVERNORS
As at 1 April 2024

1. **Yvonne Manzi Makolo**
Chair of the Board
Chief Executive Officer
RWANDAIR

2. **Michael Rousseau**
President and Chief
Executive Officer
AIR CANADA

3. **Benjamin Smith**
Chief Executive Officer
**AIR FRANCE-KLM
GROUP** (representing Air
France)

4. **Campbell Wilson**
Chief Executive Officer
and Managing Director
AIR INDIA

5. **Robert Isom**
Chief Executive Officer
AMERICAN AIRLINES

6. **Shinichi Inoue**
President and Chief
Executive Officer
ANA

7. **Patrick Healy**
Chair
CATHAY PACIFIC

8. **Ma Xulun**
Chairman
**CHINA SOUTHERN
AIRLINES**

9. **Pedro Heilbron**
Chief Executive Officer
COPA AIRLINES

10. **Jasmin Bajić**
President and Chief
Executive Officer
CROATIA AIRLINES

11. **Mesfin Tasew Bekele**
Chief Executive Officer
ETHIOPIAN AIRLINES

12. **Richard Smith**
President and Chief
Executive Officer, Airline
and International
FEDEX

13. **Zhu Tao**
Chief Executive Officer
HAINAN AIRLINES

14. **Peter Ingram**
President and Chief
Executive Officer
HAWAIIAN AIRLINES

15. **Luis Gallego Martín**
Chief Executive Officer
IAG (representing IBERIA)

16. **Pieter Elbers**
Chief Executive Officer
INDIGO

17. **Marjan Rintel**
President and Chief
Executive Officer
KLM

18. **Walter Cho**
Chairman and Chief
Executive Officer
KOREAN AIR

19. **Roberto Alvo**
Chief Executive Officer
LATAM AIRLINES GROUP

20. **Carsten Spohr**
Chairman and Chief
Executive Officer
LUFTHANSA GROUP
(representing Lufthansa)

21. **Izham Ismail**
Group Chief Executive
Officer
MALAYSIA AIRLINES

22. **Mohamad El-Hout**
Chairman and Director
General
MIDDLE EAST AIRLINES

23. **Mehmet Tevfik Nane**
Chairperson of the Board
of Directors
PEGASUS AIRLINES

24. **Badr Mohammed
Al-Meer**
Group Chief Executive
Officer
QATAR AIRWAYS

25. **Abdelhamid Addou**
Chairman and Chief
Executive Officer
ROYAL AIR MAROC

26. **Anco van der Werff**
President and Chief
Executive Officer
SAS

27. **Ibrahim Al-Omar**
Director General
**SAUDI ARABIAN
AIRLINES**

28. **Ahmet Bolat**
Chairman of the Board of
Directors and Executive
Committee
TURKISH AIRLINES

29. **Scott Kirby**
Chief Executive Officer
UNITED AIRLINES

30. **Enrique Javier
Beltranena Mejicano**
President and Chief
Executive Officer
VOLARIS

31. **Willie Walsh**
Director General
IATA

ALSO SERVED

(To 15 June 2023)
Mr John Dietrich
President and Chief
Executive Officer
ATLAS AIR

(To 5 November 2023)
Mr Akbar Al Baker
Group Chief Executive
QATAR AIRWAYS

(To 15 January 2024)
Topi Manner
President and Chief
Executive Officer
FINNAIR

(To 1 April 2024)
Yuji Akasaka
Representative Director,
President
JAPAN AIRLINES

On the path to renewed profitability

Economic environment

Strong growth and renewed profitability
In 2023, air transportation grew strongly and enjoyed renewed financial profitability.

The global economy avoided the recessionary environment predicted by many and delivered a 3.1% growth rate in gross domestic product (GDP), which aligns with the long-term average. Among major economies, the US economy expanded at a rate of 2.5% in 2023, up from 1.9% the year before. The Indian economy also exceeded expectations, surpassing China's economy to become the world's fastest growing major economy.

Exceptionally low unemployment rates worldwide have played a pivotal role in protecting the global economy from recessions. In the United States, unemployment stood at 3.6% in 2023, the lowest annual average recorded in US history. Similarly, the European Union, the euro area, China, and India have all benefited from low unemployment rates, significantly contributing to households' purchasing power even in the face of high inflation and hence, global economic stability.

01 Source: IMF World Economic Outlook
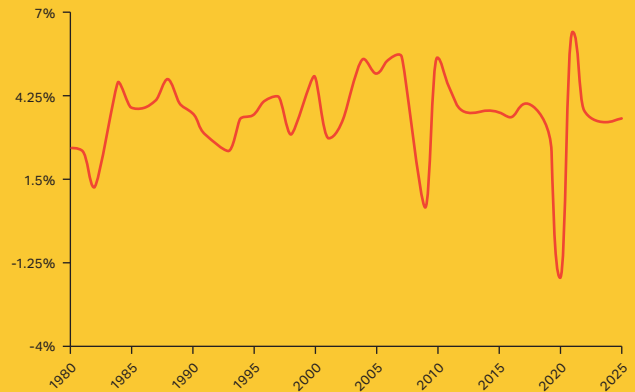
The energy transition
Airlines continued to sign agreements with sustainable aviation fuel (SAF) producers to purchase future SAF production. Over the past two years, the airline industry has made significant strides in this regard, securing 75 offtake agreements, including 53 binding and 22 non binding commitments. Hydrotreated esters and fatty acids (HEFA) and HEFA co-processing are the most mature and commercially viable technologies available, and they account for most SAF offtake agreements.

According to IATA estimates, the aviation industry consumed between 450,000 and 500,000 tonnes of SAF at $2,500 per tonne in 2023. This unit cost is 2.8 times higher than the price for conventional aviation fuel, and thus added $756 million to the industry fuel bill in 2023.

The aviation industry is set to increase its use of SAF to further reduce its carbon footprint. IATA estimates that SAF production could rise to 0.53% of airlines' total fuel consumption in 2024, adding $2.4 billion to 2024's industry fuel bill.

02 Source: IATA Sustainability and Economics

01 Global gross domestic product (constant $), annual % change

02 SAF offtake agreements as of 2022

Per month — Cumulative

- Number of agreements of the month
- Cumulative number of agreements

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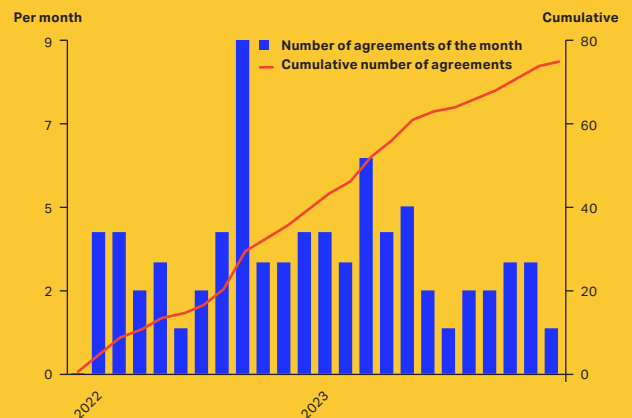
Air passenger markets

A surge in domestic travel demand was felt in all large markets during 2023. Total domestic traffic surpassed the record of 2019. International traffic also rose steadily worldwide. The industry's growth momentum was resilient as 2024 began, despite various economic and geopolitical headwinds pressuring airlines and consumers.

03 Source: IATA Sustainability and Economics, IATA Monthly Statistics

The reopening of China was one of the major developments that shaped the industry's growth in 2023. China's domestic passenger numbers rose above the 2019 level, and its international flows grew rapidly following the lifting of travel restrictions, though they still lagged the rebound in domestic traffic. Chinese outbound travel was a large contributor to passenger numbers within the Asia Pacific region and contributed to tourism industries in various countries of the region. International connectivity to and from China has not yet fully recovered but it is coming back rapidly.

04 Source: IATA Sustainability and Economics, DDS

Industry-wide domestic Revenue Passenger Kilometers (RPK) surpassed the 2019 historical peak by 3.6% in 2023 and surged 30.2% year on year (YoY). China's domestic market grew, as mentioned, 7.1% compared with 2019, and a staggering 138.8% from 2022. The world's three largest domestic passenger markets—China, the United States, and India—drove most of the industry performance in 2023. Japan and Australia, though lagging compared with 2019, also showed remarkable growth YoY.

05 Source: IATA Sustainability and Economics, IATA Monthly Statistics

03 Seasonally Adjusted Industry RPK, indexed, January 2019 = 100
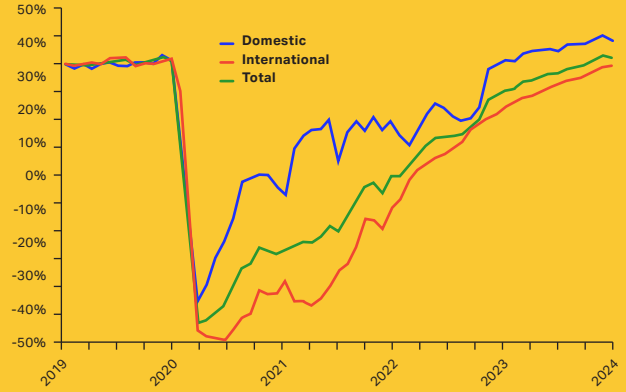
04 PR China Domestic and International passengers, millions
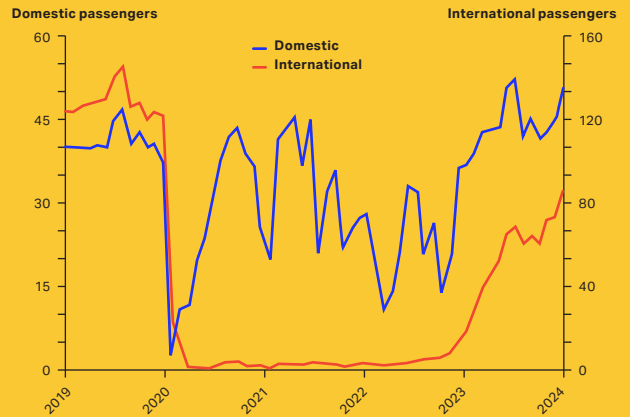
05 2023 Domestic RPK growth by market

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International traffic saw tremendous growth in 2023 compared with a year earlier. Industry-wide international RPKs increased 41.5% YoY, reflecting strong results for all regions, but fell 11.5% short of 2019's level: Asia Pacific was the region with the strongest YoY evolution in international traffic, up 126.1%. But it also had the largest shortfall compared with 2019, at -27.4%.

06 Source: IATA Sustainability and Economics, IATA Monthly Statistics
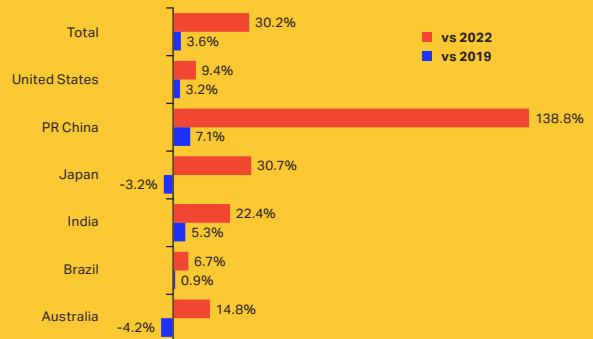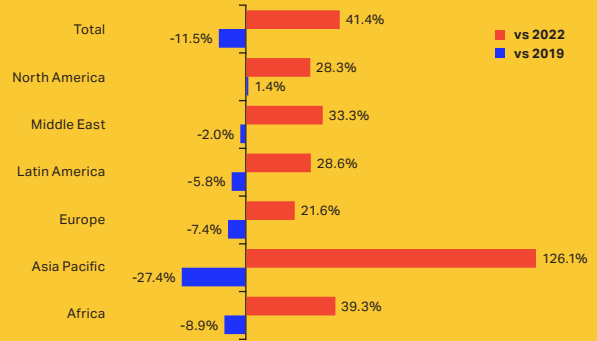
In 2023, industry-wide passenger traffic rebounded toward pre-pandemic levels. Growing from that higher base, the industry's annual growth has eased but is still expanding at a rapid pace. In March 2024, total traffic rose 13.8% YoY as the industry surpassed pre-pandemic levels for the second month in a row. This robust pace is attributable not only to the ongoing ramp-up in international operations but also to market expansions in various countries. European and Asia-Pacific carriers were the main contributors to the industry's net growth, with the latter accountable for more than half of the global RPK increase.

07 Source: IATA Sustainability and Economics, IATA Monthly Statistics

Ticket sales in the latter half of 2023 increased significantly over the first half and trended roughly sideways as the year closed. Lunar New Year festivities and pent-up demand in China fueled a surge in ticket sales there at the start of 2024. Globally, ticket sales remained near 2019 sales volumes and were higher than the previous year, showing a desire to travel among consumers worldwide.

08 Sources: IATA Sustainability and Economics, DDS

06 2023 International RPK growth by airline region of registration

Region	vs 2022	vs 2019
Total	41.4%	-11.5%
North America	28.3%	1.4%
Middle East	33.3%	-2.0%
Latin America	28.6%	-5.8%
Europe	21.6%	-7.4%
Asia Pacific	126.1%	-27.4%
Africa	39.3%	-8.9%

07 Regional contribution to industry-wide annual RPK growth

Legend: Africa, Asia Pacific, Europe, Latin America, Middle East, North America, Total YoY% growth

69.4%, 59.4%, 54.0%, 46.6%, 39.2%, 31.4%, 26.8%, 28.2%, 30.1%, 30.8%, 29.1%, 24.3%, 16.7%, 20.8%, 13.8%

Jan-23, Feb-23, Mar-23, Apr-23, May-23, Jun-23, Jul-23, Aug-23, Sep-23, Oct-23, Nov-23, Dec-23, Jan-24, Feb-24, Mar-24
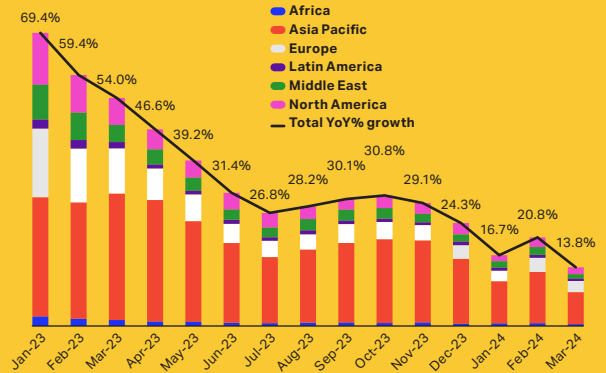
08 Ticket sales by purchase date, 7-day moving average, YoY% change

Legend: Domestic, International, Total

15
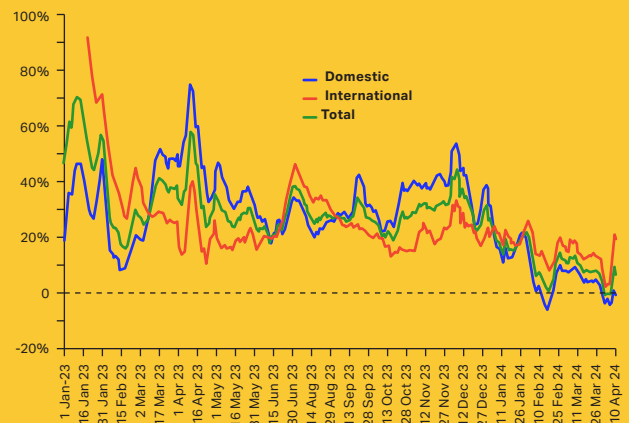
Air cargo markets

Air cargo demand started an upward trajectory in the second half of 2023

After a remarkable performance in 2021, air cargo faced multiple economic and geopolitical challenges in 2022. Inflation, the Russia-Ukraine war, China's zero-Covid policy, and supply chain disruptions all contributed to softening demand. Many of these challenges carried over to 2023. Coupled with a general rise in trade-restrictive measures, industry-wide Cargo Tonne Kilometers (CTKs) decreased a further 1.9% YoY in 2023. Air cargo traffic kicked off 2023 at its lowest level since spring 2020. However, positive and increasing YoY growth made a comeback in August 2023. In March 2024, global CTKs grew an impressive 10.3% compared with March 2023. Importantly, all regions exhibited positive YoY evolutions, led by the Middle East, Asia Pacific, and Africa, with 19.9%, 14.3%, and 14.2% growth, respectively.

09 Source: IATA Sustainability and Economics, using data from IATA Monthly Statistics

2023 was characterized by returning belly-hold capacity

Measured in Available Cargo Tonne Kilometers (ACTKs), industry-wide capacity in 2023 saw robust 11.1% growth, two-thirds of it attributed to international traffic. The primary driver for this resurgence was a return in the belly-hold capacity of international passenger flights, up an impressive 36.0% in 2023 compared with the previous year. In contrast, the belly-hold capacity of dedicated international freighters decreased 1.6% over the same period. Overall, the share of international ACTKs provided by passenger flights' belly capacity continued to normalize in 2023, adjusting from 47.0% in December 2022 to 52.6% at the end of 2023, and thereby inching closer to the pre-pandemic share of around 60%.
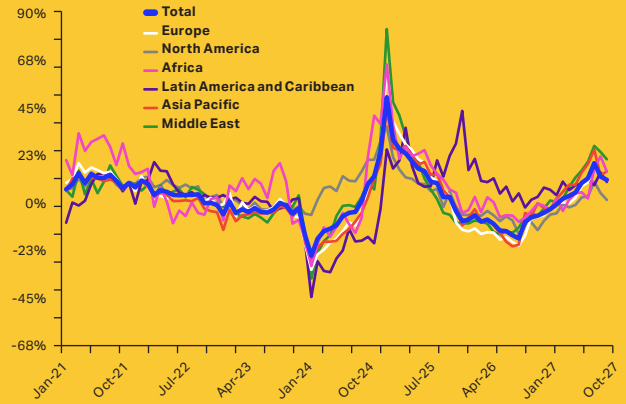
10 Source: IATA Sustainability and Economics, using data from IATA Monthly Statistics

Rising cargo load factors helped stabilize yields in the second half of the year

After an extended period of declining air cargo load factors, associated primarily with increasing belly-hold capacity against a backdrop of cooling demand, the industry saw a turning point in summer 2023. The industry load factor decreased 1.1 percentage points in the first half of 2023 from year-end 2022 , but then increased 1.3 percentage points YoY in the second half of 2023. A recent rise in the cargo load factor, moreover, helped stabilize the fall in yields. The global air cargo yield, which had shown a downward trend since early 2022, reversed that shortly after the industry load factor changed its course mid-year.

