
IATA
ANNUAL
REVIEW
2018

Alexandre de Juniac
Director General & CEO
International Air Transport Association
Annual Review 2018
74th Annual General Meeting
Sydney, June 2018

Note: Unless specified otherwise, all dollar ($) figures refer to US dollars (US$). Illustrations: Martin O'Neill - Cut it Out Studio

CONTENTS

MEMBERS' LIST

A

Adria Airways
Aegean Airlines
Aer Lingus
Aero Republica
Aeroflot
Aerolineas Argentinas
Aeromexico
Africa World Airlines
Aigle Azur
Air Algerie
Air Arabia
Air Astana
Air Austral
Air Baltic
Air Botswana
Air Burkina
Air Cairo
Air Caledonie
Air Canada
Air Caraibes
Air China
Air Corsica
Air Europa
Air France
Air India
Air Italy
Air Koryo
Air Macau
Air Madagascar
Air Malta
Air Mauritius
Air Moldova
Air Namibia
Air New Zealand
Air Niugini
Air Nostrum
Air Peace
Air Serbia
Air Seychelles
Air Tahiti
Air Tahiti Nui
Air Transat
Air Vanuatu
AirBridgeCargo Airlines
Aircalin
Airlink
Alaska Airlines
Alitalia
Allied Air
AlMasria Universal Airlines
American Airlines
ANA
Arik Air
Arkia Israeli Airlines
Asiana Airlines
Atlantic Airways
Atlas Air
AtlasGlobal
Austral
Austrian
Avianca
Avianca Brasil
Avianca Costa Rica
Avianca Ecuador
Azerbaijan Airlines
Azul Brazilian Airlines

B

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

C

CAL Cargo Airlines
Camair-Co
Cambodia Angkor Air
Capital Airlines
Cargojet Airways
Cargolux
Caribbean Airlines
Carpatair
Cathay Dragon
Cathay Pacific
Cayman Airways
Cemair
China Airlines
China Cargo Airlines
China Eastern
China Express Airlines
China Postal Airlines
China Southern Airlines
CityJet
COBALT
Comair
Condor
Copa Airlines
Corendon Airlines
Corsair International
Croatia Airlines
Cubana
Czech Airlines

D

Delta Air Lines
DHL Air
DHL Aviation

E

Eastar Jet
Egyptair
El Al
Emirates
Ethiopian Airlines
Etihad Airways
EuroAtlantic Airways
European Air Transport
Eurowings
EVA Air
Evelop Airlines

F

FedEx Express
Fiji Airways
Finnair
flybe
flydubai
FlyEgypt
Freebird Airlines

G

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

H

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

I

IBERIA
Icelandair
InselAir
Interjet
Iran Air
Iran Airtour Airline
Iran Aseman Airlines
Israir

J

Japan Airlines
Jazeera Airways
Jeju Air
Jet Airways
Jet Lite India
JetBlue
Jordan Aviation
Juneyao Airlines

K

Kenya Airways
Kish Air
KLM
Korean Air
Kuwait Airways

L

LAM
Lao Airlines
LATAM Airlines Argentina
LATAM Airlines Brasil
LATAM Airlines Colombia
LATAM Airlines Ecuador
LATAM Airlines Group
LATAM Airlines Paraguay
LATAM Airlines Peru

LATAM Cargo Brasil
LATAM Cargo Chile
LATAM Cargo Mexico
LIAT Airlines
Loong Air
LOT Polish Airlines
Lucky Air
Lufthansa
Lufthansa Cargo
Lufthansa CityLine
Luxair

M

Mahan Air
Malaysia Airlines
Malindo Air
Mandarin Airlines
Martinair Cargo
Mauritania Airlines International
MEA
MIAT Mongolian Airlines
Mistral Air
MNG Airlines
Montenegro Airlines
Myanmar Airways International

N

NCA Nippon Cargo Airlines
Neos
NESMA Airlines
Nextjet
Nile Air
Nordavia Regional Airlines
Nordwind Airlines
Nouvelair

O

Okay Airways
Olympic Air
Oman Air
Onur Air
Overland Airways

P

Pegas Fly
Pegasus Airlines
PGA Portugalia Airlines
Philippine Airlines
PIA Pakistan International Airlines
Precision Air
PrivatAir

Q

Qantas
Qatar Airways

R

Rossiya Airlines
Royal Air Maroc
Royal Brunei
Royal Jordanian
RwandAir

S

S7 Airlines
Safair
Safi Airways
SAS
SATA Air Acores
SATA Internacional
Saudi Arabian Airlines
SaudiGulf Airlines
SCAT Airlines
SF Airlines
Shandong Airlines
Shanghai Airlines
Shenzhen Airlines
Sichuan Airlines
Silk Way West Airlines
Silkair
Singapore Airlines
Singapore Airlines Cargo
SKY Airline
Somon Air
South African Airways
South African Express Airways
SriLankan Airlines
SunExpress
Suparna Airlines
Surinam Airways
SWISS
Syrianair

T

TAAG Angola Airlines
TACA
TACA Peru
TACV Cabo Verde Airlines
Tame
TAP Portugal
TAROM
Tassili Airlines
Thai Airways International
Thai Lion Air
Tianjin Airlines
TUIfly
Tunisair
Turkish Airlines
T'way Air

U

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

V

Vietjet
Vietnam Airlines
Virgin Atlantic
Virgin Australia
Vistara
Volaris
Volotea
Vueling

W

Wamos Air
WDL Aviation
WestJet
White Airways
Wideroe

X

Xiamen Airlines

IATA's membership continues to grow. Between June 2017 and May 2018, 20 airlines joined IATA's ranks, from all corners of the globe and representing a multitude of business models, including the low-cost carrier (LCC) sector.

In Africa, Africa World Airlines and Air Peace successfully applied for membership, based in Ghana and Nigeria respectively.

North Asia and Asia-Pacific boasts nine new members. Of these, four—China Express Airlines, Hebei Airlines, Suparna Airlines and UNI AIR—are all based in China (the latter in Chinese Taipei). Two LCCs joined from South Korea: Eastar Jet and Jeju Air. Batik Air from Indonesia, Cambodia Angkor Air from Cambodia, and Vistara from India make up the remainder.

In Europe, two charter airlines became IATA members. Evelop Airlines is based in Mallorca, Spain and WDL Aviation hails from Germany. Spanish LCC, Volotea, also joined.

Europe also accounts for the Faroe Islands-based Atlantic Airways and COBALT from Cyprus.

Other new members in the previous 12 months include Cayman Airways and Saudi Gulf Airlines, based in the countries from which they have taken their name, and SCAT Airlines and Somon Air, based in Kazakhstan and Tajikistan respectively.

GOH CHOON PHONG, CHAIR, IATA BOARD OF GOVERNORS & CEO SINGAPORE AIRLINES

TRANSFORMATION AND INNOVATION **TO BENEFIT OUR INDUSTRY**

What have been your priorities as Chairman?
For IATA and the aviation industry, safety is always the number one priority. We had a very good year in 2017 with no fatalities associated with any of the aviation accidents on passenger jets. That's good. But, of course, we should never be complacent as far as safety is concerned.

Beyond that, IATA has been more vocal on key issues that affect the industry, such as airport privatization. Also important was how we can better balance the value chain. We are also looking into the tedious and costly certification process that is required of airlines whenever they want to introduce innovation or equipment on the aircraft. All these are areas that we are looking at in IATA. And we believe that they will have significant benefits for the industry as a whole.

Moreover, over the last year, we have looked closely at IATA's governance structure. We are proposing to merge two of the committees of the Board of Governors—the Chair Committee and the Strategy and Policy Committee—into a single entity. It will meet more often allowing it to go into greater depth on key strategic issues that affect the industry.