11 Source: IATA Sustainability and Economics, using data from IATA CargoIS

09 Growth in air cargo demand (CTKs)

Legend: Total, Europe, North America, Africa, Latin America and Caribbean, Asia Pacific, Middle East

10 International ACTKs (billion) by type

Legend: Dedicated freighters ACTK, Passenger belly ACTK, Preighter ACTK

16
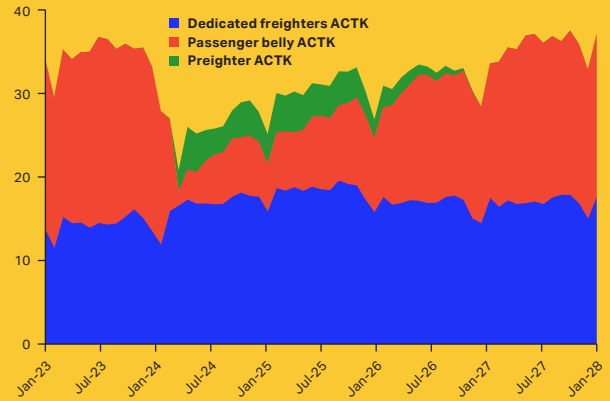
11 Global air cargo yield and load factors

Legend: Seasonally adjusted cargo load factor, indexed (Jan 2019 = 100); Air cargo yields ($ per kg, incl. surcharges), indexed (Jan 2019 = 100)
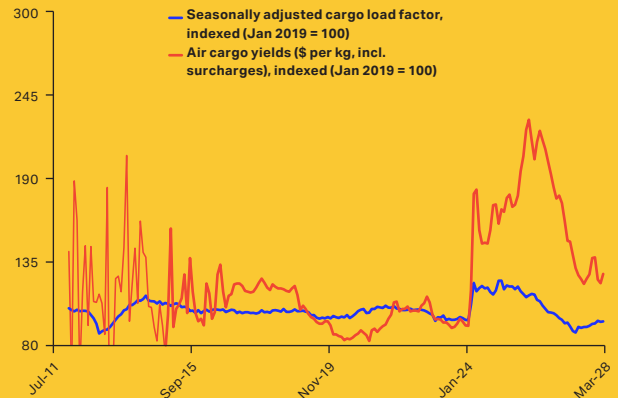
Growth in global goods trade is weak but slowly improving

In 2023, global cross-border trade saw volumes fall 1.9%, a departure from the average 2.2% growth observed during the period between the global financial crisis and the COVID-19 pandemic (2012–2019). Geopolitical trends, including the trade war between China and the United States, are having a visible impact on trade. Importantly, the slump in trade was less pronounced in the final quarter of 2023 and positive YoY growth returned in February 2024.

While demand for air cargo in 2023 receded by 1.9% compared to 2022, the month by month performance showed a steady upward trend. Industry wide CTKs started off with a -17.0% YoY contraction in January 2023, but ended the year on a high note with a solid 10.7% YoY expansion in December. However, the annual reduction in merchandise trade occurred from a high base in 2022. These base-year effects are important when comparing the relative performance of air cargo and global trade, which moved to positive territory in the second half of 2023.

▋ 12 Source: IATA Sustainability and Economics, using data from IATA Monthly Statistics and Macrobond

## Continued pessimism for new export orders

The new export orders Purchasing Managers' Index (PMI) measures the well-being of international trade and is one of the leading indicators of global air cargo demand. A PMI above 50 suggests that more purchasing managers expect their businesses to grow compared with the previous month, while a figure below 50 indicates fewer managers with that outlook. Specifically, the new export orders PMI has been hovering below the crucial 50-point threshold since March 2022, and March 2024 continued to signal contraction with a reading of 49.5. The overall pessimistic outlook for new export orders aligns with the global shift to more trade-restrictive policies.

A contracting new export orders indicator and weak global goods trade contrast with the steep YoY growth seen in industry CTKs throughout the second half of 2023. Remarkably, and possibly supported by booming e-commerce on the Asia – North America trade lane; rising demand for various special cargo products such as lithium batteries and perishables and recent attempts by manufacturers and logistics providers to diversify their supply chains, the air cargo industry is experiencing rapidly rising demand amid soft demand drivers.

▋ 13 Source: IATA Sustainability and Economics, using data from IATA Monthly Statistics and Markit

12 Growth in air cargo demand (CTKs) and global trade
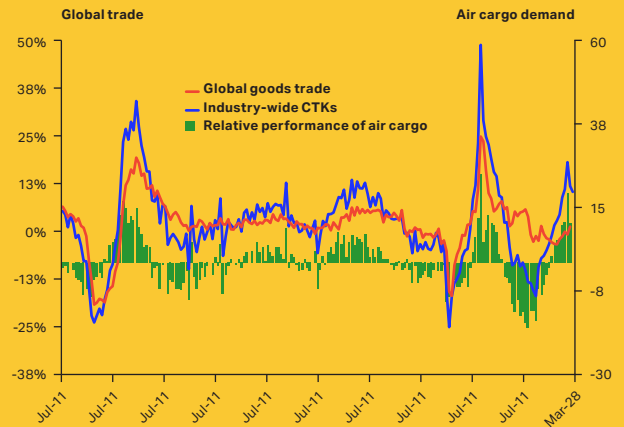
13 Global manufacturing new export orders PMI and air cargo demand (CTK) growth

17
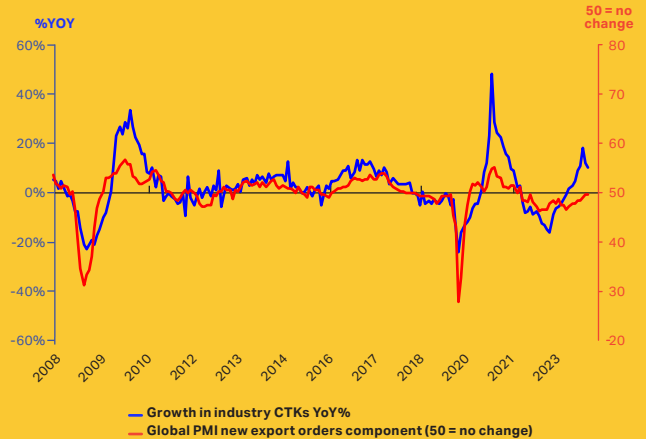
Airline financial performance

The industry returned to profitability

The airline industry returned to profitability in 2023 after three years of unprecedented losses. Despite numerous challenges in 2023, including wars, oil price volatility, elevated interest rates, and staff shortages, IATA estimates an overall industry net post-tax profit of $27.4 billion, with an operating profit margin of 5.7%—a remarkable feat in such a short time.

▮ 14 Source: IATA Sustainability and Economics, The Airline Analyst

Passenger revenue drives the top line while cargo pulls it down

Total industry revenue is estimated to have reached $908 billion in 2023, a 23% increase over the previous year. Passenger revenue was the main growth driver and reached an estimated $646 billion in 2023, an increase of 48% from 2022. A mix of high demand, increased load factors, and elevated yields facilitated the top line. Looking ahead, passenger revenue growth is expected to slow markedly in 2024, to 15%, but from its much higher 2023 base. After an increase in yields over 2022 and 2023, passenger yields should begin to stabilize in 2024.

Despite the upward trend in the cargo market toward the end of 2023, full-year industry cargo revenue is estimated to have declined by one-third. This downturn was driven mainly by lower demand and falling freight rates. Downward pressure on yields, meanwhile stemmed from increased belly-hold capacity as more passenger aircraft re-entered service and from competition from lower maritime cargo rates. A rebound in air cargo traffic is expected to offset a continued freight rate decrease in 2024. Rates nonetheless are projected to stay above their pre-pandemic figures.

▮ 15 Source: IATA Sustainability and Economics

Costs remained elevated

Airlines continued to experience rising operating costs in 2023. Primary contributing factors were inflation, high interest rates, and the elevated jet fuel crack spread. An appreciation of the US dollar and a rise in labor costs have also contributed to the increase in airline costs, putting additional pressure on the industry's profitability. On the flip side, increases in traffic and load factors allowed for a dilution of the unit cost per ATK, which, together with rising yields, enabled a boost in profitability.

▮ 16 Source: IATA Sustainability and Economics, using data from S&P Global, Refinitiv Eikon, IEA

Limited refining capacity in general and competition for that capacity among refined outputs kept jet fuel prices high at above $100 per barrel during most of 2023. The jet fuel crack spread (the price of jet fuel minus the price of crude oil) rose to around $30 per barrel towards the end of the year, a departure from the historic top-of-the-range spread of $20 per barrel.

14 Passenger and cargo revenue split in $ billions

Legend: Cargo revenue (red); Passenger and other revenue (blue)
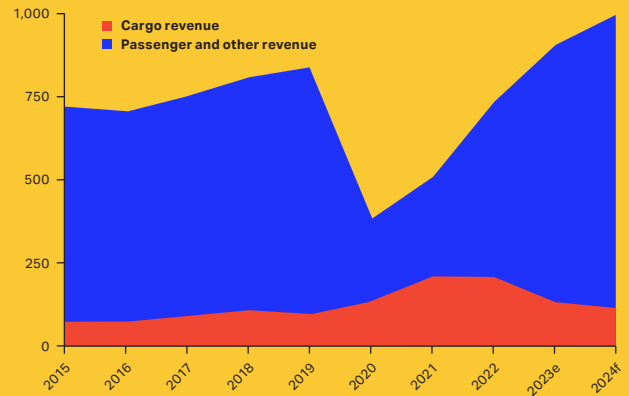
15 Breakeven vs. achieved load factor

Legend: Achieved load factor; Breakeven load factor

18
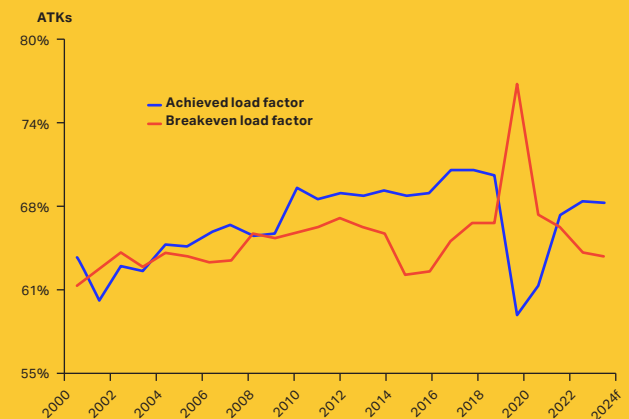
16 Fuel efficiency and the price of jet fuel

$ per barrel | Liters fuel used per 100 ATK

Legend: Fuel use/100 ATK; Jet fuel price
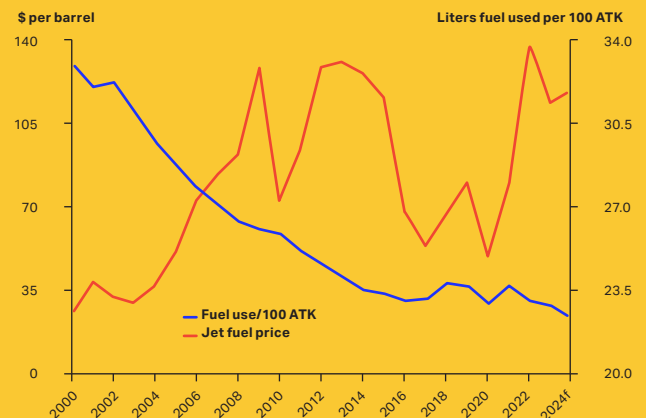
Net profit and regions

Not all of the world's regions contributed equally to the net profit of the industry in 2023. North America and Europe are the standouts and were chiefly responsible for the industry's return to profitability. All other regions however, also broke even on the net profit level.

In 2022, the financial standing of airlines improved across all regions with North American carriers taking the lead and Asia-Pacific carriers lagging. That changed significantly in 2023, when a rebound in Asian traffic garnered Asian airlines a modest profit. In fact, numerous airlines in Asia and in the Americas reported their first profit in many years.

📊 **17** Source: IATA Sustainability and Economics, The Airline Analyst

📊 **18** Source: IATA Sustainability and Economics, The Airline Analyst

Aircraft deliveries

Aircraft deliveries increased in 2023 compared with 2022, to reach 1,390 aircraft, a gain of +12% YoY. Responding to strong demand and seeking to acquire quieter, more fuel-efficient equipment, airlines worldwide have continued to place large orders for new commercial jets. The increase in demand for new aircraft is, unsurprisingly, driven by the three largest regional markets: Asia-Pacific, Europe, and North America.

In 2024, the industry anticipates the highest number of scheduled deliveries since 2018. This, however, is subject to downward revisions. Deliveries have already dropped to 1,625 from the 1,777 reported previously, which implies an 8.5% weaker capacity addition. At the same time, a large share of the global fleet remains parked. Among aircraft of the four major manufacturers, 15% of the fleet was in storage in 2023, compared with the 2000-2019 average of 10%.

📊 **19** Source: IAT Sustainability and Economics using Cirium

17 Airline net profit and EBIT margin development

Profit (US$bn)

- Net post-tax profit
- EBIT margin
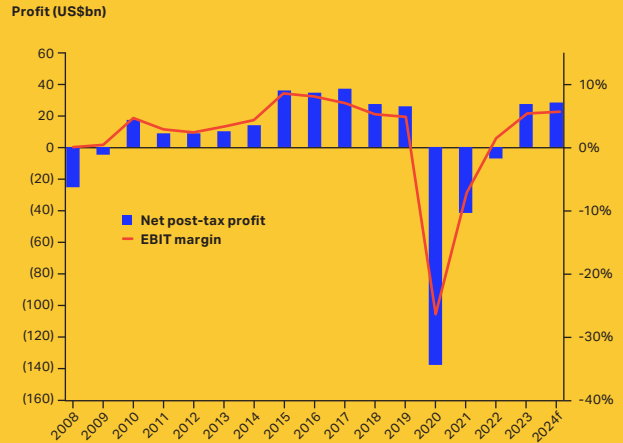
18 Airline net profit in $ billions by region

Africa, Asia Pacific, Europe, Latin America, Middle East, North America

- 2019
- 2020
- 2021
- 2022
- 2023e
- 2024f

19
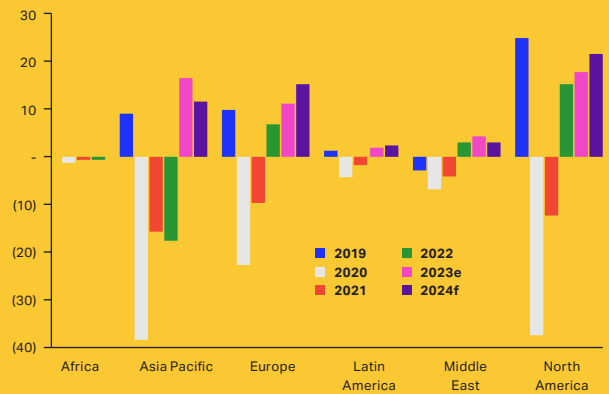
19 Aircraft deliveries by region

- Africa
- Asia Pacific
- Europe
- Latin America
- Middle East
- North America
- Total

1832, 1832, 820, 1054, 1246, 1390, 1625, 2274

2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025

ENVIRONMENT & SUSTAINABILITY
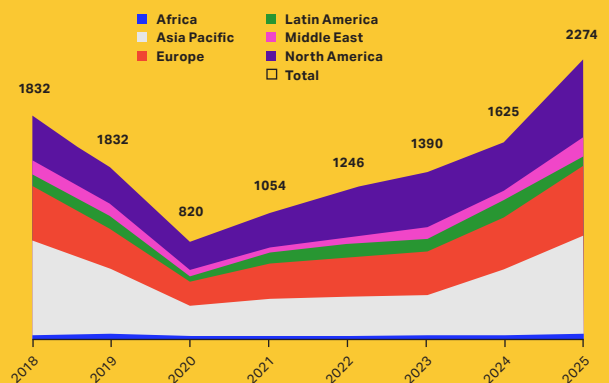
The journey to net zero CO2 emissions by 2050 continues

Reaching net zero CO2 emissions by 2050 and reducing the environmental impact of flying are critical challenges for aviation, its value chain, and stakeholders. Achieving net zero carbon emissions for aviation by 2050 is also a key commitment of governments.

Net zero roadmaps
In June 2023, the industry unveiled five roadmaps providing step-by-step actions and dependencies for aviation to achieve net zero carbon emissions by 2050. These roadmaps address aircraft technology, energy infrastructure, operations, finance, and policy considerations leading to net zero. Policy initiatives lay the foundation on which many of the needed innovations and actions will rest, and these roadmaps will be a crucial reference point for policy makers.

The roadmaps are the first detailed assessment of the key steps necessary to accelerate the transition to net zero CO2 emissions by 2050. The roadmaps were peer-reviewed, facilitated by a modeling tool provided by the Air Transportation Systems Laboratory at University College London that calculates emission reductions for each technology tracked. They will evolve as the industry sets interim milestones, more information is collected, and experience gained.

The roadmaps are not just for airlines. They are a call to action for all aviation stakeholders to deliver the tools needed to make this fundamental transformation of aviation a success.

20
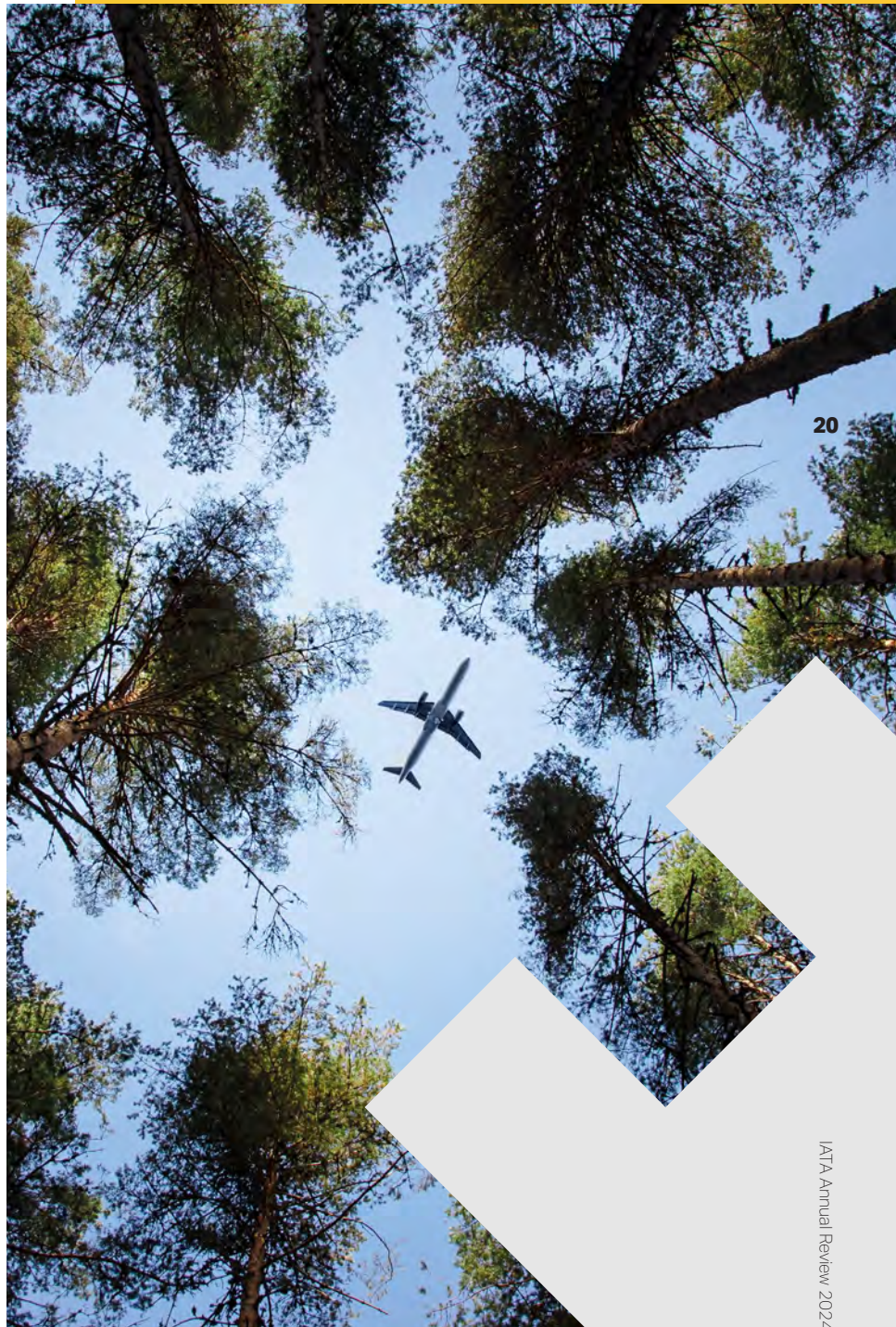
Highlights of each roadmap include:

- **Aircraft technology** encompasses the development of more efficient aircraft and engines. Particularly important are the steps needed to enable aircraft powered by 100% sustainable aviation fuel (SAF), hydrogen or batteries. All development milestones are backed-up by announced investment and demonstrator programs. Also included are new engines, aerodynamics, aircraft structures, and flight systems.

- **Energy and new fuels infrastructure** covers the fuels and new energy carrier infrastructure upstream from airports needed to facilitate the use of aircraft powered by SAF or hydrogen. Renewable energy plays a vital role in meeting the aviation sector's energy demand, and the roadmap outlines milestones to enable the necessary infrastructure developments.

- **Operations** looks at the opportunities available for reducing emissions and improving energy efficiency by enhancing the way existing aircraft are operated. Automation, data management, and the integration of new technologies are key enablers for optimizing air traffic management and enhancing the overall efficiency of the air transportation system.

- **Policy** focuses on the need for globally aligned strategic policies to provide incentives and support for the industry's transition to a net zero future. As with all other successful energy transitions, collaboration between governments and industry stakeholders is crucial in creating the necessary framework to achieve decarbonization goals.

- **Finance** considers options for funding the cumulative $5 trillion needed for aviation to achieve net zero by 2050. This includes technological advancements, infrastructure developments, and operational improvements.

Strengthened global outcome for aviation's decarbonization at the ICAO CAAF/3 Conference

The Third Conference on Aviation Alternative Fuels (CAAF/3) hosted by the International Civil Aviation Organization (ICAO) in Dubai in November 2023 was an important step forward as it agreed a global framework to promote SAF production in all geographies.

The agreement calls for fuels used in international aviation to be 5% less carbon intensive by 2030. At projected growth rates, CO_2 emissions for international aviation are expected to reach 682 million tonnes at this time, meaning SAF and low carbon aviation fuel (LCAF) need to abate some 34 million tons of CO_2. To reach this level, about 17.5 billion liters (14 million tonnes) of SAF need to be produced.

In addition to the 5% CO_2 reduction by 2030 using SAF, CAAF/3 delivered agreement on:

- Acknowledging that certain states have the capacity to progress at a faster pace than others.
- A global SAF market that includes capacity building, a "Finvest Hub", and voluntary technology transfer.
- The need for a solution that can foster a global SAF market while enabling airlines to claim the

Roadmap review

IATA, together with the Air Transportation Systems Laboratory at University College London , the Air Transport Action Group , the International Council on Clean Transportation and the Mission Possible Partnership, released the Aviation Net Zero CO_2 Transition Pathways Comparative Review. This is the first publication to compare 14 leading net zero CO_2 transition roadmaps for aviation. The report aims to provide a "one-stop shop" for airlines, policymakers, and all aviation stakeholders to better understand the key similarities and differences between the various roadmaps, and their visions for achieving net zero carbon emissions for aviation by 2050. Specifically, the report compares the selected roadmaps in terms of their scope, key input assumptions, modeled aviation energy demand, respective CO_2 emissions, and the emissions reduction potential of each mitigation lever (new aircraft technologies, zero-carbon fuels, SAF, and operational improvements).

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environmental attributes of their SAF purchases against their decarbonization obligations, based on a global and robust SAF accounting framework.

A necessary step in building SAF infrastructure is the development of accounting mechanisms that can ascertain the chain of custody, a SAF accounting framework such as Book and Claim. This type of system separates the fuel purchase from its physical location, which simplifies supply chains, increases market potential, and reduces cost. A prerequisite for Book and Claim is that fuel suppliers provide aircraft operators with full and complete sustainability documentation associated with the SAF they have procured or produced. The system should allow stacking of environmental attributes for compliance with multiple or overlapping regulatory requirements under different greenhouse gas emissions (GHG) scopes, understanding that the necessary provisions to avoid double counting are in place. Such mechanisms already exist in other sectors, such as green electricity.

IATA announced that it will establish the SAF Registry to accelerate the uptake of SAF by authoritatively accounting and reporting emissions reductions from SAF. This registry will address the crucial needs of all stakeholders in the global effort to increase SAF production:

● Governments by providing a reliable system to monitor the quality and quantity of SAF used,
● SAF producers by precisely accounting for SAF deliveries and the extent of decarbonization,
● Corporate customers by being able to transparently track their Scope 3 emissions, and
● Airlines by getting assurance that they can claim the environmental benefits of the SAF they purchase.

These elements will facilitate the creation of a global SAF market by ensuring airlines can access SAF wherever it is produced, and enabling SAF producers to reach airlines worldwide.

COP28 landmark agreement
COP28 immediately followed the ICAO CAAF/3 conference. The industry took note of the COP28 outcome, calling on nations to transition away from fossil fuels. This adds momentum for the advancement of renewable fuels globally, including SAF. To move forward, SAF production needs to rapidly increase to meet demand that is already there. Governments must deliver policies to support SAF production, and fuel producers must prioritize investments in renewable fuels.

SAF production increased but still missing opportunities
The industry expects SAF to play the largest role in decarbonizing aviation. IATA estimates that around 65% of the mitigation needed for net zero carbon emissions in 2050 will come from SAF. In 2023, SAF volumes reached over 600 million liters (0.5 million tonnes), double the 300 million liters (0.25 million tonnes) produced in 2022. This corresponds to 0.2% of global jet fuel use. However, SAF accounted for 3% of all renewable fuels produced, with 97% of renewable fuel production going to other sectors. The small percentage of SAF output as a proportion of overall renewable fuel is primarily due to the new capacity coming online in 2023 being allocated to other renewable fuels.

This 3% output from global renewable fuel production is problematic as it limits SAF supply and contributes to keeping SAF prices high. To be on the trajectory needed to reach net zero carbon emissions by 2050, aviation needs between 25% and 30% of renewable fuel production capacity for SAF. Huge opportunities are missed to advance decarbonization due to the lower than needed quantities of SAF available. As such, government support is the only option to make a significant difference. Governments must prioritize policies to incentivize the scaling-up of SAF production and to diversify feedstocks with those available locally.

Carbon Offsetting and Reduction Scheme for International Aviation
The 39th ICAO Assembly established CORSIA (Carbon

"Every drop of SAF produced has been bought and used. SAF added $756 million to a record high fuel bill in 2023."

Offsetting and Reduction Scheme for International Aviation) in October 2016, following the adoption of the Paris Agreement at the UN Climate Change Conference (COP21) in 2015. CORSIA is the only global market-based measure scheme to address CO_2 emissions from international aviation.

Under CORSIA, aircraft operators must purchase and cancel emissions units to offset the increase in CO_2 emissions covered by the scheme.

CORSIA aims to address any increase in total CO_2 emissions from international civil aviation over a baseline. While it was initially foreseen that the baseline would be determined using the average annual emissions between 2019 and 2020 as reference. However,

in June 2020, the ICAO Council agreed that the COVID-19 situation warranted action by the Council to avoid an inappropriate economic burden on international aviation and that 2020 emissions should not be used for the CORSIA design features. Therefore, according to ICAO Assembly Resolution A41-22, only 2019 emissions will be used for the pilot phase of CORSIA (2021-2023), and 85% of 2019 emissions will be used for the baseline in the subsequent compliance phases. (2024-2035).

To ensure the environmental integrity of CORSIA, the ICAO Council has approved a list of eligible emissions units that can be used for compliance. The Council's decision is informed by a recommendation from a Technical Advisory Body and guided by environmental

criteria to guarantee that emissions units deliver the required CO_2 reductions. The criteria are based on principles commonly applied under existing trading mechanisms and accepted carbon offset certification standards.

Offsetting requirements started in 2021. On completion of each three-year compliance period, operators will have to demonstrate that they have met their requirements by canceling the appropriate number of emissions units.

Considering the special circumstances and respective capabilities of countries, ICAO members agreed to implement CORSIA offsetting requirements in phases.

From 2021 until 2026 (Pilot Phase from 2021 to 2024 and First Phase from 2024 to 2026), only flights between states that volunteer to participate in CORSIA are subject to offsetting requirements.

From 2027, all international flights will be subject to offsetting requirements. However, flights to and from Least Developed Countries, Small Island Developing States, Landlocked Developing Countries and states which represented less than 0.5% of the global international Revenue Tonne Kilometers (RTK) in 2018 will be exempt from offsetting requirements unless these States participate on a voluntary basis.

Since January 2024 airlines have to purchase and cancel a quantity of "CORSIA eligible emissions units" (EEUs) to meet their offsetting requirements. To ensure that host countries do not count emissions reductions claimed by aircraft operators under CORSIA towards their national UNFCCC's pledges, "corresponding adjustments" must be made. Under this process a "host country" (the country where the CORSIA EEUs are generated) addresses the concern regarding double claiming. However, the approved programs are currently hesitant to vouch for this, partly

"At least 43 airlines have committed to use some 16.25 billion liters (13 million tonnes) of SAF in 2030, with more agreements being announced regularly."

due to host countries' lack of awareness about how or their reluctance to undertake the corresponding adjustments.

Developing carbon calculation tools and expanding partnerships

IATA launched CO2 Connect in June 2022, with the objective of using member airline data, such as fuel burn, belly cargo and load factors, to provide high-quality per flight passenger CO2 emission calculations. Paired with other IATA and open market data sources, IATA CO2 Connect calculates CO2 emissions for 74 aircraft types, representing ~98% of the active global passenger fleet, and considers traffic data from 881 aircraft operators representing ~93% of global air travel. More than 20 airlines have signed agreements to share their data to contribute to IATA CO2 Connect, including all 13 **one**world alliance airlines. This will further improve the quality and accuracy of the tool, as the percentage of airline-specific fuel burn data used by the calculator will substantially increase.

In March 2024, IATA and the Smart Freight Centre (SFC) announced a partnership to provide consistent and transparent CO2 emissions calculations for air cargo shipments. This is an important step for the global air transport sector to advance its decarbonization efforts as the two organizations will focus efforts on developing the cargo component of IATA's CO2 Connect offering. The collaboration with the SFC Clean Air Transport Program will promote a common methodology in CO2 emission calculations and ensure accurate and consistent CO2 calculations are distributed to the industry's biggest shippers and freight forwarders in air cargo, supporting them with pre-shipment and reporting purposes.

A balanced approach to noise reduction

Noise remains a significant challenge for the industry. Aircraft movements are increasing and a recent World Health Organization (WHO) report recommended noise limits and announced research into possible links between noise and cardiovascular diseases.

Aviation has always taken noise mitigation seriously. To support industry efforts in this area, governments agreed on a clearly defined approach to be applied globally, known as the Balanced Approach. It was first adopted by the ICAO Assembly in 2001 and has been reaffirmed subsequently.

If the Balanced Approach is not followed, and operating restrictions are imposed without considering the first three pillars, the consequences can include:

● **Reduced connectivity.** For passengers, this means an increase in their travel time, their cost, and their inconvenience since there will be fewer flights available. For cargo, reduced connectivity will impact the transport of time-sensitive and perishable goods.

● **Financial implications.** Operating restrictions will affect tourism, business, and trade by increasing costs and reducing the revenues of firms that rely on international markets and international transport.

● **International disputes.** This happened when the United States requested a Special Joint Committee meeting with the EU Commission under the US-EU Air Transport Agreement in the case of Schiphol's airport capacity reduction.

● **Congestion of airports.** Restrictions increase operational complexity and uncertainty for airlines, affecting their fleet planning and historical slots, if any, thereby impacting the passenger experience.

Therefore, following the Balanced Approach to aircraft noise management is critical, as it is the most effective and sustainable way to address noise concerns while enabling the growth and development of air transport.

Non-CO2 emissions

The industry and its stakeholders are working to address the impact of non-CO2 emissions on climate

change, particularly contrails. In April 2024, IATA called for urgent action to deepen the understanding on the formation and climate impact of aviation contrails to develop effective mitigation measures. The IATA report Aviation Contrails and their Climate Effect: Tackling Uncertainties and Enabling Solutions calls for a strengthening of collaboration between research and technological innovation, coupled with policy frameworks to address aviation's non-CO2 emissions through more atmospheric data. The report highlights the complexity of contrail science, noting gaps in the understanding of how contrails form, or when they could persist, and how they impact the climate. The lack of high-resolution, real-time data on atmospheric conditions, particularly humidity and temperature at cruising altitudes, hinders precise contrail forecasting.

Corporate sustainability and airline environmental data management

In April 2024, IATA released the Reassessing Single Use Plastic Products in the Airline Sector report to assist airlines, regulators, and the airline supply chain to mitigate the environmental impacts of single use plastic products (SUPP) and develop, adapt, and implement the solutions best suited to an aircraft's

unique environment. This report provides visibility on the challenges faced by the air transport industry when it comes to SUPP, along with practical recommendations for the industry and its various stakeholders, including regulators. Collaboration across the aviation value chain is vital to enable circular economy principles, while seeking a sectoral approach to facilitate the reduction and replacement of SUPP.

IATA launched EcoHub, which aims to become the single access point for airline environmental data management, reporting, and compliance. By streamlining processes, EcoHub empowers airlines to efficiently fulfill their environmental commitments. The platform safeguards airlines' environmental data and ensures confidentiality and ownership over it. It additionally offers solutions to complex tasks that require powerful support tools. EcoHub provides two essential modules:

● **CORSIA Center:** formerly known as FRED+, a secured platform that supports and facilitates CO2 emissions reporting for aircraft operators and states subject to CORSIA in accordance with ICAO requirements.
● **CO2 Connect:** a secured platform designed for airlines to upload their fuel burn and belly

cargo performance in support of the IATA CO2 Connect calculator. The data is reviewed before being seamlessly integrated into the CO2 Connect calculator, enabling precise and accurate calculations of passenger CO2 emissions.

Sustainability in cargo

Cargo carriers are significantly engaged in sustainability, driven by strong demand from both cargo airlines and shippers for SAF utilization. Moreover, an increasing number of partnerships between airlines, freight forwarders, and shippers are emerging to support the use of SAF. A number of cargo companies have also signed purchase agreements with fuel producers for SAF. However, the challenge lies in the limited supply of SAF.