How is digital disrupting the industry and what role should IATA play?
Digital is disrupting all industries and it is obviously very important that we in the aviation sector pay attention to how it can be applied. Digitization can be applied in many areas. A good example is safety. Digital transformation will enhance safety management and IATA has a role to play in making that happen at the industry level.

We are also talking about using digital technology to enhance the customer experience and to make our operations more efficient. A good example is the potential for predictive maintenance.

Digital disruption or transformation crosses the use of data, new technology, and artificial intelligence. These are all important areas that we should continue to pursue to see how the industry can benefit from them.

How important is innovation in distribution?
Innovation across the industry is important. In the case of distribution, we have the introduction of New Distribution Capability (NDC) and ONE Order. These are important standards for the industry.

With NDC, we can ensure we present a consistent front-end retail experience to our customers whether we are selling directly or via travel agents. ONE Order will build on advances from NDC to modernize and simplify airlines' back office functions. Both are important for passengers because with NDC they will be able to benefit from a more transparent offering of services and products from the airlines while ONE Order will provide a single order number to replace today's confusing system of passenger records.

How critical are global standards to operational efficiency?
Global standards are absolutely important. As we see in the case of e-tickets and e-freight, where the definition of standards allowed the industry to move towards a paperless and efficient system for transactions.

Similarly, NDC is a standard that allows us to be more transparent and offer more options in distributing our services and products to the end consumers.

Going forward, an important part of IATA's work will be exploring innovations that can deliver greater benefits at the industry level once everyone has adopted them.

How can governments get the most out of air transport?
Air transport is about bringing people and goods from countries all over the world to their destinations. And in doing so it has a catalytic effect on the global economy. It will have a lot of spin-offs for other economic activities, whether it is tourism, whether it is goods and services, or whether it is trade.

The air transport industry should not be viewed as a source of revenue for the government, whether it is the raising of taxes, or other forms of revenue generation.

So, if you were to look at aviation and the air transport industry, it is important to look at it in totality. With that in mind, when governments are implementing any measures, IATA and airlines involved in that geography should be actively consulted and involved in the discussion. The goal should be to bring about an outcome that best benefits the economy.

Is it important to attract more low-cost carriers to IATA?
IATA is an aviation body for all airlines. It is important for us to be representative. That means we should have participation from as many airlines as possible within the industry. Of course, that includes the low-cost carriers (LCCs).

It is important for us to attract more LCCs to join IATA. In fact, IATA has formed a focus group to study how we can be more relevant and provide added value for LCCs that might be looking to join. We will pursue that and see what needs to be done for us to enhance value.

IATA BOARD OF GOVERNORS 2017–2018

CHAIR OF THE BOARD

Goh Choon Phong
Chief Executive Officer
SINGAPORE AIRLINES

MEMBERS

(From April 2018)
Yuji Akasaka
President
JAPAN AIRLINES

Akbar Al Baker
Chief Executive Officer
QATAR AIRWAYS

Saleh N. Al Jasser
Director General
SAUDI ARABIAN AIRLINES

David Bronczek
President and Chief Operating Officer
FEDEX CORPORATION

Yang Ho Cho
Chairman and Chief Executive Officer
KOREAN AIR

Enrique Cueto
Chief Executive Officer
LATAM AIRLINES

Pieter Elbers
President and Chief Executive Officer
KLM

(From August 2017)
Mohamad El-Hout
Chairman and Director General
MIDDLE EAST AIRLINES

Tewolde GebreMariam
Group Chief Executive Officer
ETHIOPIAN AIRLINES

Naresh Goyal
Chairman
JET AIRWAYS

Rickard Gustafson
President and Chief Executive Officer
SAS

Robin Hayes
President and Chief Executive Officer
JETBLUE

Pedro Heilbron
Executive President and Chief Executive Officer
COPA AIRLINES

Rupert Hogg
Chief Executive Officer
CATHAY PACIFIC

Harry Hohmeister
Chairman
AUSTRIAN

Alan Joyce
Chief Executive Officer
QANTAS

Liu Shaoyong
Chairman
CHINA EASTERN

(From August 2017)
Sebastian Mikosz
Group Managing Director and CEO
KENYA AIRWAYS

Pham Ngoc Minh
Chairman
VIETNAM AIRLINES

(From April 2018)
Oscar Munoz
Chief Executive Officer
UNITED AIRLINES

Safwat Musallam
Chairman and Chief Executive Officer
EGYPTAIR

(From April 2018)
Christine Ourmières-Widener
Chief Executive Officer
FLYBE LIMITED

Douglas Parker
Chairman and Chief Executive Officer
AMERICAN AIRLINES

Calin Rovinescu
President and Chief Executive Officer
AIR CANADA

Vitaly G. Saveliev
Director General and Chief Executive Officer
AEROFLOT

Carsten Spohr
Chairman and Chief Executive Officer
LUFTHANSA

Tan Wangeng
President and Chief Executive Officer
CHINA SOUTHERN AIRLINES

Willie Walsh
Chief Executive Officer
INTERNATIONAL AIRLINES GROUP
(representing BRITISH AIRWAYS)

ALSO SERVED

(To June 2017)
Mbuvi Ngunze
Group Managing Director and Chief Executive Officer
KENYA AIRWAYS

(To July 2017)
Farhad Parvaresh
Chairman and Managing Director
IRAN AIR

(To January 2018)
Fernando Pinto
Chief Executive Officer
TAP PORTUGAL

(To March 2018)
Mark Dunkerley
President and Chief Executive Officer
HAWAIIAN AIRLINES

(To March 2018)
Masaru Onishi
Chairman
JAPAN AIRLINES

(To May 2018)
Andrés Conesa
Chief Executive Officer
AEROMEXICO

(To May 2018)
Jean-Marc Janaillac
Chairman and Chief Executive Officer
AIR FRANCE/KLM
(representing AIR FRANCE)

THE BUSINESS OF FREEDOM

For the world's airlines, 2017 was a good year. More people than ever traveled—some 4.1 billion. The air cargo business posted growth of 9.7%, the strongest since 2010.

Air travel is more accessible than ever. In 2017 airfares, in real terms, averaged less than half what they were in 1995. The network has expanded to exceed 20,000 unique city pairs.

Financial performance

Airlines made a net profit of $38.0 billion in 2017. For a third year in a row, the return on invested capital (9.0%) exceeded the cost of capital. With that trend continuing into 2018, it appears that the industry is finally able to deliver normal levels of profitability consistently.

There will be some headwinds in 2018. There is evidence that the re-stocking cycle that breathed new life into air cargo is winding down to more normal growth levels. Labor disputes are prevalent and taking their toll on some airlines. Meanwhile fuel and other input prices are climbing higher.

The concentration of profitability in North America remains strong. About half the industry's 2017 profits were generated there. It's important to remember that, for many airlines, day-to-day business is a struggle.

What is the buffer between profit and loss? We calculate it at $9.27 which is the average profit that airlines made per passenger in 2017. Margins are being squeezed, but we still expect a strong collective industry profit for 2018.

Safety

The industry is also performing well on its top priority—safety. In 2017 there were no fatalities on passenger flights operated by jet aircraft. And the fatal accident rate was the equivalent of one for every 6.7 million flights.

There is still work to be done to improve safety. And much of that improvement will be guided by data. As the IATA Operational Safety Audit (IOSA) marks its 15th year, we are in the process of digitizing it.

That will contribute to our Global Aviation Data Management project which will house data from multiple sources.