As the industry advances towards its goal of achieving net zero CO2 emissions by 2050, the transparency and availability of CO2 emissions data linked with cargo shipments become increasingly important. This transparency is not only poised to become a regulatory mandate but also is demanded by customers, who are required to report their emissions. In response, IATA is developing CO2 Connect for Cargo, a tool that facilitates the application of a unified methodology across the air cargo value chain for the calculation and reporting of carbon emissions. Powered by actual airline operational data and adhering to an industry-approved methodology, CO2 Connect for Cargo will meet the rising demand for transparency in CO2 data.

The IATA Environmental Assessment (IEnvA) program for Cargo complements these efforts. Recently expanded to include airports, cargo handling facilities, freight forwarders, and ramp handlers, the program now supports 60 organizations within the industry, encompassing airlines, airports, and cargo handlers.

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A record year for aviation safety

I n 2023, aviation had a record year in terms of safety, with several parameters indicating "best-ever" results. The year saw the smallest number of fatal accidents, with no scheduled passenger jets involved in hull loss or fatal accidents. Furthermore, 2023 also had the lowest fatality risk and all accident rate ever recorded. This achievement is noteworthy given the 17% increase in aircraft movements— from just over 32 million sectors in 2022 to more than 37 million in 2023. A single fatal accident occurred in 2023, on a turboprop aircraft, resulting in 72 fatalities. IATA member airlines and IATA Operational Safety Audit (IOSA)-registered airlines experienced no fatal accident in 2023.

2023 by numbers	2023	2022	5-year average (2019-2023)
All accident rate (accidents per one million flights)	**0.80** (1 accident every 1.26 million flights)	1.30 (1 accident every 0.77 million flights)	1.19 (1 accident every 0.88 million flights)
All accident rate for IATA member airlines	**0.77** (1 accident every 1.30 million flights)	0.58 (1 accident every 1.72 million flights)	0.73 (1 accident every 1.40 million flights)
Total accidents	**30**	42	38
Fatal accidents	**1** (0 jet and 1 turboprop)	5 (1 jet and 4 turboprop)	5
Fatalities	**72**	158	143
Fatality risk	**0.03**	0.11	0.11
IATA member airlines fatality risk	**0.00**	0.02	0.04
Jet hull losses (per one million flights)	**0.00**	0.24 (1 major accident every 4.11 million flights)	0.14 (1 major accident every 4.94 million flights)
Turboprop hull losses (per one million flights)	**0.57** (1 hull loss every 1.76 million flights)	1.76 (1 hull loss every 0.57 million flights)	1.21 (1 hull loss every 1.03 million flights)
Total flights (million)	**37.7**	32.2	32.9

Jet hull loss rates by region of operator (per 1 million departures)

Region	2023	2022	5-year average (2019-2023)
Africa	**0.00**	0.00	0.28
Asia Pacific	**0.00**	0.00	0.19
Commonwealth of Independent States (CIS)	**0.00**	1.18	0.65
Europe	**0.00**	0.16	0.15
Latin America and the Caribbean	**0.00**	1.43	0.29
Middle East and North Africa	**0.00**	0.00	0.00
North America	**0.00**	0.00	0.04
North Asia	**0.00**	0.46	0.12
Global	**0.00**	0.24	0.14

Turboprop hull loss rates by region of operator (per 1 million departures)

Region	2023	2022	5-year average (2019-2023)
Africa	**2.42**	9.40	5.04
Asia Pacific	**0.87**	0.00	0.28
Commonwealth of Independent States (CIS)	**0.00**	0.00	11.40
Europe	**0.00**	0.00	0.00
Latin America and the Caribbean	**0.00**	5.64	1.86
Middle East and North Africa	**0.00**	0.00	0.00
North America	**0.00**	0.00	0.35
North Asia	**0.00**	0.00	0.00
Global	**0.57**	1.76	1.21

Note that CIS sectors may undergo larger revisions than normal once actual flown sectors become available. This will affect accident rate as well as fatality risk calculation.

Regional safety performance

The 2023 all accident rate improved compared with 2022 for all regions with the exceptions of North America and Asia Pacific. No regions experienced a jet hull loss in 2023. Asia Pacific recorded a fatal turboprop hull loss, a loss-of-control accident in Nepal in January 2023 with 72 fatalities. Consequently, all regions except Asia Pacific recorded a fatality risk of zero in 2023.

The number of turboprop accidents declined in 2023 compared with 2022 but turboprops accounted for the one fatal accident last year with loss of life to all passengers and crew onboard. Although sectors flown by turboprops represented about 9% of total sectors in 2023, turboprops were involved in 23% of all accidents and responsible for 100% of fatal accidents involving 72 fatalities.

All regions showed improvement or no deterioration in the turboprop hull loss rate in 2023 when compared with the five-year average except for Asia-Pacific. Africa's turboprop hull loss rate improved in 2023 although it remains high compared with other regions.

IATA is working to support Africa with the adoption of safety best practices to reduce the accident and serious incident rate through the Collaborative Aviation Safety Improvement Program (CASIP), part of IATA's Focus Africa initiative. Through CASIP, IATA is partnering with states to increase the implementation of ICAO Standards and Recommended Practices (SARPs). Only 12 of Africa's 54 states meet the new threshold of 75% or greater (from 60%) SARPs implementation, indicating the need for significant improvements.

Accident types

Challenges persist in critical phases of flight, especially during landing and take-off, with over half of all accidents for the period 2014-2023 occurring during these phases. Factors contributing to these accidents include a range of issues from managing aircraft configuration to aircraft navigation, communicating effectively with air traffic control (ATC), critical functions related to crew resource management (CRM) principles and core competencies. A number of accidents in 2023 were also attributed to non-compliance with standard operating procedures (SOPs), abnormal runway contact, improper manual handling skills, adverse weather conditions, aircraft malfunction, and lack of monitoring and cross-checking.

IOSA

IOSA continues to be one of the hallmarks of IATA's activities in the field of safety, having become the globally recognized standard for airline operational safety auditing since its inception 20 years ago.

IOSA is being adapted into a risk-based audit by tailoring the audit activity to the operator's profile and focusing on high-risk areas. In addition to airlines, IOSA is also being used by numerous authorities in their regulatory safety programs. IOSA-registered carriers recorded no hull losses or fatal accidents in 2023.

- 425 operators are on the IOSA registry, including 100 non-IATA members.
- The all-accident rate for airlines on the IOSA registry in 2023 was 56% better than the rate for non-IOSA airlines.
- The 2019-2023 average accident rate of IOSA airlines was zero, almost three times better than the non-IOSA average.
- The 19 accidents involving IOSA members led to neither hull losses nor fatalities.

Since 2005, the all-accident rate for airlines on the IOSA registry is almost three times better than for non-IOSA airlines. The implementation of global standards improves safety. IOSA's recent transition to a risk-based audit model will contribute to raising the safety bar even higher by focusing on pertinent safety risks while maintaining a baseline of safety. Under Risk-Based IOSA, audits will be tailored to the airline's individual operating profile and history. Additionally, IOSA is introducing a maturity assessment of the operator's safety management system (SMS) and other safety critical programs. As a result, IOSA will become an even more powerful tool to help airlines and regulators to maintain and improve high levels of safety performance.

Safety as a shared responsibility

A strong safety culture within the aviation industry is essential for

"IOSA continues to be one of the hallmarks of IATA's activities in the field of safety."

continuous improvement in all aspects of operations. Creating an environment that encourages the transparent and timely reporting of incidents and accidents is essential to be able to identify systemic issues and prevent future occurrences. IATA is actively working on two fronts to bolster this effort:

● **Enhancing airline safety culture:** In 2023, IATA introduced The Safety Leadership Charter, designed to reinforce organizational safety culture through airline executives committing to the eight IATA safety leadership principles. As of June 2024, more than 70 airlines have signed the charter.

Safety Charter guiding principles

1 Lead obligation to safety through words and actions.
2 Foster safety awareness with employees, the leadership team, and the board.
3 Guide the integration of safety into business strategies, processes, and performance measures.
4 Create the internal capacity to proactively manage safety and collectively achieve organizational safety goals.
5 Create an atmosphere of trust, where employees are encouraged and confident to report safety-related information.
6 Establish a working environment in which clear expectations of acceptable and unacceptable behaviors are communicated and understood.
7 Create an environment where all employees feel responsibility for safety.
8 Regularly assess and improve the organizational safety culture.

● **Encouraging states to provide timely, comprehensive and public accident reports:** An IATA analysis of accident investigations from 2018 to 2022 showed that just over half are published as prescribed by the Chicago Convention. The current shortfall in compliance prevents the aviation industry's various stakeholders from accessing vital information that could significantly improve flight safety. IATA is working with states through the ICAO Accident Investigation Group (AIGP) to understand why accidents are not reported in accordance with ICAO Annex 13. To support this initiative, a five-point accident investigation roadmap has been developed by the IATA Safety Group for states so they have a clearer understanding of how they can best fulfill their obligations under ICAO Annex 13.

Other 2023 priorities
Reducing operational risk is a key priority for the industry. Specific activities include:

● **Loss of Control In-flight (LOC-I):** Although accidents involving LOC-I are low in numbers, they are the leading cause of fatalities in commercial aviation. This was the cause of the sole accident in 2023. Upset Prevention and Recovery Training (UPRT) is an essential mitigation measure to address

and reduce LOC-I accidents. Recognizing the severity of LOC-I, IATA is advocating to ensure regulators and the industry consistently implement ICAO UPRT provisions and IATA best practices. IATA is dedicated to fostering initiatives and taking innovative approaches to address the unique challenges associated with LOC-I accidents and further reducing the fatality risk in this critical accident category.

● **Controlled Flight into Terrain (CFIT):** There were no Controlled Flight into Terrain (CFIT) accidents in 2023.When they occur, however, CFIT accidents account for a substantial number of fatalities. Between 2017 and 2021, six CFIT accidents resulted in 108 fatalities. Ensuring the Ground Proximity Warning System (GPWS) database of obstacles is accurate and remains updated is an IATA priority. The integration of the IOSA recommended practice FLT 4.2.7 into the IOSA Standard Manual edition 16 underscores the importance of routinely verifying the accuracy of the Enhanced Ground Proximity Warning System (EGPWS) database.

● **Runway Safety:** The implementation of proactive measures to promote runway safety remains a top priority for IATA. This effort resulted in conducting a safety risk assessment (SAR) that serves as a resource to assist IATA members in determining if their safety controls are effective. The outcome of the SAR led to a series of recommendations, including an update on tail strike mitigation measures. Efforts are also underway to identify and categorize high-risk unstable approaches.

● **Traffic Collision Avoidance System Resolution Advisory (TCAS RA) Measurement Enhancement:** A focus on TCAS RA events includes identifying hot spot areas with frequent TCAS RA activities, using the Flight Data Exchange (FDX) platform and intelligence from industry airline groups to formulate region-specific action plans. These action plans aim to address and mitigate TCAS RA events, taking into account unique operational factors and challenges in different parts of the world. Together with EUROCONTROL, IATA is working to add new ways to measure and track how pilots respond to TCAS alerts. This effort is part of a larger goal to improve safety and reduce the risk of mid-air collision.

"An IATA analysis of accident investigations from 2018 to 2022 showed that just over half are published as prescribed by the Chicago Convention."

Global Navigation Satellite Systems (GNSS) Radio Frequency Interference (RFI)

Incidents of GNSS jamming and spoofing have been increasingly undermining the reliability of position, navigation, and timing (PNT) services, particularly in Eastern Europe and the Middle East, with similar issues reported globally. Such incidents can pose a threat to aviation safety and operational integrity.

To counter this, the industry needs:

- **Data collection and sharing:** Coordinated efforts are crucial for collecting and sharing GNSS safety-related data. This approach enhances situational awareness and response strategies.
- **Guidance and procedures:** Aircraft manufacturers should provide universal guidelines on handling GNSS incidents. This ensures uniform responses across the aviation sector.
- **Retention of traditional navigation systems:** To counter GNSS disruptions, maintaining a minimal operating network (MON) of legacy navigation systems is essential. They provide a reliable backup, ensuring ongoing operations and safety. IATA member airlines contribute to the determination of the MON in each region via an online survey.

Effective mitigation requires the active collaboration and engagement of all stakeholders. This includes regulatory bodies, industry associations, and aviation operators.

- To support airlines, IATA has been collaborating on this topic with industry stakeholders such as the European Union Aviation Safety Agency (EASA), International Coordinating Council of Aerospace Industries Associations (ICCAIA), the International Federation of Air Traffic Controllers' Associations (IFATCA) and the International Federation of Air Line Pilots' Associations (IFALPA). This advocacy led to a resolution under the International Telecommunication Union (ITU), emphasizing the importance of protecting the radio spectrum for GNSS operations.

Protection of aircraft radio altimeters from interference

Protection of civil aviation radio spectrum allocations and aircraft safety systems remains high on IATA's safety agenda. The rollout of C-band spectrum 5G services in the United States created enormous disruption to aviation, owing to the potential risk of interference with radio altimeters that are critical to aircraft landing and safety systems.

Accepting that spectrum allocations and transmission characteristics for 5G services are not the same in each country, several states have successfully managed to meet the current requirements of 5G service providers while implementing necessary mitigations to preserve aviation safety and ensure uninterrupted services.

As countries issue additional 5G licenses to telecom companies, IATA has called on governments, before deciding on any new spectrum allocations or conducting further spectrum auctions, to ensure coordination and mutual understanding between national spectrum and aviation safety regulators. This is to guarantee that each new frequency allocation or assignment is comprehensively studied and proven not to adversely impact aviation safety and efficiency. Robust testing, in coordination with aviation experts, is critically important in providing the necessary information, even more so as 6G standards are currently being defined.

IATA recognizes the importance of making spectrum available to support new high-speed telecommunications services. However, maintaining the current levels of safety for passengers, flight crews, and aircraft is crucial for aviation.

PASSENGER EXPERIENCE

The end-to-end digital passenger journey

One ID and Contactless Travel continued to transform the passenger journey into a more seamless experience using the capabilities of process digitalization.

A successful end-to-end digital identity proof of concept was carried out with British Airways on the route between London Heathrow (LHR) and Rome Fiumicino (FCO), putting digital identity technologies and their interoperability to the test.

The journey illustrated the potential of a future fully integrated digital travel experience using digital ID and biometrics not only for travel processes but also the shopping experience of travel planning. Utilizing digital identity in retail and service delivery is a key capability that will enhance IATA's Modern Airline Retailing program.

The advantages of this new way to travel are broad:
- **Passengers** benefit from a modern, seamless, contactless experience with enhanced privacy and reduced airport waiting times.
- **Airlines** improve efficiency, save on costs, receive better data quality, and reduce the number of passengers who are refused entry and associated immigration penalties.
- **Airports** reduce queues, optimize space, and enhance their operational efficiency.
- **Governments** improve their border security and facilitation, using advanced tools to combat cross-border criminal activities.

Setting standards

Global standards are key in offering a seamless experience to travelers. These include:

- **One ID Standards**
  - ▶ One ID focuses on the **digitalization of admissibility** and **contactless travel**. Both aim to move processes offsite, allowing passengers to seamlessly move through the airport. The goal is for travelers to arrive at the airport ready to fly, having completed all document checks in advance. They can head directly to bag drop and boarding gates without needing to interact with an agent.
  - ▶ **Digitalization of admissibility** will simplify the verification of passenger documents by enabling travelers to digitally prepare, store, and remotely verify documents such as passports and visas. The initiative ensures that passengers comply with destination requirements before reaching the airport. This streamlines the travel process, enhances security, and improves adherence to international regulations.
  - ▶ **Contactless travel** will enable passengers to share their biometric data and travel details in advance for smooth passage through airport checkpoints without physical contact. This will eliminate queues and reduce waiting times.
  - ▶ The recommended practices for **digitalization of admissibility** and **contactless travel** have been published and the technical standards supporting these were tested in the 2023 end-to-end digital identity proof of concept. A Recommended Practice for Biometric Handling is scheduled for completion in 2024.

- **Standards for digital identity for value chain partners in distribution**
  - ▶ Standards for airlines to verify the identities of their partners through distribution messages were tested in 2023. At the beginning of 2024, the process of onboarding business partners using digital identity for instant verification was standardized and piloted. Additionally, the capability to issue digital credentials to airline distribution partners was also tested.

Understanding digital identity

Digital identity is key to One ID. It is a collection of electronic characteristics and credentials, including both biographic and biometric information, that uniquely identify an individual.

Given their global operations, airlines must comply with privacy laws and regulations across different jurisdictions. IATA's One ID standards prioritize privacy through core principles that safeguard passenger data.

These principles cover:

- **Ownership and consent:** Passengers retain full ownership of their data, providing consent to share their digital identity for travel purposes only with relevant parties, ensuring only necessary data is requested.
- **Opt-in for sharing:** Travelers can voluntarily share digital identity information for a seamless, biometric-enabled journey.
- **Right to opt-out:** Passengers can withdraw from biometric processes at any time, choosing manual processing if they prefer traditional methods.
- **Peer to peer data transfer:** Data control remains with passengers, allowing for direct peer-to-peer data sharing without intermediaries.
- **Need to know basis:** Information is shared strictly when necessary. Governments may receive detailed information for official purposes, and airlines only get basic confirmation, ensuring passengers' privacy and control over their data.
- **Global interoperability:** Industry standards are being developed to ensure compatibility with global, regional, and national digital travel or identity initiatives, such as the ICAO Digital Travel Credential (DTC), and the EU Digital Identity Wallet.

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Eight steps of the future passenger journey

Step 1

Passengers digitally prepare and store essential travel documents.