The ultimate goal is to be able to use the data to understand risk factors so well that we can mitigate accidents before they happen.

Security

One of the biggest challenges of 2017 was security. In particular, unilateral bans on large portable electronic devices (PEDs) by the US and UK on certain flights from the Middle East and North Africa were a major challenge—on implementation and on maintaining public confidence in the security of the global air transport system.

Eventually, industry and governments cooperated to find alternative measures. And airlines did an exceptional job of introducing these measures in a very tight time frame. The focus now is on the successful implementation of the Global Aviation Security Plan, under the leadership of the International Civil Aviation Organization and with the full support of the industry.

Sustainability

Airlines are preparing for the introduction of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Emissions reporting in 2019 will form the basis of the scheme which is critical for the industry's commitment to carbon neutral growth from 2020.

The importance of this achievement cannot be over-stated. And we are already looking towards an even more ambitious goal—cutting aviation's net emissions to half of 2005 levels by 2050. To do so we continue to urge governments to develop policy frameworks that will support the commercialization of sustainable aviation fuels and to push forward major modernization projects for air traffic management.

The infrastructure challenge

It is clear that the demand for air connectivity will continue to grow. Governments understand that the economic impact of aviation on their economies is critical—supporting 63 million jobs globally and underpinning $2.7 trillion in economic activity. However they are not building critical infrastructure fast enough to keep pace with demand.

Given long timelines to develop infrastructure, it is clear that we are heading for a crisis.

A strategic review of the *Worldwide Slot Guidelines* will help ensure that scarce capacity is measured and allocated fairly and transparently; and with sufficient predictability that airlines are able to make critical fleet plans. In parallel we are launching a major campaign to work with governments to help them find appropriate funding mechanisms to develop airports that can affordably satisfy demand with quality infrastructure.

Open borders

The fortunes of the industry depend on borders that are open to people and to trade. There is a global political undercurrent that is pushing the world towards a more protectionist future. The threat of trade wars, raging debates on immigration, and efforts to replace multilateralism with bilateral arrangements do not bode well for the global economy or the global air transport industry.

Aviation is globalization at its very best—linking people and economies as never before. We must be strong in reminding governments that globalization has lifted millions from poverty in the developing world. At the same time, developed nations have benefited with expanded purchasing power. As the Business of Freedom, aviation must and will be a strong voice for continued global integration.

Efficiency

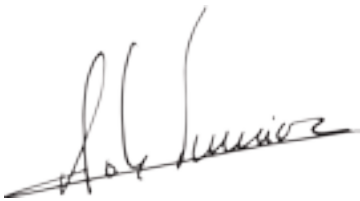
In addition to being the airline industry's global advocate, IATA is also a common back office for many critical functions—not least of which are our financial services. In 2017, IATA's Financial Settlement Systems handled $433.4 billion of industry funds successfully. Our NewGen ISS initiative will further modernize the system with the goal of providing faster, cheaper and safer payments.

As we mark 10 years of the global conversion to paper tickets, New Distribution Capability is primed to take airline distribution into the modern era. And, our ONE Order initiative will complete the circle with a major innovation of back-office processes and replacement of today's multiple reservation records with a single order number.

The association

In the face of these successes and challenges, IATA's mission to lead, represent and serve the airline industry remains relevant. Our membership has grown to over 280 airlines from around the world. Combined they provide 83% of air transport and operate across a broad spectrum of business models. And we are working hard to welcome even more diversity to the IATA fold.

Aviation is a tough business. Airlines compete intensely for each and every customer. But they cooperate through IATA to strengthen the industry's foundation. Working with our members, our goal continues to be to provide safe, efficient, sustainable and profitable global connectivity.



ALEXANDRE DE JUNIAC
Director general and CEO

01

DEMAND GROWS STRONGLY: **BUSINESS MODELS EVOLVE**


87 36 24 74
75%
10%
20%
40%
30%

Air transport delivers more choice, at a lower cost

In 2017, airlines connected a record number of cities worldwide, providing regular services to more than 20,000 city pairs. This is an increase of 1,351 over the number of city-pair connections in 2016 and a doubling of service since 1995, when there were less than 10,000 city-pair connections globally. Over this same period, the cost of air travel for consumers has decreased by more than half in real (inflation-adjusted) terms. ***Chart*** 1

Air transport supports economic growth and prosperity through tourism and trade

International tourists traveling by air are estimated to have spent $711 billion in 2017, an increase of almost 6% over 2016. More and cheaper city connections also boost trade in goods and services and heighten foreign direct investment and other important economic flows. Although more than 99% of world trade by weight is by surface transport, more than one-third by value is transported by air. IATA estimates the value of goods carried by air in 2017 to have been $5.9 trillion, representing almost 7.5% of world GDP. ***Chart*** 2

Direct connections are boosting demand

Connecting cities directly cuts the cost of air transport by saving time for shippers and travelers. Combined with cheaper fares and stronger economies, the boost from time savings resulted in worldwide air passenger numbers exceeding four billion in 2017 for the first time. In 2000, the average citizen flew just once every 43 months. The time between trips in 2017 was lower by nearly half, at only 22 months. ***Chart*** 3

Strong passenger demand in 2017...

The demand for air passenger services grew strongly in 2017, with industry-wide revenue passenger kilometers (RPKs) increasing 8.1%. This is the fastest growth in more than a decade, since 2005, and is well above the long-run average of 5.5%.

Passenger growth in 2017 was supported by a broad-based improvement in global economic conditions and by lower airfares, mainly earlier in the year. Lower fares have been a tailwind for passenger demand since late 2014 and have helped to drive the RPK/GDP multiplier above its long-term median level for three years in a row. ***Chart*** 4

...was led again by growth in China

In 2017, the domestic China passenger market again provided the largest incremental increase globally in the number of passenger trips, adding a massive 59 million journeys compared with 2016. The composition of the world's top three increasing origin-destination (O-D) markets was unchanged from 2016, with the domestic markets of the United States and India once more ranking second and third, respectively. Many of these O-D markets delivered double-digit growth in 2017, with the strongest being Japan–Korea, where the number of passenger journeys increased more than 26%. ***Chart*** 5

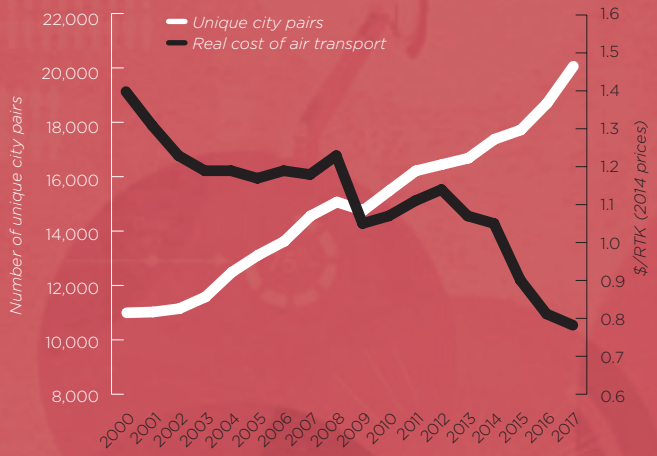
> Air freight **grew more than twice** as fast as global trade volumes overall **during 2017.**

Air freight carried momentum through the year

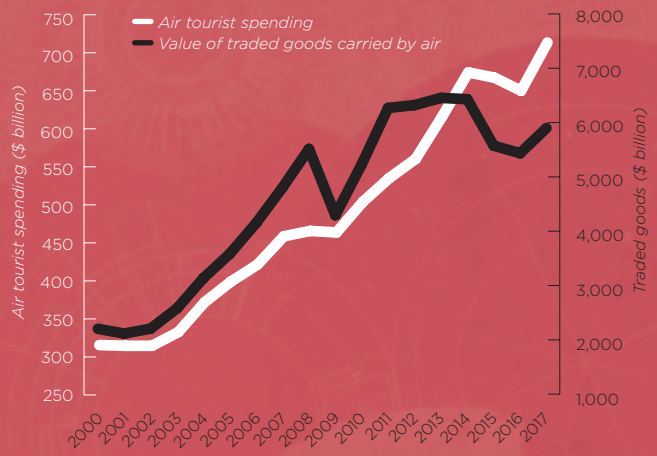
After picking up in the second half of 2016, industry-wide freight tonne kilometers (FTKs) rose 9.7% in 2017, up from 3.6% in 2016. Air freight grew more than twice as fast as global trade volumes overall during 2017—the widest margin of outperformance since the rebound from the global financial crisis in 2010.

The strong growth in air freight volumes was driven by the global inventory restocking cycle and by buoyant demand for manufactured exports. In annual terms, international FTK growth accelerated in all regions in 2017 compared with 2016, most notably in Africa. ***Chart*** 6

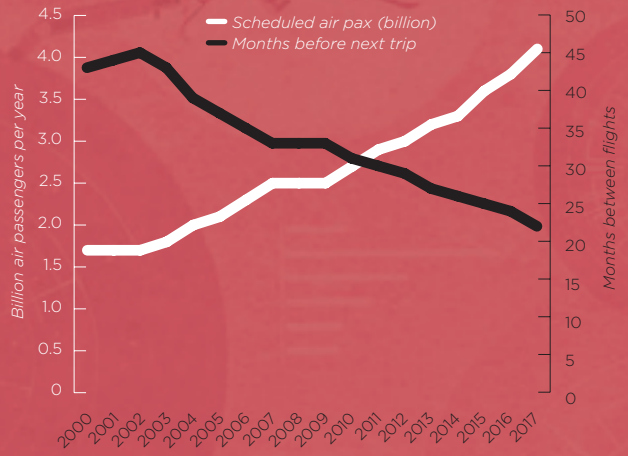
1 UNIQUE CITY PAIRS AND REAL TRANSPORT COSTS



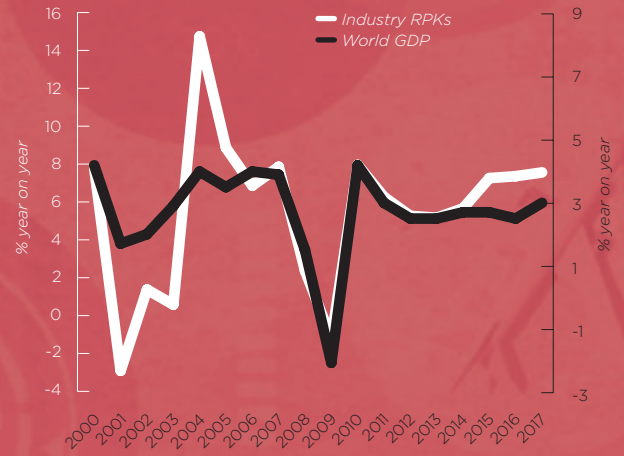
2 AIR TOURIST SPENDING AND VALUE OF TRADE CARRIED BY AIR



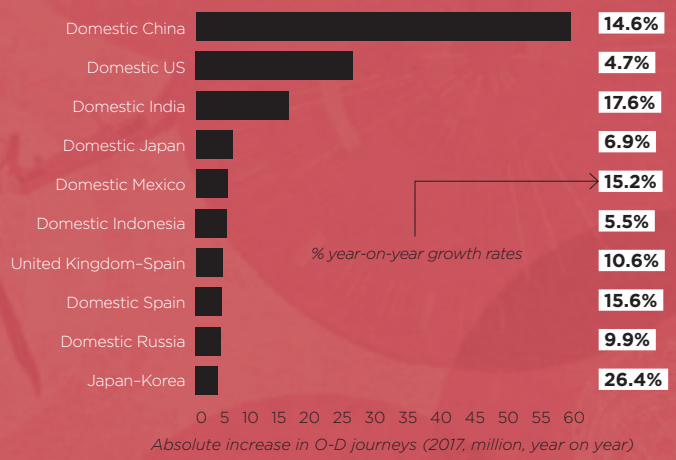
3 ACCESSIBILITY OF AIR TRAVEL



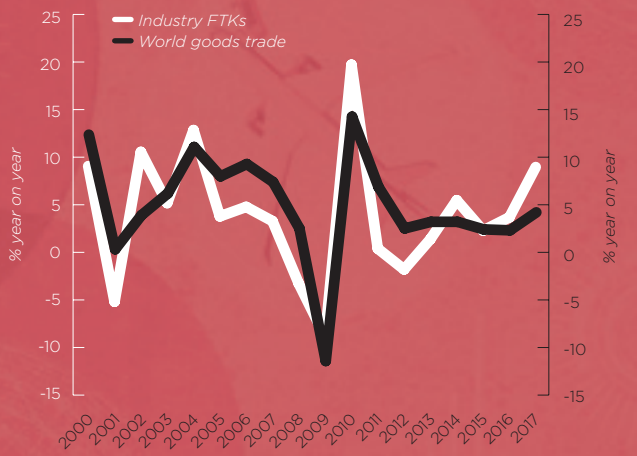
4 RPK VERSUS WORLD GDP GROWTH



5 TOP 10 INCREASING O-D MARKETS IN 2016



6 AIR FREIGHT VERSUS GLOBAL GOODS TRADE GROWTH



Demand for air transport services was not matched by capacity increases

Industry-wide increases in capacity in 2017 failed to keep pace with strong demand growth. On the passenger side, global available seat kilometers (ASKs) increased 6.7% in 2017 compared with 2016. For freight, available freight tonne kilometers (AFTKs) grew 4.8% year on year in 2017—the slowest full-year growth rate since 2013.

As a result, passenger and freight load factors increased in 2017. The industry-wide passenger load factor rose 1.0 percentage point compared with 2016, to a record high 81.5% for a calendar year. With freight demand growing at double the rate of capacity, the increase in the freight load factor was even larger than the increase in the passenger load factor, up a sizeable 2.2 percentage points relative to 2016 for a return to its 2011/12 level. ***Chart*** 7

World oil prices rose significantly but affected regions unevenly

Broadly speaking, 2017 was a year of two halves for crude oil and jet fuel prices. The first half of the year saw prices drift lower, but that trend was reversed in the year's second half. Oil and jet fuel prices ended the year around 20% higher than at the beginning of the year. The impact of the increase, though, was not equal across countries. For most, a weak US dollar helped to a varying degree to offset rising prices. Mexico and South Africa were most insulated by exchange rate fluctuations, whereas Brazil was a notable exception. ***Chart*** 8

Airlines raised their achieved load factor, maintaining a gap above the breakeven level

With oil prices, interest rates, and such other key costs as labor rising in 2017, the estimate for the industry-wide breakeven load factor increased sharply to 64.0%. However, the increases in passenger and freight load factors meant that the combined achieved load factor also rose, 1.5 percentage points, to 69.2%, enabling airlines to maintain a solid gap above the level required for financial breakeven. The gap between the breakeven and achieved load factors is driving profitability and returns and was again critical to the industry's financial performance in 2017. ***Chart*** 9

Airline business models and industry structure evolves further

There was further evolution of air transport markets and airline business models in 2017. The long-haul, low-cost (LHLC) model continued to gather momentum, particularly in the North Atlantic market, with a number of legacy carriers having established LHLC subsidiaries. More broadly, low-cost carriers (LCCs) are pursuing practices previously thought to be part of the full-service carrier (FSC) model: the use of global distribution systems; of frequent-flier programs; and of connecting or feeder traffic, including the LHLC services of other airlines. The FSCs are also adopting many of the cost-efficiency practices pioneered by LCCs.