Step 2

Documents are shared with the authorities of the destination countries for pre-travel approval, with notifications stored in digital identity wallets.
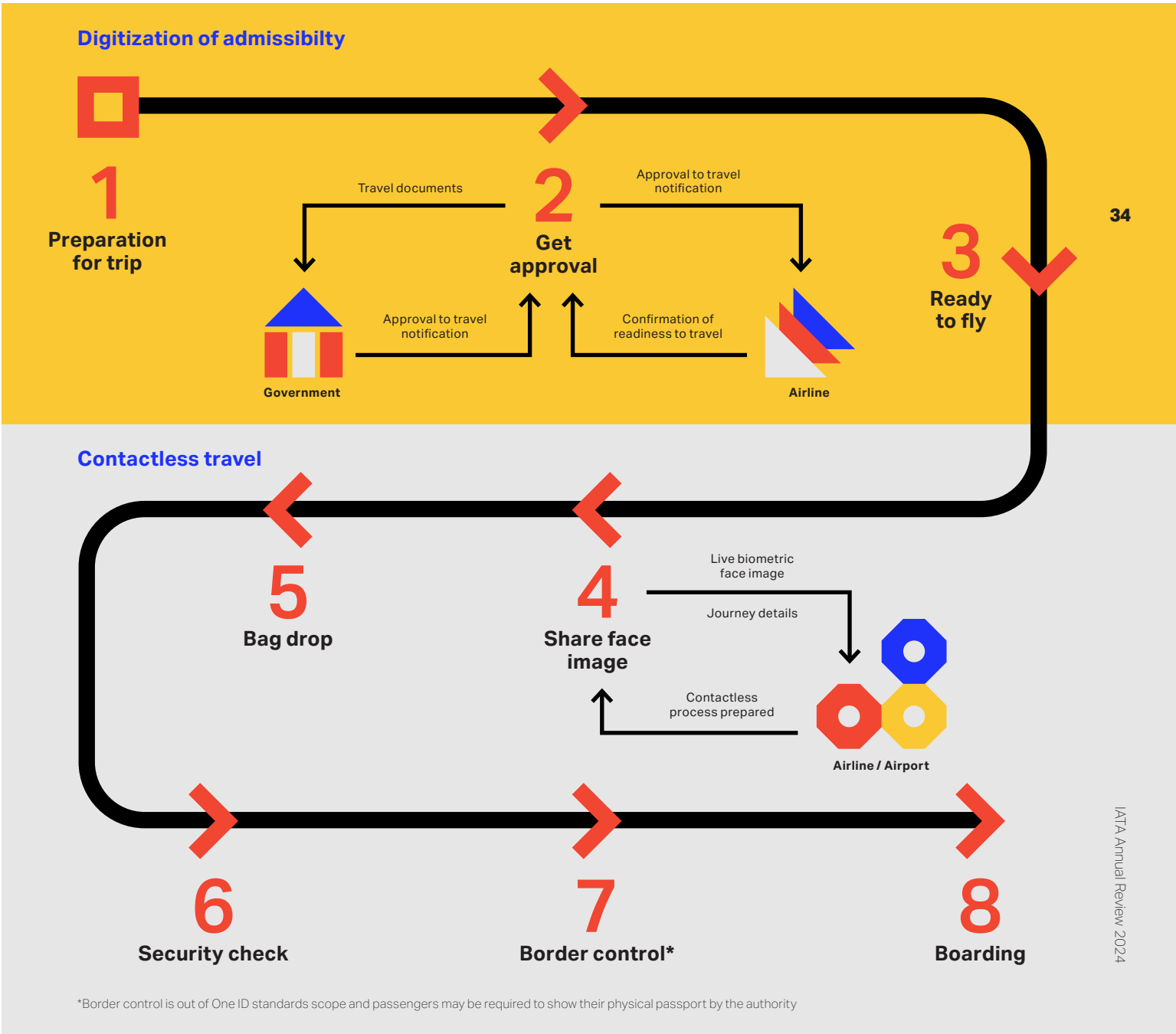
Step 3

Passengers verify their admissibility with airlines through digital identity wallets, confirming they are ready to fly.

Step 4

When a contactless process is available at the airport, the passenger is offered that experience. The passenger can choose to share their biometric face image and journey details with the party responsible for the contactless process in that location.

Steps 5-8

Biometric data enables passengers to navigate airports without physical document checks for bag drop, security, border control, and boarding.

Digitization of admissibilty

1

Preparation for trip

Travel documents

2

Get approval

Approval to travel notification

Approval to travel notification

Confirmation of readiness to travel

Government

Airline

3

Ready to fly

34

Contactless travel

5

Bag drop

4

Share face image

Live biometric face image

Journey details

Contactless process prepared

Airline / Airport

6

Security check

7

Border control*

8

Boarding

*Border control is out of One ID standards scope and passengers may be required to show their physical passport by the authority

Advocating for fit-for-purpose airport development

Airlines are pivotal in providing essential connectivity for passengers and freight, playing a significant role in economic growth at local, regional, and national levels. Airports provide essential infrastructure and services that facilitate air transport on the ground while Air Navigation Service Providers (ANSP) manage airspace infrastructure. It is crucial that both these service providers in the aviation value chain operate efficiently and cost-effectively, in order to sustain the development of air transport and the broader economy.

However, the situation in 2023 fell short of this ideal. Post-pandemic, a number of airports and ANSPs are exploiting their market power in novel ways.

● Providers are trying to have airlines pay for losses they incurred from 2020-2022.

- Heightened political pressure regarding environmental concerns, particularly in Europe, is driving a push towards basing charges on CO2 emissions, noise, and other emissions.
- Providers justifying price increases by citing inflation without demonstrating efforts to offset these costs through efficiency improvements.

Given the monopoly or near-monopoly status of most infrastructure providers, robust oversight by governments and regulators remains essential to prevent unjustified developments and charge impositions. Charges for infrastructure and ANSP should be fair, justified, and reflective of the value offered to airlines and passengers. Economic regulation fostering transparency, consultation, and efficiency is key to enhancing cost-effectiveness at airports.

In 2023, IATA engaged with over 80 airports and ANSPs, working alongside member airlines against unjust charges. Despite these efforts, challenges persist, underscoring the ongoing need for vigilant oversight and advocacy.

Airport development
The necessity for further infrastructure development is clear, yet any significant investment must be supported by a solid business case and extensive consultation with the airlines that finance such developments. Ensuring that infrastructure development aligns with airline growth projections and operational needs is vital. Over development leads to inefficiencies, increased costs, and potentially diminished air travel demand, undermining investment

rationales. Early and mandated airline consultation is crucial to ensure cost-effective capital investments and alignment with airline requirements.

With over $2 trillion forecasted for global airport development in the next two decades—over half in the Asia Pacific region—the industry faces structural challenges such as regulatory inefficiencies, lack of transparency, inadequate airline consultation, construction price inflation, and potentially unnecessary sustainability investments.

Containing these costs while ensuring value necessitates expertise and experience. IATA's increasing role in representing airline interests in consultations on infrastructure development is indicative of this need. To support effective infrastructure development, IATA has developed guidance materials and training resources, including:

- **The Airport Development Reference Manual**, a widely-used guide by airports, planners, and regulators, the upcoming 13th edition content will cover updates regarding sustainability, new technologies, passenger service levels, and more.
- **The Airport Investments to Reduce Carbon Emissions (AIM) framework**, assisting in evaluating the necessity and efficiency of infrastructure investments aimed at achieving carbon neutrality, potentially funded through aeronautical charges.

ICAO Engagement
IATA's engagement with the International Civil Aviation Organization (ICAO) is critical in

setting policies related to charges. Despite challenges, IATA has successfully upheld the core provisions of ICAO's Document 9082 (Policies on Charges for Airports and Air Navigation Services), countering pressures from various stakeholders to weaken its effectiveness. Ongoing engagement with ICAO throughout 2024 will ensure airline perspectives are taken into account when new policy is being considered. This includes, among others, the development of airport design, operational infrastructure, new guidance on airport master planning, obstacle limitation surfaces and the integration of electric and hydrogen infrastructure.

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REGIONAL OVERVIEW

The Americas

Success stories

Nav Canada service fee reduction to yield $50 million savings per year.

Denmark and Iceland overflight fee reduction by 26% and 42% respectively for every 100 km unit.

Revenue cap model in Brazil to reduce airport costs in Brazil yielding savings of $800,000 between 2023 and 2024.

Costa Rica (SJO) 10-year contract extension reduces charges by 14%.

Peak pricing plan by Toronto Airport postponed.
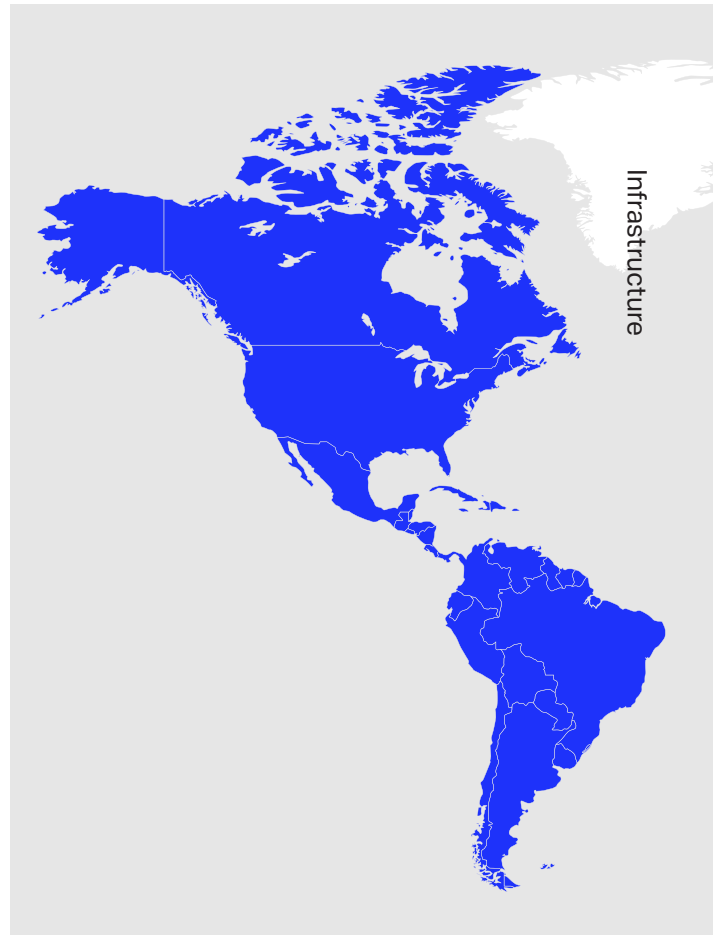
Airport development

Lack of regulated consultation on capital expenditure on airport projects, apart from Brazil (some airports), Canada and the United States.

Airport charges

Concession contracts that adjust airport charges based on inflation remain an issue. Moreover, crown rents at Canadian airports elevate airlines' operational costs.

ANSP charges

Many regional ANSPs raising charges due to inflation. However, higher-than-expected operational levels have led to some reductions for 2024, notably with DENICE (Denmark & Iceland) and Nav Canada. Consultation processes with DECEA (Brazil) and BANSA (Bahamas) are being encouraged. Efforts are underway to minimize the discrepancy between domestic and international flight charges in Ecuador and Argentina.

REGIONAL OVERVIEW

Europe

Success stories

Half of planned price increase avoided at Bucharest Airport.

Prenotification surcharge avoided and removal of CO2 modulation charges at Lisbon Airport.

Airport development

Many airports are ramping up "green investment" either in aeronautical facilities such as Preconditioned Air (PCA) or Fixed Electrical Ground Power (FEGP) – or non-aeronautical ones such as solar panels. IATA is encouraging consultation on investments.
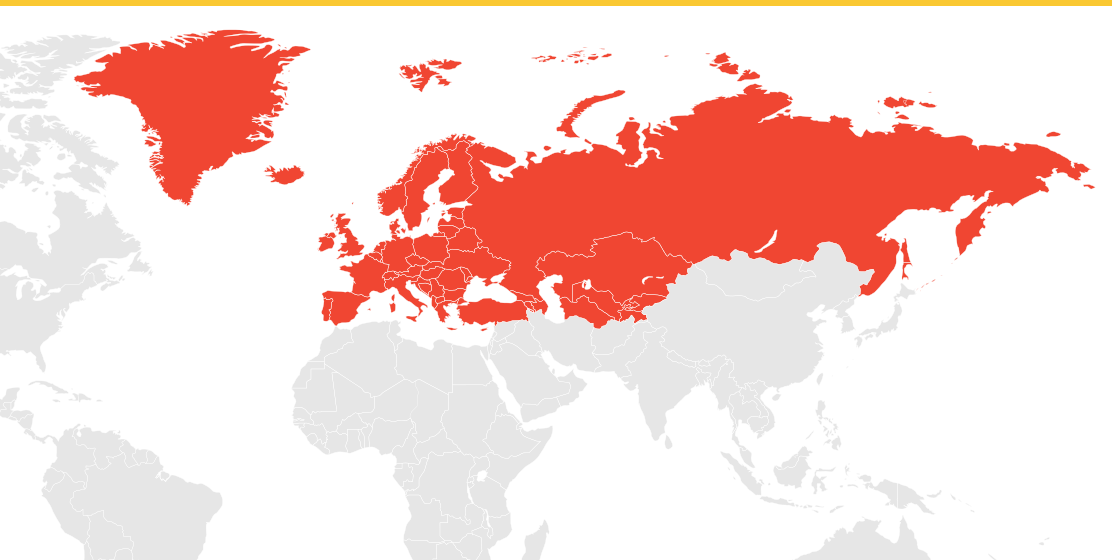
Airport charges

With a new European Commission in 2024, there are discussions regarding a package of EU measures including potential revision of the Airport Charges Directive.

Several European airports, such as the VINCI Airports group are introducing various charges or modulations related to CO2 or SAF. IATA is pushing for overall reductions rather than targeted incentives and demonstrating that modulations have little to no effect.

ANSP charges

2024 has seen movement on the Single European Sky (SES) II+ package, where unfortunately states have agreed to a watered-down version of IATA proposals.

The dilution of the SES initiative's goals may lead to higher operational costs for ANSPs due to inefficiencies, continued fragmentation, delayed technological upgrades, and unmet investment returns. These factors can contribute to an increase in ANSP charges, affecting the cost of air travel and the competitiveness of the European aviation sector.

Middle East & North Africa

Success stories

In Egypt, IATA's engagement with the Ministry of Transportation resulted in a revised approach to the privatization of the countries airports, ensuring the protection of airline interests. Similarly, in Saudi Arabia, IATA's intervention has led to the introduction of one of the region's first economic frameworks for the regulation of airports.

Airport development

Major expansion projects have been announced in several key countries, including Saudi Arabia, the United Arab Emirates, Egypt, Morocco, and Tunisia. Although CAPEX expenditures are subsidized by governments in many of these countries, there remains a risk that overspending could result in higher charges in the future or infrastructure that fails to meet the needs of airlines. IATA has proactively engaged with governments to emphasize the importance of consulting airlines before finalizing plans.
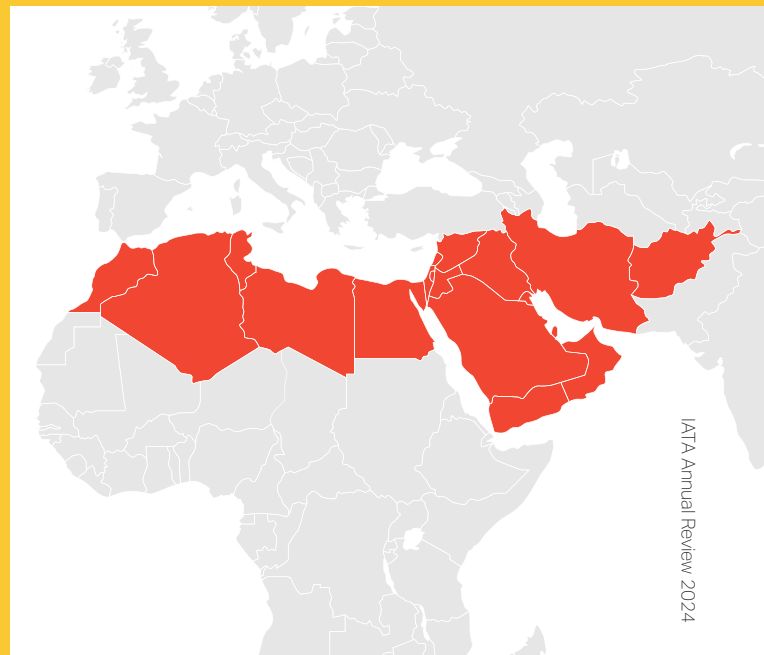
Airport charges

Most airports have no formal economic regulation and charges are simply announced by the government. Most advocacy work on this topic was done with Saudi Arabia, the United Arab Emirates, and Egypt.

ANSP charges

Many Air Navigation Service Providers (ANSPs) operate without formal economic oversight, with charge rates unilaterally set by governments. IATA launched significant campaigns in countries such as Egypt, the United Arab Emirates, Qatar, Saudi Arabia, Iraq, and Jordan.

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Africa

Success stories

South Africa's Ministry of Transport approved a lower rate increase than originally requested by Airports Company South Africa (ACSA) for 2024-2028. Approved tariffs are about ZAR1.6 billion or 10% lower than proposed.

Liberia's proposed security fee postponed.

Malawi plans a 67% cut in its Airport Development Fee.

Sierra Leone has agreed an 18-month delay on new fees.

12-month postponement of security fee hikes in South Sudan.

Airport development

Airport charges are being expanded and raised without user consultation.

Significant investments in airport infrastructure, notably in South Africa, are underway. Additionally, IATA is assisting the governments of Ethiopia and Madagascar with airport development and aiding Nigeria in enhancing airport services and operations.

Airport charges

Inconsistent interpretations of ICAO policies by African states leads to challenges, including a lack of effective economic oversight.

ANSP charges

Collaboration with regional aviation authorities such as ATNS (South Africa), ASECNA (The Agency for Aerial Navigation Safety in Africa and Madagascar), and Roberts FIR (Guinea, Liberia, and Sierra Leone,) on ATM modernization. Through Technical Panels, it influences ANS fee decisions, successfully halting a number of planned increases. Simultaneously, IATA challenges overflight permit fees that violate the ICAO Chicago Convention, advocating for fee removal with ASECNA and clearer ICAO regulations, achieving success in eliminating non-compliant charges.