These developments are blurring the distinction between the FSC and LCC models, resulting in a hybrid business model. Airlines, meanwhile, are also looking to expand their networks, for example through antitrust-immune joint ventures, which make it possible to achieve economies of density and to serve "thinner" city-pair routes than would otherwise be possible; equity investments; or other types of partnerships.

In 2017, the industry also saw the demise of some airlines, notably in Europe. This highlights the evolving industry structure, which includes consolidation in some markets.

Airline investors received an above-cost-of-capital return for the third consecutive year

Another important way of considering profitability is the perspective of the industry's capital providers. Equity investors in the airline industry have typically not been rewarded adequately for risking their capital until the past few years. Despite a moderation in industry-wide returns, to 9.0%, and a rise in the cost of capital, to 7.1%, 2017 is the third consecutive year when the industry's return on capital exceeded its average cost of capital and generated a normal return for investors. Creating value for investors will be an increasingly crucial element in attracting the capital necessary to fund fleet renewal and replacement in the years ahead. ***Chart*** 10

The level of profits remains high

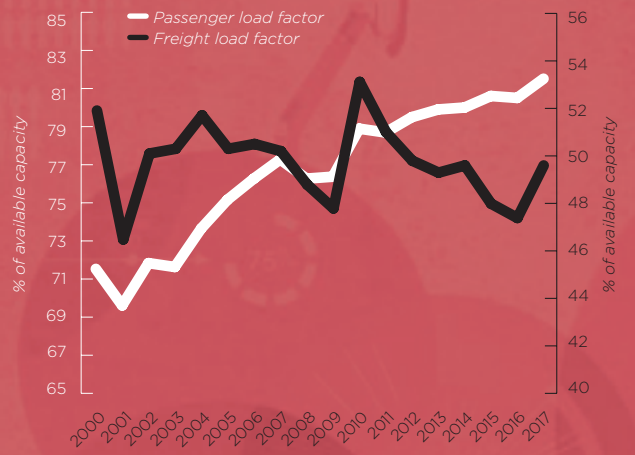
Supported by strong demand and a healthy economic backdrop, the airline industry generated an estimated net post-tax profit of $38.0 billion in 2017. This was the third consecutive year of robust financial outcomes in the broader historical context of the industry, albeit one that would simply be considered a normal performance in most industries. This outcome was boosted by tax credits, and a number of one-off financial transactions, even as trading conditions became more challenging. The operating profit margin eased moderately in 2017 as unit costs outpaced unit revenues. At an estimated 7.5% of revenues, the operating profit margin also remains around historical highs. Prior to 2015, industry-wide operating profit margins of this order were last seen in the 1960s. ***Chart*** 11

Regional financial performance remains mixed

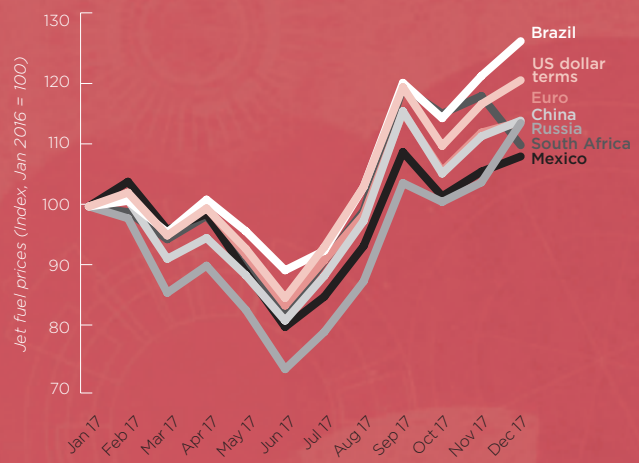
Regionally, the industry's financial performance is mixed. There has been some convergence in profitability, but wide differences remain. North America continues to outperform, with an operating margin of around 11%, solidly above the industry average of 7.5%.

The robust growth of the air freight segment in 2017 was an important contributor to the improved financial result for Asia-Pacific carriers, which generally rely more on freight to be an important contributor to their business. The impact of various policy decisions—including travel restrictions and the ban on electronic devices—and intense competition in some leading markets negatively impacted the financial performance of Middle Eastern carriers in 2017. Despite signs of gradual improvement, the challenging operating environment for airlines in Africa remains clear. ***Chart*** 12

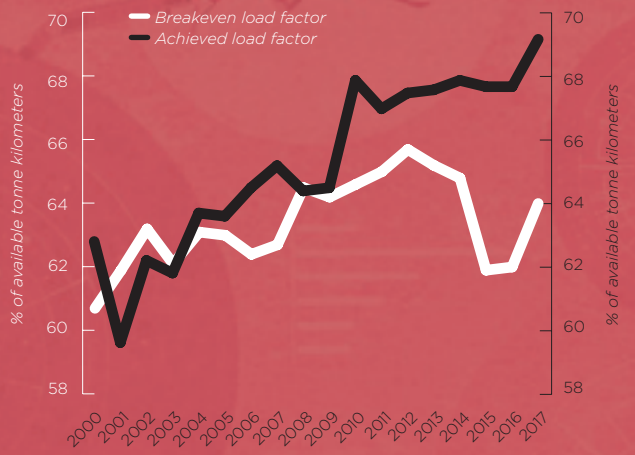
7
INDUSTRY PASSENGER AND FREIGHT LOAD FACTORS



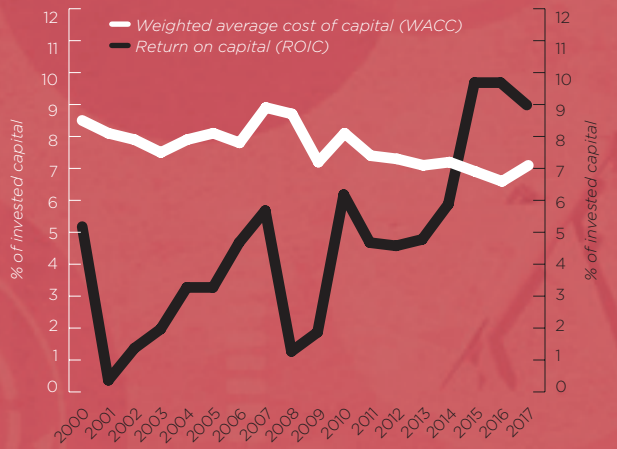
8
EXCHANGE RATE–ADJUSTED JET FUEL PRICES (2017)