REGIONAL OVERVIEW

North Asia

Success stories

IATA is working with Airport Consultative Committees (ACCs), which include airline representatives to foster effective engagement. Major campaigns include initiatives at PKX (Beijing Daxing International Airport), PVG (Shanghai Pudong International Airport), and HKG (Hong Kong International Airport).

Airport development

Many airports, particularly those in mainland China, are currently undergoing expansion and reconstruction. This growth is supported by government subsidies to capital expenditure (CAPEX). There is a notable lack of transparency in engaging with users and stakeholders, underscoring the necessity for increased involvement from the industry.

Airport charges

Airport charges schemes have remained stable in the region in 2023 and at this stage there are no significant increases foreseen in 2024.

There is engagement with Chinese Authorities regarding putting the Passenger Service Charge (PSC) on the ticket as China is one of the few countries where this common practice is not applied, allowing passengers to see passenger-based charges included in fares.

ANSP charges

China has implemented a centralized Air Traffic Flow Management (ATFM) system to enhance airspace accessibility and flexibility. In March 2024, the Civil Aviation Administration of China (CAAC) published new "Conduct Rules for Air Navigation Charges (ANS)" to align with ICAO Document 9082 policies.

In Chinese Taipei, discussions are ongoing with the Civil Aviation Administration regarding a proposed increase in ANS charges for overflights in 2024.

REGIONAL OVERVIEW

Asia Pacific
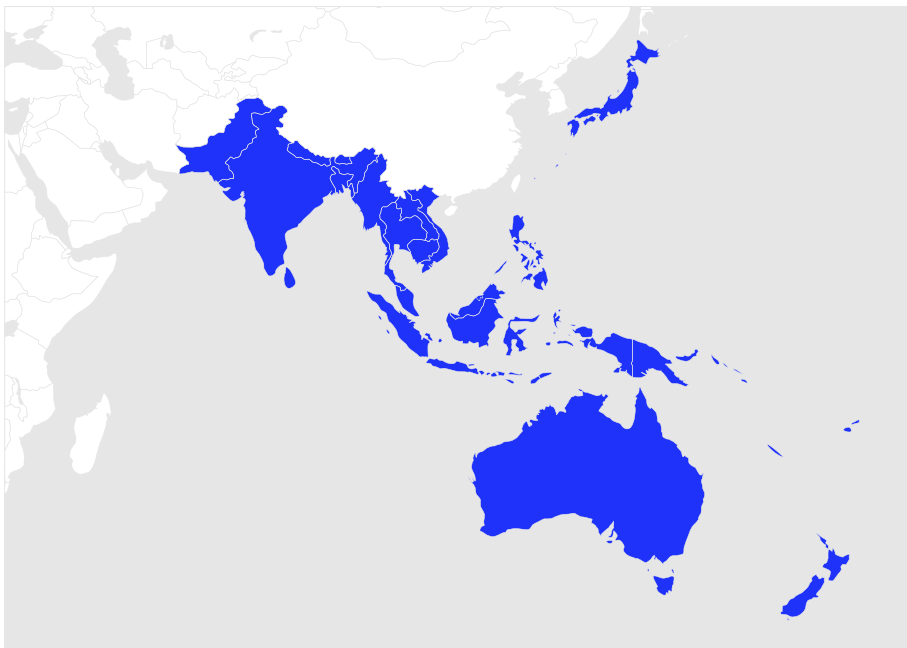
Success stories

Collaboration with local Airline Operators Committees and national task forces helped boost airport capacity and optimize operations before the post-pandemic traffic rise. This collaborative approach has kept airport congestion in the region manageable, and generally less severe than in other areas.

Airport development

The region is experiencing rapid infrastructure growth, with numerous greenfield airports and expansion projects underway. Engagement with airport operators and authorities to ensure a structured consultation process and improved project governance is vital.

Airport charges

Involvement in regulatory reviews in Australia, New Zealand, and India will improve service quality monitoring and airport financial transparency.

IATA also pressed for cost discipline and curbing airport charge increases. Peak pricing postponement was achieved at Narita International Airport (NRT), and Ngurah Rai International Airport (DPS) , the introduction of airport loss recovery charges in Malaysia was prevented, and a noise charge scheme in South Korea was revised.

ANSP charges

There are expected charges increase by many ANSPs between 2023 and 2025, often implemented unilaterally, with consultation being a rarity. Ensuring consultation is a priority for IATA.

Additionally, many ASPAC States, apart from Australia and New Zealand, typically do not adhere to ICAO Document 9082 and its recommendations concerning charges. IATA advocates for greater transparency, consultations, and the creation of economic regulations where absent.

In India and Pakistan, navigating ANSP billing poses unique challenges.

Advocating to improve regulation

Advocacy continued across various regulatory fronts, with IATA engaging with the relevant authorities on topics ranging from airport slots and data privacy to accessibility and consumer protection.

Airport Slot Regulations
Regulation exists to help manage insufficient airport capacity. In such cases, the World Airport Slot Guidelines (WASG) ensure that capacity is managed fairly, transparently, and efficiently. In 2023, the Worldwide Airport Slot Board (WASB) continued to refine the WASG, for example with the inclusion of an update on the provision of slots data to airports by coordinators. This assists with planning and efficiency efforts.

It will further support managing scarce airport capacity in a fair and transparent manner, balancing the needs of competition and access with consistent and reliable schedules for airlines and their passengers.

WASG can only work to maximum efficiency if implemented globally. IATA and its members advocate continuously with governments for closer WASG alignment. Particular efforts are being made in Australia, China, and Saudi Arabia and in response to the EU Slot Impact Assessment. In March 2024, IATA coordinated industry responses to a slot consultation in the United Kingdom.

The twice-annual IATA Slot Conference, which returned to pre-pandemic levels of attendance, also provided valuable advocacy opportunities for carriers to meet with representatives from civil

aviation authorities and transport ministries worldwide. Key industry experts at the June 2023 Dublin Slot Conference were interviewed as part of a video documentary on the slot system, which was distributed to a wide audience via IATA's social media channels and *Airlines* magazine.

Threatened capacity cuts will cause havoc with global slot coordination

The most significant threat to the efficient implementation of the WASG in 2023 was at Amsterdam

Schiphol Airport. In response to noise concerns, the government announced a unilateral reduction in movements at Schiphol from a theoretical limit of 500,000 flights to 460,000 for the summer 2024 season, with a further cut to 440,000 planned beyond that.

The industry reacted strongly, as the proposed cuts would significantly impact slot allocation and grandfather rights. The Dutch government's precipitate action was held to be in breach of the Balanced Approach to aircraft

noise agreed by governments though the International Civil Aviation Organization (ICAO) in 2001. The Balanced Approach is a system for tackling local noise concerns while preserving airport operations and the benefits of growing air connectivity. It is enshrined in EU law and bilateral air agreements entered into by the Netherlands, and specifically holds that operational restrictions, such as reducing flights, can only be introduced after a number of other mitigating steps have been considered.

After a major legal intervention by IATA and multiple airlines, plus the Airlines for America association, and representations by the United States and European Commission, among others, the Dutch Government agreed to return to the previous traffic limits at Schiphol. The immediate benefit of this climbdown was evidenced in the restoration of slots for the airline JetBlue and increasing choice for consumers on the transatlantic market.

The future of Schiphol's capacity remains uncertain, however. The Dutch courts have not yet given their final verdict on the legality of the government's plan, which in theory could be reinstated. Moreover, capacity reductions are also being proposed or have already been implemented at airports in Brussels, Mexico City and Rio de Janeiro (Santos Dumont), along with Dublin, where night flight caps and passenger

"Slot regulations manage scarce airport capacity in an efficient, fair, and transparent manner."
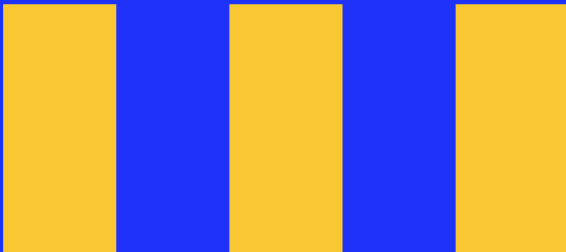
limits have been suggested. The industry will continue to robustly defend the Balanced Approach and the importance of retaining slot capacity at already highly congested hub airports.

Data protection and privacy
At present, there is a patchwork of national data protection laws that don't consider the special characteristics of international civil aviation. These national laws conflict and/or don't recognize foreign laws as a basis for the cross-border transfer of personal data, and often have extraterritorial application. Although airlines aim to comply with all applicable laws, it is now becoming so complex and contradictory that it is difficult to know which data protection laws apply on a particular passenger itinerary.

Airlines have focused on raising awareness of this issue with governments and civil aviation and data protection regulators. In 2023, IATA worked closely with ICAO to good effect, most clearly in the first ever global seminar on data protection and international carriage by air, which was held in Montreal in September.

The seminar's principal outcome was an agreement for a multi-disciplinary study group to assess the issues and deliver high level guidance for countries on the application of national data laws to civil aviation that can be referred to when countries develop, amend, or benchmark their own national laws. IATA will publish its own white paper on the issue in 2024.

Deterring unruly passenger behavior
Efforts continue to deter instances of unruly passenger behavior. The primary focus is to promote the ratification of the Montreal Protocol 2014 (MP14). This provides states

with stronger legal powers to ensure those who are unruly and disruptive face consequences for their behavior. In 2023, the number of countries becoming parties to MP14 increased to 47, representing more than one third of total air traffic.

Additionally, Denmark, Ireland, the Netherlands, and Sweden launched national programs bringing together airlines, airports, ground handlers, police, prosecutors, and airport concessions (especially bars, restaurants, and duty free) to agree actions to reduce the number of unruly passenger incidents. IATA is supporting these initiatives with guidance and examples of best practice.

Meeting the accessibility challenge for passengers with disabilities
It is estimated that more than one billion people (15% of the world's population) have a disability of some kind. As populations age, this number will increase and put further pressure on the travel industry infrastructure and value chain to ensure proper support and access.

The 2023 IATA Global Passenger Survey revealed that 80% of

travelers using special assistance services were satisfied with the level of service they received. This encouraging result reflects the significant work airlines have done in partnership with the supply chain and the disabilities community. In 2023, this work continued across several key initiatives, with a focus on moving from policy positions to practical guidance as soon as possible.

In response to a request from the US Department of Transportation, a special service task force was launched with the scope to:
● Address the need for consistent application of special service assistance by airlines and ticket agents.
● Assess the frequency of training for airline and ticket agent personnel as appropriate to their duties, including consideration of the benefits of annual training.

The outcome will be guidance for travel agents, followed by educational webinars and recommendations to review Resolution 700 on the Acceptance and Carriage of Passengers Requiring Special Assistance.

"It is difficult to know which data protection laws apply on a particular passenger itinerary."

Policy guidance was also developed on 'One Person One Fare'—clarifying the industry position that only one seat should be provided per paid fare. Passengers requiring an extra seat, irrespective of reason, would need to pay for any additional seats they wish to secure per flight. Airlines nevertheless remain committed to working with regulators and travelers with disabilities for proportionate and workable solutions to ensure fair and equal access to air travel.

Improving website information for disabled travelers

In the 2023 IATA Global Passenger Survey, 20% of travelers highlighted that improved website accessibility for booking and reservations should be a priority. Guidance material to help airline websites enhance access to all necessary information for travelers with disabilities has been developed with support from IATA.

The guidance stresses a streamlined approach, enabling travelers with disabilities to access crucial information with just one click from the homepage. It provides best practices on creating clear and intuitive information pathways on airline websites for passengers with disabilities or reduced mobility, ensuring they have direct access to essential details about air travel arrangements and passenger rights.

Benefits of a light touch

Air transport thrives when regulators employ a global approach and work with the industry to ensure regulations have the lightest touch feasible so that competition and choice for consumers can flourish. Unfortunately, not all governments are following this approach. In 2023, regulatory activity on passenger rights moved beyond the Americas and Europe, with governments in Asia and the Middle East becoming more active in this area.

IATA and its members engaged extensively on passenger rights issues in Australia, Canada, Oman, the Philippines, Saudi Arabia, and the United States. The industry worked to persuade governments not to see EU261 (Europe's passenger rights regulation) as a gold standard, pointing out the many gaps and grey areas in the 2004 regulation and highlighting that the European Commission has recognized the need to reform the regulation for over a decade.

Despite being on the books for two decades, EU261 has not seen any improvement in delays or cancelations. Indeed, independent analysis carried out for the European Commission found that the number of delayed flights has increased significantly since delay compensation became payable, coinciding with an increase in air traffic control-related disruption.[1]

1 Steer, Study on the current level of protection of air passenger rights in the EU, 2020

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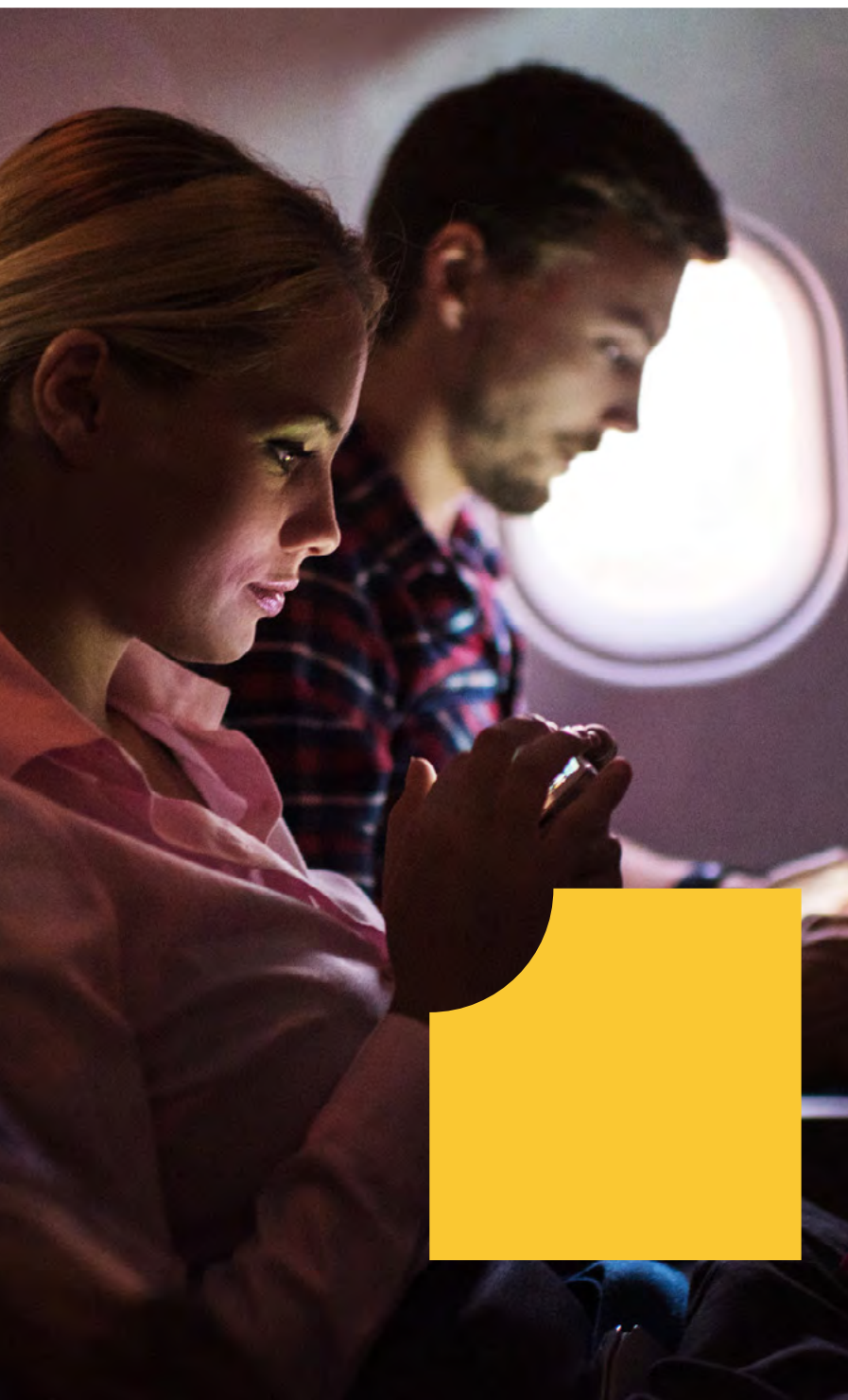
The industry decried the absurd judgement whereby the Court of Justice of the European Union (CJEU) determined that a co-pilot being found dead two hours before scheduled departure did not constitute an extraordinary circumstance and so compensation was payable for the resulting delay.

● The EU published a package of consumer rights proposals in November 2023. IATA engaged extensively with the Commission in the run up to publication of these proposals, but the overarching message was that none of the proposals is a substitute for a full revision of EU261 based on the Commission's proposal from 2013.

● The United Kingdom's National Air Traffic Services (NATS) meltdown in August 2023 was estimated to have cost airlines as much as $100 million in care

and assistance payments—yet the disruption did not cost the air navigation service provider a penny. It gave further credence to IATA's call for shared responsibility for all actors in the aviation ecosystem. Episodes like this and the CJEU judgement illustrate that the current approach to air passenger rights is broken.

Strengthened coordination on air transport and public health

In early 2023, China removed the last of its COVID restrictions and reopened its borders to travel. China followed the pattern established by other nations in seeing a rapid return to pre-COVID levels of demand. In May 2023, the World Health Organization (WHO) finally declared that COVID-19 no longer constituted a Public Health Emergency of International Concern.

But, in the short-term, the China reopening also triggered a final flurry of measures, including aircraft wastewater sampling as a method of detecting new variants. IATA pushed back strongly against the kneejerk introduction of wastewater sampling for flights from China.

The industry considered the measure unnecessary, discriminatory, and almost certainly ineffective. At the same time, IATA recognized the potential for it to be used as an early warning surveillance tool as part of preparedness for future health emergencies.

Several airlines trialed wastewater sampling during the pandemic, and their experience will be valuable in developing a way forward that helps respond to future outbreaks without putting unnecessary burdens on airlines.

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Taxation

Airlines and their customers pay millions of dollars in taxes and charges every year. Moreover, recent years have seen a 'tax rush' as governments have sought additional sources of revenue to tackle high public debt. Consequently, air transport is seeing a spike in tax initiatives, applicable at local, national, regional, or global levels.

The industry continues to make the case for policies that ensure aviation pays its fair share of taxes while also protecting the benefits of connectivity—which delivers value to governments, their citizens, and the economy.

OECD BEPS 2.0

The Organisation for Economic Co-operation and Development (OECD) has instigated a project to ensure a global corporate income

tax at a minimum effective rate of 15% through the implementation of complex mechanisms known as the Base Erosion and Profit Sharing (BEPS) 2.0 Two-Pillars Solution. The industry is engaging with the relevant stakeholders to ensure that the administrative and financial impacts of this approach—primarily targeted at the 'Big Tech' companies and other multinational digital corporations—are mitigated. The proposed policy brings administrative challenges to airlines, including data collection and unbalanced compliance costs. IATA is working with the OECD to ensure this project arrives at an appropriate outcome for airlines.

Article 8 of the UN Tax Model Convention

The United Nations Tax Committee is proposing to revise a policy approach that has worked with proven success for 95 years. It is

suggested that a residence-based approach to corporate income taxation in which airlines are taxed where they are principally domiciled should change to a source-based approach where airlines would be taxed in all jurisdictions in which they generate revenue.

The residence-based approach has been supported by governments in Article 8 of the UN Model Tax Convention, the ICAO Policies on Taxation in International Air Transport, and the Convention on International Civil Aviation (Chicago Convention).

The justification for the proposed change is that it would increase revenue to Least Developed Countries (LDCs). But if such a practice was implemented it would generate considerable complexity for airlines and tax authorities alike, while running entirely counter to the approach of many governments to simplify tax regimes. Most importantly, as most states have one if not many airlines tax domiciled in their jurisdictions, it is expected that there would be limited (if any) gain for LDCs.

Advocacy efforts will continue with the aim of maintaining Article 8 of the UN Tax Model Convention and preserving the economic and social benefits delivered to countries by international aviation—including facilitating foreign investment, trade, jobs, and economic growth. LDCs benefit from all the above.

Residence-based taxation is the most accurate and fair means of taxing international air transport.

Green taxes
Passengers increasingly agree that so-called green taxes on aviation are greenwashing by governments looking to raise cash under the cover of acting on climate change. In fact, such taxes do nothing for the environment. Raising the cost of air transport through tax is a blunt and inefficient means of controlling demand. If a government insists on raising money from aviation under an environmental pretext, it must reinvest the tax revenues in projects that directly cut emissions from aviation, or finance policies that support the transition to net zero CO2. These measures can be, for instance, creating a balanced supply of SAF through establishing regional technology hubs, demonstration projects, supporting green banks, or loan guarantees.

Advocacy efforts continued in 2023 and into 2024 against any form of government revenue generation that brings no benefit to the

environment and further debilitates airlines' financial ability to fund the much-needed energy transition. This includes the mooted European Union Energy Tax Directive, which would add a tax on jet fuel.

Tourism taxes
Imposing new passenger taxes, or increasing existing ones, affects a country's demand and connectivity. The foregone economic benefits— due to the reduced air travel demand—far outweigh the revenue raised from such taxes. On the contrary, there is evidence that removing barriers to air traffic, including tourism taxes, stimulates connectivity and positively impacts a country's GDP, jobs, and overall economy.

The aviation industry robustly opposes any tourism tax, charge, levy, or fee where the resulting revenue is not reinvested in aviation and is merely meant to increase general government revenues. Such practices contradict the Chicago Convention and the ICAO Policies on Taxation in International Air Transport.

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"Despite being on the books for two decades, EU261 has not seen any improvement in delays or cancelations."
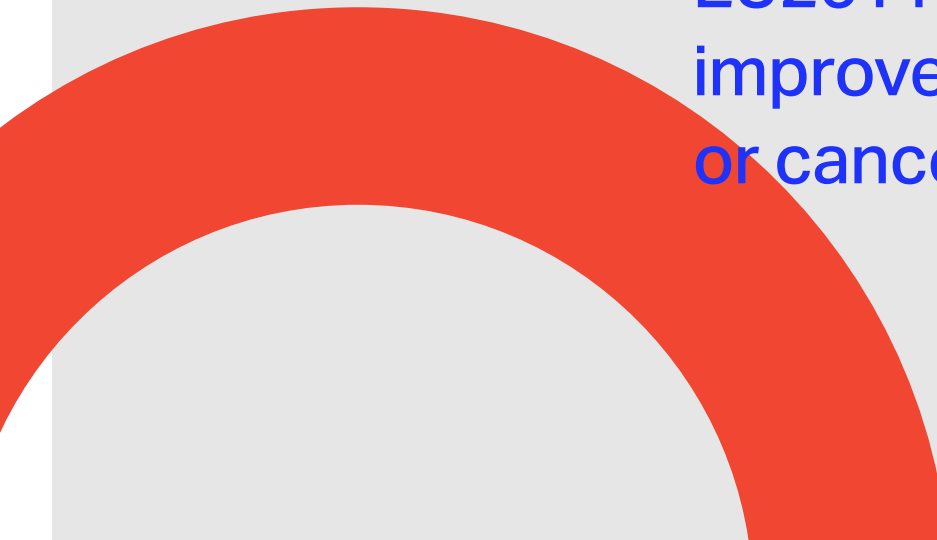
Digitalization, safety, and sustainability head air cargo priorities

Air cargo markets have shown resilience, regaining much of the ground lost in 2022 following the unprecedented peak during the COVID-19 pandemic in 2021. By the close of 2023, full-year demand was just 3.6% shy of pre-COVID levels, signaling a robust recovery and a return to pre-pandemic contributions to airlines' bottom line.

Key issues for air cargo in 2023 included digitalization, safety, and sustainability.

Digitalization

Although the journey towards digitalization started gradually, tangible progress is now visible across the industry. Cumbersome paper-based, manual processes are giving way to digital solutions, enhancing efficiency in cargo operations ranging from tracking to customs clearance.

Notable industry progress has been made in the following areas:

● **Seamless sharing of digital information:** The adoption of the ONE Record standard has significantly enhanced efficient data exchange across the supply chain. The industry is on track to achieve 100% airline capability of ONE Record by January 2026, and there is a concerted effort to extend these digital advantages across all supply chain participants.

● **Digitalization of customs and trade facilitation processes:** The digitalization of customs and trade facilitation processes has seen countries make considerable progress toward facilitating trade, streamlining border operations, and securely managing trade flow. The expansion of pre-loading advance cargo information (PLACI) initiatives underscores the importance of accurate data sharing within the air cargo supply chain, with the United Arab Emirates and Canada poised to implement such programs by the end of 2024.

● **Shipment Tracking**: The surge in pharmaceutical transport and e-commerce has spiked demand for real-time shipment tracking. The updated IATA Interactive Cargo Guidance offers a unified framework for tracking device approval and use, ensuring the integrity of time and temperature-sensitive goods.

● **Commitment to digitalization:** To encourage and recognize the industry's focus on digital advancement, the IATA Digitalization Charter was developed. Adherence to the Charter's principles promotes excellence, security, and sustainability within the digital realm. Seven airlines have signed the charter.

Safety

A new standard for fire-resistant containers (FRC) and fire containment covers (FCC) for aircraft pallets was drafted. This will aid in countering improperly packaged shipments should they be loaded on board.

An increase in the number of airlines contributing dangerous goods incident data to the IATA Global Aviation Data Management program is assisting risk management and advocacy. Over 90 airlines are now contributing data.

● The publication of special guidance for operators to mitigate risks posed

by inexperienced e-commerce shippers.

- An increase in the number of companies becoming CEIV Lithium Batteries certified, emphasizing best practices in safety. The number of companies in the program has grown to 93.
- The strengthening of regulation governing dangerous goods. Updates to ICAO Annex 18 clarify who is responsible for what within the cargo supply chain and how countries oversee these activities.

IATA also renewed and strengthened its partnership with the International Civil Aviation Organization (ICAO), supporting the publication of the IATA *Dangerous Goods Regulations* (DGR). IATA began issuing guidance for the carriage of Dangerous Goods on aircraft back in 1956 and has been updating and devising standards ever since. A more formalized approach on this subject was taken at a regulatory level by the adoption of ICAO Annex 18 in January 1984.

IATA works with the aviation industry to develop the applicable practical tools and operational recommendations. These are issued as the Dangerous Goods Regulations and are global standards applicable to the entire value chain—manufacturers, shippers, airlines, freight forwarders and ground handlers. These regulations include operator variations, supporting documents, tools, guidelines, and notes which are essential for a practical, consistent approach to the safe acceptance, inspection, handling, and carriage of dangerous goods on aircraft.

Sustainability
Sustainability is a key priority for the entire aviation industry, including the air cargo sector. Sustainable Aviation Fuels (SAF) serve as the foundation of the industry's efforts to decarbonize. Cargo carriers are significantly engaged in this area, driven by strong demand from both cargo airlines and shippers for SAF utilization. Moreover, an increasing number of partnerships between airlines, freight forwarders, and

shippers are emerging to support the use of SAF. A number of cargo companies have also signed purchase agreements with fuel producers for SAF over the next few years. However, the challenge lies in the limited supply of SAF.

Transparency and availability of CO2 emissions linked with cargo shipments has become increasingly important. This transparency is not only poised to become a regulatory mandate but is also demanded by customers, who are required to report their emissions to their stakeholders. In response, IATA is developing CO2 Connect for Air

Cargo, a tool that facilitates the application of a unified methodology across the air cargo value chain for the calculation and reporting of carbon emissions. (See Sustainability chapter for further details.)

Additionally, the IATA Environmental Assessment (IEnvA) program for Cargo complements these efforts. Recently expanded to include airports, cargo handling facilities, freight forwarders, and ramp handlers, the program now supports 60 organizations within the industry, encompassing airlines, airports, and cargo handlers.

The Center of Excellence for Independent Validators

The Center of Excellence for Independent Validators (CEIV) was designed to address industry concerns in the handling and transport practices for pharmaceutical, live animal, and perishable shipments, as well as for Lithium Batteries. The CEIV Pharma, Live Animals, Fresh, and Lithium Batteries programs help businesses build robust

operations through relevant processes that are compliant with regulations for each respective special cargo commodity. All CEIV programs are backed by industry standards, which serve as a baseline for developing best practices in the areas of quality management, infrastructure, supplier management, staff competency, and more.

CEIV in numbers

Certification	Number of certifications	Number of certifications in 2023	Number of countries
CEIV Pharma	502	48	64
CEIV Fresh	43	6	21
CEIV Live Animals	30	7	13
CEIV Lithium Batteries	95	41	25

CEIV Lithium Batteries
Representing one third of the dangerous goods transported by air, lithium batteries have become the preferred energy source to power a wide variety of consumer goods, ranging from mobile phones to children's toys to cars and e-bikes. Though widely used, most people are not aware that lithium batteries are dangerous goods that can pose a safety risk if not prepared

in accordance with transport regulations. In some cases, there is even intentional misdeclaration of lithium battery shipments, causing safety incidents.

The Center of Excellence for Independent Validators Lithium Batteries (CEIV Li-batt) is a certification program designed to enable the supply chain of lithium battery products—shippers, freight forwarders, cargo handling

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facilities, and airlines—to meet their safety obligations by complying with the applicable transport regulations. It also enables them to demonstrate their capability and competency in handling and transporting lithium battery products. Since its inception in 2022, the CEIV Li-batt has made significant strides in promoting safety and efficiency in the handling of lithium batteries. The program has successfully certified almost 100 companies worldwide, demonstrating these companies' commitment to adhering to the highest standards of safety and compliance. This progress underscores the program's pivotal role in fostering a safer and more reliable environment for the transportation of lithium batteries products.

Special Cargo certification (CEIV Pharma, Fresh and Live Animals)

Over the last 12 months, the CEIV special cargo certification program expanded, recording a 17% year-on-year growth in conducted validations. As it embarks on its second decade of operation, the program boasts a solid foundation, with 150 organizations successfully certified or re-certified in 2024. Globally, the IATA CEIV programs now comprise more than 700 stations, surpassing 500 within the pharma certification. Given increasing awareness of compliance requirements in the temperature-sensitive air cargo domain, standardization emerges as a pivotal enabler for collective advancement and sustained growth. Therefore, positioned at the forefront of industry certification leadership, IATA directs the trajectory of the entire sector of pharmaceutical air cargo.

- **CEIV Pharma** Transporting and handling pharmaceuticals presents both challenges and opportunities for all participants in the cold chain. The pharmaceutical industry relies on air transport for its speed, consistency, and efficiency in ensuring high-value, time-sensitive, temperature-controlled products reach their destination safely. However, aviation stakeholders sometimes struggle to provide the high-quality services pharmaceutical shippers expect, including expertise, adequate infrastructure, well-equipped facilities, and regulatory compliance. Working alongside aviation industry stakeholders and regulators, CEIV Pharma was created to help organizations and the air cargo supply chain to achieve pharmaceutical handling excellence. CEIV Pharma addresses the industry's need for more safety, security, compliance, and efficiency, through a globally consistent and recognized pharmaceutical product handling certification.

- **CEIV Fresh** As consumer demand for healthy products all year round continues to grow, so does the transport of perishable goods by air, providing supply chain stakeholders with business opportunities. But, with some 12% of total food production being lost due to insufficient refrigeration, every stakeholder also has a responsibility to do its part to safeguard the world's food supply and make it more sustainable. The CEIV Fresh certification is based on the *Perishable Cargo Regulations*, establishing baseline standards and best practices with the aim of ensuring supply chain partners efficiently manage time and temperature to prevent food loss. It provides organizations with the opportunity to become a center of excellence for perishable logistics.

- **CEIV Live Animals** Transporting animals by air is seen as the most humane and expedient method of transportation over long distances. However, to ensure the safety and welfare of animals and avoid additional stress, injury and even death, organizations seeking to specialize in this type of air transportation will need to respect specific requirements. CEIV Live Animals establishes standards to improve the level of competency, infrastructure, and quality management in the handling and transportation of live animals throughout the supply chain. It is based on the provisions of IATA's *Live Animals Regulations* (LAR), which is recognized by bodies such as the World Organisation for Animal Health (WOAH), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the US Fish and Wildlife Service (USFWS), and the member states of the European Union, as the benchmark guidelines for the carriage of live animals by air.

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"IATA works with the aviation industry to develop the applicable practical tools and operational recommendations."

SECURITY

Standards and harmonization needed to support security efforts

In recent years, international aviation security evolved with governments engaging airlines and allowing them to take on a more active role in the development of security rules and regulations. However, in 2023, the evolution stalled, primarily due to escalating unrest and conflicts across Eastern Europe, the Middle East, the Southern Levant, and Africa. Even in the absence of direct ties to specific threats or vulnerabilities, governments continue to embed unilateral countermeasures into national regulations.

An example of this is **ICAO Annex 17 Aircraft Operator Security Program (AOSP)**. In 2022, AOSP underwent a significant overhaul to eliminate the substantial and unnecessary administrative duplication burdening the industry. A key benefit of the revised standards is the mutual recognition of AOSP between countries, which reduces redundant approvals and thereby enhances operational efficiency. However, enthusiasm for implementing these new standards has been tepid, influenced by the current geopolitical climate. IATA continues its engagement efforts at government level to accelerate the adoption of these improvements.

At the same time, airport security processes consistently rank among the top three passenger frustrations, as highlighted in IATA's Global Passenger Survey. IATA continues to advocate that the passenger journey should be streamlined so travelers can keep all permitted items in their bags and require only a single screening—be it physical or digital—when they first enter the travel system, irrespective of their subsequent destinations. However, this ideal is far from the current reality, due to a patchwork of security measures and a lack of mutual recognition between states for international connections. Instead of moving toward this vision, a regression has been observed. Examples of these include:

- **Liquids, aerosols, and gels (LAGs).** Since 2006, passengers have faced restrictions on LAGs in cabin baggage despite advancements in explosive detection technology. Although the European Union and the

United Kingdom have aligned restrictions with improved detection capabilities, leading to a phased-out approach, the United States continues to enforce strict prohibitions, illustrating a disparity in the application of LAGs security measures. Adding to the confusion, in 2023, the International Civil Aviation Organization (ICAO) released an Electronic Bulletin that urged states to maintain LAGs measures, despite existing adequate standards and recommendations as per Annex 17.

- **Computed Topography (CT) Scanners.** A conflict between EU legislation and US security requirements due to algorithms of new CT machines, has prompted some states and airport operators to delay deploying advanced cabin baggage screening technologies. These new systems can detect both solid and liquid explosives without requiring passengers to remove LAGs or large electronic devices from their bags. Although efforts are underway to resolve these issues, a more harmonized approach could have prevented these delays.

- **Hold Baggage Offloading.** The industry continues to seek improvements to the historical ICAO guidance on hold baggage security, in line with the vision of shifting toward a more collaborative, risk-based security approach that promises increased efficiency and effectiveness. Airlines offload baggage if the corresponding passenger fails to board the aircraft, often

resulting in significant departure delays. In response, IATA is championing a more flexible process that allows airlines to make operational decisions based on assessed risks.

From an industry perspective, reviving the balanced approach is essential to streamline security efforts and provide a better customer journey experience. Topics that need to be addressed include:

- **Security Management Systems (SeMS).** SeMS are the key to transforming global aviation security. These systems advocate for dynamic, risk-based, and outcome-focused solutions, making SeMS vital to modernizing security practices. Although ICAO guidance recognizes the SeMS approach, its implementation by states has been slow, often hindered by a preference for stringent regulatory controls with limited flexibility. To facilitate wider adoption, IATA is collaborating with ICAO to enhance SeMS guidelines and is also promoting a grassroots approach. Many of IATA's member airlines have already incorporated SeMS into their security protocols via the IATA Operational Safety Audit (IOSA), and efforts are underway to expand SeMS recognition and implementation industry wide. These efforts include extending SeMS to external service providers, promoting an industry-wide, risk-based approach to security management for 2024 and beyond.