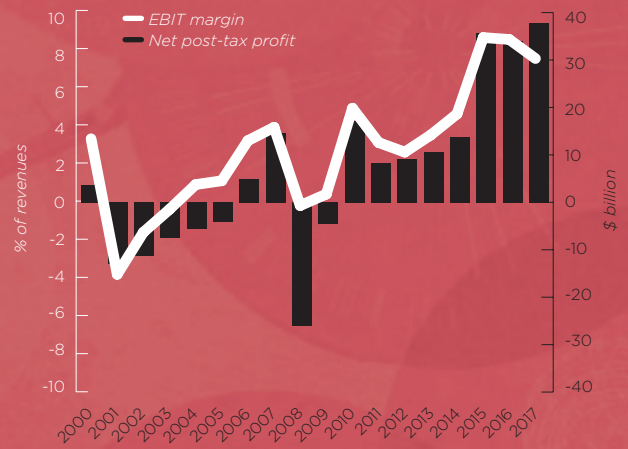
9
BREAKEVEN AND ACHIEVED LOAD FACTORS



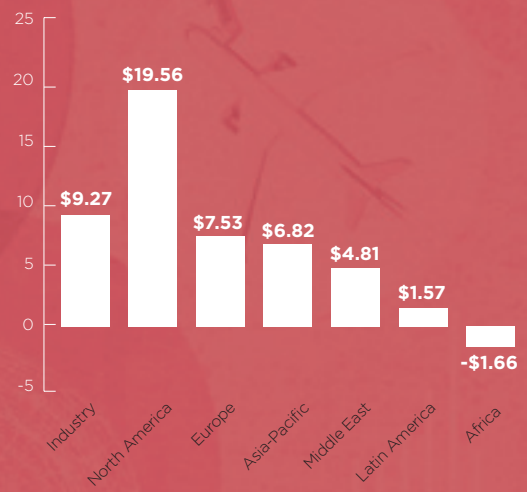
10
RETURN ON CAPITAL INVESTED IN AIRLINES



11
GLOBAL COMMERCIAL AIRLINE PROFITABILITY



12
NET POST-TAX PROFIT ($ PER PASSENGER)



02

FLYING SAFELY: THE NUMBER ONE PRIORITY

Safety continues to improve

The last decade saw continued improvements in overall safety performance. Industry measures have resulted in a 70% reduction in the accident rate, from 3.60 per million flights in 2008 to 1.08 per million flights in 2017.

The equivalent of more than half the world's population—4.1 billion travelers—flew safely on 41.8 million flights in 2017. IATA member airlines experienced zero fatal accidents and zero hull losses with jet or turboprop equipment. IOSA-registered airlines experienced one accident for every 1.8 million flights in 2017 whereas the rate for carriers not on the register was one accident for every 460,000 flights.

There were 6 fatal accidents in 2017, resulting in 19 fatalities among passengers and crew. This compares with an average of 10.8 fatal accidents and 315 fatalities per year for the 2012–2016 period and with 9 fatal accidents and 202 fatalities in 2016. None of 2017's 6 fatal accidents involved a passenger jet. Of that total, 5 involved turboprop aircraft and 1 involved a cargo jet. The crash of the cargo jet also resulted in 35 fatalities on the ground.

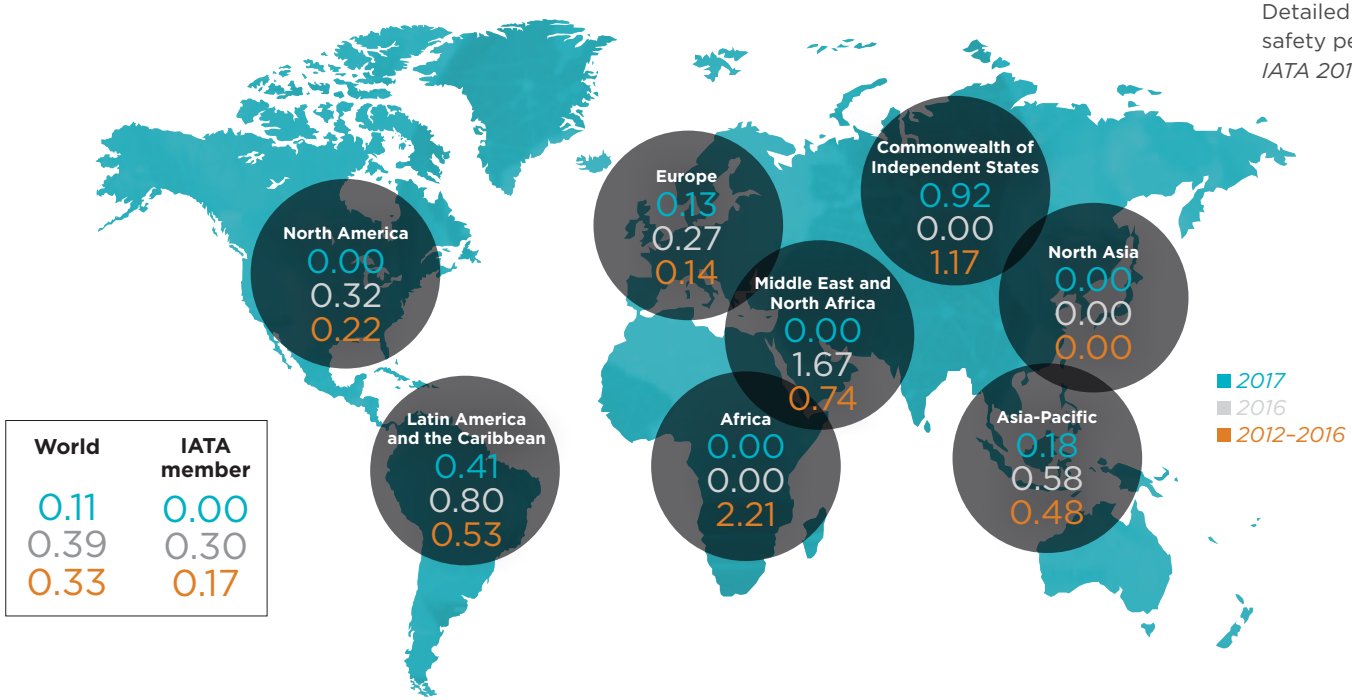
Sub-Saharan Africa continued to make strong progress on safety. Airlines in the region had zero jet hull losses and zero fatal accidents involving jets or turboprops for a second consecutive year. The region's turboprop hull loss and all-accident rates declined against the averages of the previous five years. The 2017 turboprop hull loss rate, however, increased from 1.52 to 5.70 compared with 2016. And that, in turn, was largely responsible for an increase in the all-accident rate compared with 2016, from 2.43 to 6.87 in 2017.

Asia-Pacific operators have had the highest number of accidents in the last five years, compared with other IATA regions, with an average of 24% of the world's accidents. However, there are signs of improvement in the region's accident rate, which was down from 2.33 per million flights in 2016 to 1.54 per million flights in 2017.

Turboprop aircraft operated 16.5% of the world's commercial flights in 2017 but accounted for 44% of all accidents and 5 out of the 6 fatal accidents. A positive improvement in turboprop safety can be seen when the 2017 accident rate of 2.90 per million flights is compared with the five-year (2012–2016) rate of 4.89 per million flights.

Detailed information on the industry's safety performance can be found in the *IATA 2017 Safety Report*.

JET AIRCRAFT HULL LOSS RATES PER MILLION FLIGHTS



World	IATA member
0.11	0.00
0.39	0.30
0.33	0.17

Six-Point Safety Strategy

IATA's Six-Point Safety Strategy is a comprehensive, data-driven approach to identifying organizational, operational, and emerging safety issues. Its six points are as follows:

- reducing operational risk
- enhancing quality and compliance through audit programs
- advocating for improved aviation infrastructure, such as the implementation of performance-based navigation (PBN) approaches
- supporting the consistent implementation of safety management systems
- supporting effective recruitment and training to enhance quality and compliance
- identifying and addressing emerging safety issues

Current and emerging safety risks

IATA works to implement safety programs that identify and reduce operational and fatality risks. IATA's data-driven assessments and data analyses and Safety Group of experts from member airlines have identified the following areas of focus for improving safety in aviation: controlled flight into terrain (CFIT); loss of control in flight (LOC-I); midair collision; runway safety, including runway excursion, runway incursion, incorrect landing, and takeoff surface; third-party oversight; human performance and crew resource management (CRM), including crew experience; ground operations, including loading errors and integrity and load sheet; dangerous goods, such as lithium batteries; fitness for duty, involving fatigue and mental health; cabin safety; smoke, fire, and fumes, including unusual odors; maintenance contributors to flight risk, from errors to noncompliance; and security threats.