- **Digital ID.** The increasing use of digital identity documents in travel has the potential to have a significant impact on aviation security and operational improvement. Many travelers have expressed a willingness to share personal information for a seamless travel experience. Several countries are already trialing the use of Digital ID to process passengers more effectively, including the Transportation Security Administration in the United States for domestic travel. IATA will continue to support the industry's call for integrating digital ID into security checkpoints to improve the process.

Cybersecurity

Cyberattacks are escalating across various sectors, including aviation. Airlines face growing threats from ransomware, data theft, and targeted disruptions. Preparedness at the highest level is essential, particularly in light of the rapid introduction of new digital technologies across the aviation value chain. Moreover, as aviation cybersecurity regulations around the world develop, airlines and their supply chains need to ensure that they can comply with forthcoming regulations.

IATA strategically engages in efforts to secure the aviation information technology supply chain with the Aviation Information Sharing and Analysis Center (A-ISAC) and its subject matter expert members from all around the globe and industry. Meeting monthly in-person and virtually, the third-party risk assessment community of interest is providing a first of its kind aviation focused cyber risk assessment framework. The framework is propelled by industry standards such as the National Institute of Standards and Technology (NIST), the International Organization for Standardization (ISO) 27002 for information, cybersecurity, and privacy protection, and 27036 for supplier relationships.

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> "Digital identity could have a major impact on security."

Tactically, IATA operationalizes cybersecurity best practices and real time cyber threat intelligence with the A-ISAC and its members on a continuous battle rhythm. The information sharing allows IATA to better prevent, detect, respond, and remediate cyber threats. Additionally, it provisions an environment that ensures the best minds from the aviation cyber security industry are building relationships to enhance the knowledge base for areas of responsibility and insights for areas of interest. This will help secure the aviation sector as a whole ecosystem.

IATA continues to work in collaboration with the Cybersecurity and Resilience Management Working Group on an Aviation Cybersecurity Framework. This framework will include standards and guidance materials aimed at strategically enhancing the cyber resilience and maturity of airlines, as well as improving their cybersecurity management programs.

From the perspective of international cybersecurity regulations, the ICAO Trust Framework and Cybersecurity Panel are developing foundational guidance for regulators. This material will propose aviation cybersecurity policies and measures to address evolving cyber risks. Harmonized implementation of ICAO's requirements is essential for supporting airlines operating internationally, ensuring consistent standards worldwide.

Airlines, like all businesses, increasingly rely on technology and communications links across the supply chain. This extends to aircraft, which have complicated supply chains and, in operation, interact with many parties. Assessing and mitigating the risks requires cyber security by design thinking, so that resilience is built into systems rather than added after they are in operation.

The Baseline Call Initiative

With security remaining a top priority for the industry, IATA, in collaboration with aviation value chain stakeholders and government regulators, has been convening a critical information sharing activity focused on preventing and responding to emerging geopolitical risks worldwide.

This is a result of industry calls to governments to diligently work on methods to provide threat information in a rapid and efficient manner. The IATA-hosted information sharing "Baseline Call" is a high-level activity for states, airlines, and industry partners taking a no-surprises approach to risk management. The Baseline Call allows stakeholders to collaborate in an unclassified setting and achieve broad awareness of emerging, active threats and risk concerns to civil airspace and airports exposed to militarized hostilities. Although the Baseline Call is not the technical solution, it is a venue where aviation stakeholders provide, and obtain, information that they may not have the ability to independently acquire.

This initiative has been greatly enhanced by the participation and contributions by some of IATA's Strategic Partners. These organizations offer a distinct value to civil aviation and complement IATA's public-private partnership strategies. They are experts on transportation security policy, regulation and operations, threat and risk management organizations, and are aware of airline security concerns. The information provided by these partners is also widely accepted by the government subject matter experts participating in the Baseline Calls. More importantly, the IATA Strategic Partners can provide their commentary on open-source intelligence and strategic threat assessments (conflict zones, insider threat and others) ensuring IATA members have timely access to crucial information.

The safety and security of civil aviation are paramount for IATA and its members. Strategic Partners not only support these efforts but also bring unique skills and insights that are typically unavailable in most marketplaces.

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DIVERSITY & INCLUSION

A catalyst for change in the aviation industry

The 25by2025 initiative was launched in 2019 to address the gender gap in the aviation industry. Fast forward to 2023 and progress is visible across the entire aviation value chain. The industry's growing focus on diversity and inclusion has amplified the importance of having representation at all levels of an organization. Nearly 30 female CEOs took the reins at airlines in 2023, with RwandAir's Yvonne Manzi Makolo and KLM's Marjan Rintel serving on the IATA's Board of Governors.

The number of 25by2025 signatories grew by 32 in 2023, bringing the total to 208. Although this growth is significant, so is the data being collected from all the signatories on Diversity, Equity, and Inclusion (DEI) from across the industry.

Female representation is on the increase, with the number of women in senior roles growing from 24% in 2021 to 28% in 2022. Interestingly, this shift continues to take place across several other areas, including engineering and the flight deck. In absolute terms, there was 1,000 more women in pilot roles. The average number of female pilots grew from 4% in 2022 to 5% in 2023—with India leading the way with 11% of female pilots overall.

An airline's commitment to gender diversity has also gained in importance in the decision-making process of passengers, with nearly a third stating that they are taking this into consideration when choosing airlines. The April 2024 edition of the Passenger Trends & Insights report observed this across all age groups with 37% of those between 25-34 seeing this as a priority, followed by 35% for both those aged 18-24 and 35-44.

IATA Diversity and Inclusion Awards
Driving change is achieved through recognizing those who play an active role in advancing gender balance. In 2023, there was a record number of 89 nominations for the IATA Diversity & Inclusion Awards. These annual awards—sponsored by Qatar Airways—recognize

to inspire the entire aviation value chain to drive DEI initiatives. These initiatives were strengthened with the introduction of the DEI maturity self-assessment survey, which enables 25by2025 signatories to identify strengths and areas of improvement, and benchmark themselves against their peers. The assessment tool comes with a set of guidelines and recommendations to implement, serving as a useful instrument to further advance DEI within the industry.

The increased focus on data prompted IATA to partner with Amazon Web Services (AWS) to organize the first ever Diversity & Inclusion datathon. This addressed the challenges of using data along with new technologies and demonstrated the impact of DEI to CEOs. The aim was to redress the gender balance on the flight deck and in other technical roles. The winner of the datathon, SMBC Aviation Capital, demonstrated a positive correlation between gender balance on airline senior management teams and Environmental, Sustainability and Governance (ESG) scores to a CEO. In addition, a data-led model was created that analyzed airlines across 12 countries, focusing on metrics around financial and ESG performance. Finally, a sector-specific Aviation Gender Equality Index was built to track performance of the entire value chain in promoting gender equality through policy development and representation.

Getting ready for 2025
These ongoing initiatives are not merely preparations for 2025, but are the building blocks of a more inclusive future. As 2025 approaches, the impact of 25by2025 will not only be discussed but also the milestones achieved will be celebrated and the ambitious next steps unveiled. This is more than addressing an imbalance. It is about reshaping the industry to be as diverse as the world and setting a new standard for diversity and inclusion.

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women and organizations that are at the forefront of prioritizing diversity in the industry. The 2023 winners included: Inspirational Role Model—Poppy Khoza, Director of Civil Aviation, South African Civil Aviation Authority (SAACA); High Flyer—Camila Turrieta, Chair of the President's Committee for Diversity & Inclusion, Air Line Pilots Association (ALPA), and First Officer,

JetBlue Airways; and Diversity & Inclusion Team—Virgin Atlantic.

Best practices
Fostering a diverse and inclusive workforce does not happen in isolation but requires all players to take an active role. To facilitate this, a report giving an overview of DEI best practices was jointly commissioned by PWC and IATA

"Ongoing initiatives are the building blocks of a more inclusive future."

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MODERN AIRLINE RETAILING

Retailing with 100% Offers and Orders

I n December 2022, IATA launched the Modern Airline Retailing (MAR) initiative to support airlines' focus on greater customer centricity and value creation, irrespective of the distribution channel and across multiple touchpoints throughout the customer journey.

The industry's focus is now shifting from the traditional ticket sales mindset to a more multifaceted approach that encompasses aspects critical to customer centricity. This includes more personalized offer creation, diversified and seamless payment transactions, and efficient order delivery.

100% Offers and Orders

At the crux of the MAR initiative is retailing with 100% Offers and Orders.

- In retailing with offers, airlines create personalized suggestions for passengers, based on their preferences, travel history, and context (leisure vs business travel, for example). These offers extend beyond the air ticket, and can include ancillary services, such as seat upgrades, extra baggage, lounge access, and in-flight meals. Every interaction with a passenger is an opportunity for recognition and to provide value.
- In delivering with orders, e-tickets, electronic miscellaneous documents (EMD), and passenger name records (PNR) get consolidated into a single passenger record—the order. The delivery and servicing processes are simplified, and the passenger has a seamless travel experience, even in the case of disruptions.
- All this will be underpinned by IATA's One ID standard, allowing passengers to streamline their journey with advance information sharing. Airlines can offer a seamless experience across different channels and touchpoints, including during the shopping process, should the customer choose to be identified.

In late 2023, the IATA Board of Governors asked IATA to develop a high-level roadmap for 100% Offers and Orders for the air transport value chain.

Implementation status

The industry has made significant strides since the launch of the MAR initiative.

- **NDC has entered its maturity phase with leading airlines already realizing benefit.** Some airlines have seen their distribution costs reduced by over $100 million, achieved a 1.5%–2% revenue increase from continuous pricing (by being able to offer more lower prices to customers), and a substantial growth in ancillary sales, with some airlines reporting a five-to-ten-fold increase. Global Distribution Systems (GDSs) such as Amadeus, Travelport,and Sabre are now able to act as aggregators by consuming NDC content and are connecting to an increasing number of airlines.
- **Leading airlines are spearheading the adoption of ONE Order** through the work carried out by the IATA Retailing Consortium. This transition away from e-tickets, EMDs, and PNRs is also actively supported by the technology providers.
- **Digital Identity—another pillar of the MAR initiative—delivered the first proof of concept** across the end-to-end journey, demonstrating the possibility of delivering a seamless customer experience, from shopping for travel to airport delivery and biometrics.
- **Payment and settlement are now on the radar of adopting airlines.** Modern retailing will make it easier for airlines to offer more payment options to travelers and accelerate adoption of alternative forms of payment, for the benefit of their customers.

It is also worth noting that in a world of retailing, the IATA Billing and Settlement Plan (BSP) remains just as valuable and accessible as it is today. A payment component has also been added to the Airline Retailing Maturity (ARM) index. The index was launched in 2021 and

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"Some airlines have seen their distribution costs reduced by over $100 million."

provides airlines and their partners with improved visibility of their own retailing journey compared with that of other anonymized organizations. Despite the progress, more work is required to expand and harmonize the adoption across the whole travel value chain, particularly in business travel, which is more complex as it requires robust servicing and interlining capabilities.

Addressing challenges and identifying opportunities

The IATA Airline Retailing Consortium (see box) is an accelerator for this transition away from legacy artifacts and processes to 100% Offers and Orders.

The Consortium's three key releases in 2023 addressed the "Why", "What", and "How" of the industry transition to modern retailing through:
- a business case
- a reference architecture describing the business capabilities airlines are expected to have in the world of Offers and Orders
- a roadmap of generic IT transition pathways to help airlines assess their journey.

Collaboration remains critical for success

The MAR initiative is a once in a lifetime transformation for the airline industry that will have an impact on all airlines. IATA's primary role is to support its members throughout this journey so that no airline gets left behind. This means ensuring all members have access to the relevant capabilities and resources needed to make their own strategic decisions and determine their pace of change. For example, the Consortium airlines have the journey to 100% Offers and Orders on their radar and others will follow at their own pace.

Value chain alignment and collaboration remain vital because airlines, agents, and technology providers need to work together for the transformation to be successful. This also applies to airlines who need to ensure internal alignment

Airline Retailing Consortium

In 2024, the Consortium welcomed three additional members, bringing the total to 16: Air Canada, Air France-KLM, Air India, American Airlines, British Airways, Cathay Pacific, Emirates, Finnair, Iberia, LATAM, Lufthansa Group, Oman Air, Qatar Airways, Singapore Airlines, Turkish Airlines, Xiamen Airlines.

The Consortium member airlines continue to provide actionable insights and guidance to help accelerate the industry journey to 100% Offers and Orders.

Since the beginning of 2024, the Consortium has delivered a set of procurement considerations for a world of 100% Offers and Orders, which will offer airlines support in their engagement with technology providers.

A sequel to the 2023 business case is also available. Based on interviews with 15 airline senior executives, it provides further insights into the way leaders have engaged and convinced their executive committees to embark on this journey.

Another critical piece of work examines the implications of 100% Offers and Orders in airport delivery: when legacy artefacts such as e-tickets, PNRs, and EMDs are replaced by orders, the customer experience can be completely revamped to make it much smoother, even in times of disruption.

Finally, as this is a complex ecosystem with strong dependencies among all the players, the Consortium will also be carrying out an industry transition study to build a coherent roadmap with key dependencies. It will focus on sellers, regulators, IT providers, and other verticals, such as hotels and rail operators, to understand how they may each be affected by this transformation in their interactions with airlines.

The goal of all these activities is to help accelerate the industry's journey and to reduce the barriers to entry for any airline that wishes to embark on the journey.

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across many different functions, such as sales, revenue management, distribution, finance, and IT.

Airline leaders driving retail transformation in their organizations have voiced significant challenges in developing the new workforce needed to support their new retail strategies. These challenges can include difficulty in finding and hiring good skilled people across the industry and shifting mindsets from traditional roles. Airlines realize this is not a tech-first change, and they are bringing talent into the strategy of the overall retail transformation. As one of the key training providers

for the aviation industry, IATA is presently working with its members to assess requirements and explore how it can support them in these areas.

IATA also continues to engage with corporate buyers and travel agents to gather feedback on implementations and any enhancements that need to be considered for the standard. These groups are the Travel Manager Advisory Group, which comprises over 40 corporate buyers in Europe and North America, and the Global Travel Executive Council, which comprises over 20 business travel agents from across the world.

Ensuring the industry's financial efficiency

The IATA Financial Settlement Systems (IFSS) play a critical role in facilitating the swift, secure, and reliable movement of funds across the air travel value chain. Due to the strong industry recovery, in 2023 the IFSS processed $445.3 billion (excluding $18.2 billion in refunds), up 22.6% from the $363.3 billion in 2022 (excluding $18.5 billion in refunds). It did so while maintaining extremely high levels of efficiency and security.

The Billing and Settlement Plan (BSP) expedites and simplifies the selling, reporting, and remittance procedures of IATA-accredited travel agents and improves financial control and cash flow for approximately 400 airlines. In 2023, the BSP processed $225.0 billion (excluding $18.2 billion in refunds). At the close of 2023, there were 153 BSP operations covering 183 countries and territories. Their overall, on-time settlement rate was 100.0%, compared with 99.998% in

2022. The unrecovered default rate in 2023 was 0.010%.

The Cargo Account Settlement System (CASS) simplifies the billing and settling of accounts between airlines and freight forwarders. In 2023, CASS processed $42.7 billion, with an on-time settlement rate of 100%. At the end of 2023, 89 CASS export operations and eight CASS import operations were serving 282 general sales and service agents (GSSAs), 200 CASS

The IATA Currency Clearance Services (ICCS) is a global cash management system that enables more than 388 airlines to centrally control and repatriate their BSP and CASS sales, including from countries with currency liquidity issues. The ICCS processed $38.5 billion in 2023.

Simplified Invoicing and Settlement (SIS) is a cost-effective electronic invoicing platform legally compliant for e-invoicing in 47 countries. It enables the exchange of electronic data among airlines and between airlines and direct operating cost suppliers. The use of a single standard, the IS-XML, simplifies business activity for the industry and allows suppliers to use one invoicing standard for all their airline customers.

SIS automation and cost control can save companies 0.5% to 2% on operating expenses through fast, efficient, and secure electronic invoicing. Improved invoice quality also drives savings for its participants (airlines and suppliers) and better control of operating costs.

In 2023, SIS had 106,933 participants, including 472 airlines, 440 suppliers, 2,220 other entities (air operators, GSSAs, GSAs, etc.), and 103,801 IATA accredited agents. SIS processed over 1.52 million interline and supplier invoices in 2023 and settled more than $76.4 billion.

The Enhancement & Financing (E&F) service gives air navigation service providers and airports access to IATA's globally trusted settlement systems and processes for accurate billing data, standardized e-invoices that can be automatically validated, and secure fund collection. E&F helps airlines avoid late payment penalties, reconciliation problems, and disputes through a standardized billing process with a single point of contact for questions or disputes. In 2023, E&F processed $3.7 billion.

export airlines, and 63 CASS import delivery carriers.

In 2023, the CASS transaction services were made free of charge for IATA member airlines. This continued in 2024 and expanded to include BSP transaction services for IATA member airlines. This is possible through continued efforts over the years to gain efficiency, expand BSP operations globally, and introduce such added services as IATA Pay. At the same time, operating costs were reduced through negotiation with suppliers and reorganizations to achieve economies of scale.

The IATA Clearing House (ICH) provides fast, secure, cost-effective settlement services to 536 airlines and associated companies in the aviation value chain. In 2023, the ICH processed $58.95 billion and had a settlement rate of 99.99999% or 0.00001% unrecovered amounts. The on-time settlement rate for 2023 was 100%.

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