IATA is developing safety performance indicators (SPIs) to monitor events in these areas and to identify precursors to more-serious incidents and accidents. This approach to measuring safety performance is essential for safety management and decision making.

Global aviation data management

Historically, aviation has relied on the accident investigation process to guide safety improvements. As the number of accidents declines, future advances will depend on analyses of flight information and other data resources to achieve a thorough understanding of what happens in the more than 100,000 flights that operate safely every day. The Global Aviation Data Management (GADM) program integrates many sources of operational data received from various channels and includes the following:

- the STEADES database of de-identified airline incident reports, the world's largest such resource
- the Flight Data eXchange (FDX) aggregated, de-identified database of flight data monitoring and flight operations quality assurance (FDA/FOQA)–type events, which helps airlines to proactively identify safety hazards
- the Ground Damage Database (GDDB) designed to facilitate data-driven decisions to measurably reduce aircraft ground damage
- the IATA Operational Safety Audit (IOSA)
- the IATA Safety Audit for Ground Operations (ISAGO)

The GADM program includes information from over 470 organizations. More than 90% of IATA's members contribute to at least one GADM database.

IATA and the Civil Aviation Authority of Singapore (CAAS) recently signed a memorandum of collaboration to establish a Safety Predictive Analytics Research Center (SPARC) in Singapore. SPARC will leverage operational safety information available under the GADM initiative to assess potential hazards and identify safety risks, many of which are otherwise difficult or impossible to foresee.

Lithium batteries

The industry continues to work to ensure that lithium batteries can be carried safely. IATA, through the IATA Dangerous Goods Board, issued an addendum to the 2018 edition of the *Dangerous Goods Regulations* to restrict the carriage of what is known as smart luggage; that is, luggage with lithium batteries installed for use as a power bank to charge a portable electronic device (PED) or to power motorized wheels on the bag. IATA has issued a guidance document on managing smart baggage with built-in lithium batteries and electronics.

ICAO continues to study issues surrounding the carriage of passengers' PEDs in checked baggage. IATA continues to represent the industry in the discussion on the carriage of lithium batteries and PEDs by participating in the work of the applicable ICAO panels.

In-flight turbulence

IATA is also developing a global database of turbulence reports to provide airlines with an enhanced situational awareness tool that will facilitate a significant decrease in passenger and cabin crew injuries from in-flight turbulence. Airlines, manufacturers, data service providers, software developers, and various weather information providers are involved in the project, which aims to go live in 2019. The aim is to share real-time, in situ turbulence reports between aircraft in flight and their respective dispatch and flight operations departments.

Aircraft tracking

Many airlines track their aircraft in remote airspace through a variety of means. On 10 November 2015, the ICAO Council adopted a common aircraft tracking standard and made all operators responsible for tracking their aircraft throughout their areas of operations at intervals of 15 minutes, as required in oceanic airspace and recommended for all airspace. Aircraft tracking by airlines is not required in airspace where air traffic service (ATS) surveillance is performed in intervals of 15 minutes or less.

ADDRESSING THE PRIMARY CAUSES OF ACCIDENTS

Loss of Control In Flight

From 2013 to 2017, LOC-I accounted for only 9% of all reported accidents. LOC-I, however, generally has a high severity, with 93% of LOC-I accidents resulting in fatalities from 2013 to 2017. IATA works with airlines to reduce LOC-I risks through activities that should result in an understanding of

- the common hazards and contributing factors that may lead to LOC-I, such as meteorological conditions and aircraft malfunctions affecting flight control, and
- manual handling errors and faulty decision-making.

IATA, supported by IATA's Pilot Training Task Force (PTTF), has developed the *Guidance Material and Best Practices for the Implementation of Upset Prevention and Recovery Training* (*UPRT*) manual to help address factors contributing to LOC-I.

Controlled Flight into Terrain

CFIT accidents from 2013 through 2017 represent 4% of the total accidents in that five-year period. The CFIT accident rate has declined, but CFIT remains a concern because of the high number of fatalities associated with this type of event. To understand and mitigate CFIT, IATA is committed to understanding

- human performance deficiencies,
- the common hazards that may lead to CFIT accidents, and
- the factors contributing to a loss of situational awareness.

IATA encourages mitigations to CFIT that include but are not limited to

- adherence to crew procedures;
- the use of enhanced ground proximity warning systems (EGPWS) and updated databases;
- enhanced CRM and pilot monitoring;
- the use of a continuous descent final approach (CDFA) technique, where a continuous descent is maintained along a vertical path; and
- the implementation of PBN.

Runway Safety

IATA worked closely with the International Civil Aviation Organization (ICAO) in 2017 to analyze runway safety data from global aviation data management (GADM) programs and to develop the *ICAO Global Runway Safety Action Plan* (*GRSAP*). The GRSAP was published in November 2017 coincident with the Second ICAO Runway Safety Symposium in Lima, Peru, in which IATA participated.

Midair Collisions

The Eurocontrol Safety Improvement Sub Group (SISG) identified non-compliance with TCAS RA (traffic collision avoidance system resolution advisory) among its top five air traffic management (ATM) operational safety priorities in 2017 and launched a study into the issue. It was concluded in the planning stage of the study that the best source of information is pilots. A voluntary online survey was proposed and supported by IATA and a number of European aircraft operators, and the resulting survey prompted some 3,800 responses from pilots in 90 countries.

The IATA Safety Group believes that operators should develop a risk-based TCAS minimum equipment list (MEL) policy so that, for example, an aircraft with an unserviceable TCAS cannot be dispatched into airspace that uses in-flight broadcast procedures (IFBP). IATA also believes that operators should use their flight data management (FDM) programs to monitor pilot response to TCAS RA to ensure that a TCAS RA maneuver is carried out correctly and in a timely manner. Operators should also address any identified shortcomings through training and awareness campaigns.

The aircraft tracking standard became effective in July 2017 and will become mandatory on 8 November 2018. The standard is performance based and allows for the use of new systems and technologies as they become available.

Unmanned aircraft systems

Unmanned aircraft systems (UAS) represent a potential hazard to civil aviation, particularly through their irresponsible use in the vicinity of airports and manned aircraft. Many UAS are being flown by people unfamiliar with the safety risks and with civil aviation and its regulations.

In 2016, IATA launched an awareness campaign to educate and alert UAS users about the importance of their responsible use. IATA has also been working with the following stakeholders to promote the safe use and integration in airspace of UAS: Airlines for Europe (A4E); Airports Council International Europe (ACI Europe); the Civil Air Navigation Services Organisation (CANSO); the European Cockpit Association (ECA); the European Helicopter Association (EHA); the International Federation of Air Line Pilots' Associations (IFALPA); and the International Federation of Air Traffic Controllers' Associations (IFATCA).

To help countries define and implement UAS regulations, in 2017 IATA, other key air transport industry stakeholders, and national civil aviation authorities (CAAs) worked with ICAO to develop a toolkit to guide UAS safe operation and governance. In addition, ICAO issued a letter on 20 March 2017 emphasizing national responsibilities to protect civil aircraft from pilotless aircraft.

The transition from prescriptive- to performance-based regulations for UAS and the establishment of target levels for safety will set the foundation for the implementation of further safety initiatives. IATA participates in developing policies and operational technology concepts to enhance safety. Priorities include the following:

- dynamic geofencing that provides adaptable virtual barriers using a combination of global positioning system (GPS) and radio frequency connections, such as Wi-Fi or Bluetooth, to keep UAS from entering dangerous, restricted, or sensitive airspace
- detect and avoid (DAA) technology
- analyses of UAS incidents and accidents to identify trends and support safety management systems (SMS) and state safety programs (SSP)

It is becoming increasingly important for UAS to be safely integrated into overall airspace. Developing UAS traffic management (UTM) architecture will require new technologies and safety and security standards and safeguards. IATA will continue to participate in UTM concept development.

Safety audits

IOSA
Since its launch 15 years ago, the IATA Operational Safety Audit (IOSA) has become the global benchmark for airline operational safety management. In 2017, the accident rate for IOSA members was almost four times lower than for non-IOSA airlines and more than 2.5 times lower than over the previous five years.

IOSA is a worldwide standard that enables and maximizes the joint use of audit reports. To date, IOSA has saved the air transport industry more than 7,900 redundant audits and led to extensive cost savings for IOSA-participating airlines.

Since 2008, all IATA members must maintain IOSA registration. Of the 430 airlines on the IOSA Registry, however, 141 are non-IATA members, a testament to IOSA's widespread appeal.

An IATA focus in 2018 will be to progress with the IOSA digital transformation project by further prioritizing potential solutions. Another focus within that project will be the review and improvement of audit methods and practices.

The IOSA digital transformation project has three strategic pillars:

- the optimization and digitalization of the internal audit program processes
- the use of advanced analytics
- the deployment of a collaborative platform for industry stakeholders

This project will facilitate effective and efficient audits and benchmarking and lead to a further reduction of redundant audits. The increased reliability of audits will, in turn, engender heightened trust in IOSA worldwide.

ISAGO
The IATA Safety Audit for Ground Operations (ISAGO) is an aviation industry ground service provider (GSP) registration scheme. It is aimed primarily at establishing safe ground operations and raising cost benefits by reducing the risk of aircraft damage and personnel injuries and eliminating redundant audits by airlines.

A 2017 analysis of ground damage database (GDDB) data showed that ISAGO-registered providers exhibited a better reporting culture than non-ISAGO providers. They reported 78% of all the damage they caused, compared with only 34% for non-ISAGO GSPs.

Improvements to enhance the scope and value of ISAGO results were rolled out in 2017:

- Moving to a corps of dedicated auditors and away from a pool of voluntary auditors. Because ISAGO audits will be conducted, with IATA oversight, by professionally trained and certified auditors, they will be of consistently the highest quality. This should lead to regulators' and airlines' growing acceptance of ISAGO audits.
- Restructuring the cost model to ensure a more even distribution of program expenses between GSPs and airlines.

Also under consideration is expanding the scope of ISAGO audits. If implemented, this could lead to a further reduction in duplicate audits for GSPs.

The new ISAGO model was developed in consultation with stakeholders, and the transition to it has been completed.

Quality assurance program

Data management and analysis are the main pillars of the quality assurance programs underpinning the integrity of IOSA and ISAGO. In line with a new request from the IATA Board, IATA monitored the number of IOSA audits, observing that 31 were conducted in 2017. IATA also identified observing audits for IOSA and ISAGO and the monitoring of individual auditor performance as a performance measure for 2018.

International Airline Training Fund

The International Airline Training Fund (IATF) is funded by IATA and its members and sponsors capacity-building initiatives for airlines and other aviation industry stakeholders where they are most needed globally. In 2017, the IATF trained 3,408 aviation industry professionals from developing nations, particularly from Africa (86%).

Enhancing aviation safety remained the IATF's priority through the continuation of the IOSA Implementation Training Initiative for African Airlines (IOSA-ITI) and the delivery of on-demand training courses on operational safety. Six airlines achieved IOSA certification thanks to the IATF's training support in 2017.

The IATF also sponsored four rounds of the IATA Diploma in Airline Management in 2017. This sponsorship helped to develop the aviation business skills of young airline professionals in Africa and from small island countries in the South Pacific.

THE ISAGO REGISTRY

03

SECURITY PROCESSES: PLANNING AND COOPERATION FOR IMPROVED OUTCOMES

A challenging year

Security and facilitation issues presented several challenges to civil aviation in 2017. Among the developments were the US travel ban imposed without warning on travelers from seven nations; the months-long ban on portable electronic devices (PEDs) in cabin baggage on direct flights to the United States and the United Kingdom from several African and Middle Eastern countries; the implementation of enhanced security measures when flying into the United States from 285 locations following the removal of the PEDs ban; and the release of the ICAO Global Aviation Security Plan (GASeP).

ICAO Global Aviation Security Plan

The 2016 United Nations Security Council Resolution 2309 on Aviation Security reaffirmed the obligation of countries to ensure the security of their citizens and of other nationals against terrorist attacks on air services operating within their territories. It likewise reaffirmed the responsibility of nations to safeguard their citizens and other nationals against terrorist attacks on international civil aviation wherever these may occur.

Resolution 2309 also urged nations to implement ICAO Annex 17 standards at every airport within their jurisdictions and to urgently address any gaps or vulnerabilities.

ICAO also shared with the IATA Security Group (SEG) a detailed roadmap with 94 tasks for ICAO members, other countries, and the industry. IATA is directly involved in the delivery of more than 25% of the 94 tasks. Global GASeP tasks are being integrated into SEG programs, and the SEG will provide progress reports to ICAO on a regular basis.

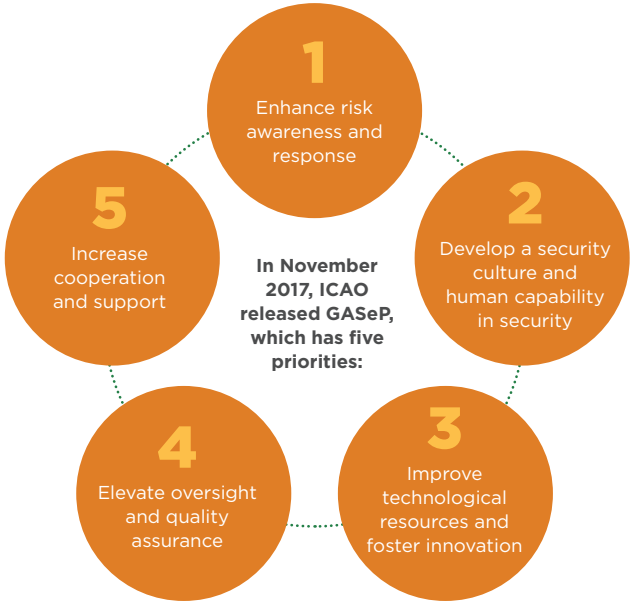
ICAO, meanwhile, is developing regional GASeP roadmaps that combine regional security and facilitation programs and plans under one framework. IATA is again involved, by building on regional security and facilitation initiatives.

Portable electronic devices

In March 2017, the US Department of Homeland Security (DHS) issued a security directive to ban large PEDs from the cabins of US-bound flights originating from 10 airports in the Middle East and North Africa. The UK Department for Transport (DfT) followed suit a short time later with similar restrictions but a different list of airports. Airlines immediately complied with the directives but noted the potential fire hazard of PEDs in the cargo hold and the on-the-ground difficulties arising from aircraft with different security requirements departing the same airport.

Following robust, IATA-led calls for alternative measures, in June 2017 the US DHS and Transportation Security Administration (TSA) released new requirements that allowed carriers to unlock the ban, although details were not publicly disclosed. IATA's SEG led consultation efforts with the TSA to understand the flexibility in implementing the new requirements. This resulted in updated directives, with the latest released in December 2017. Clear, alternative means of compliance on certain aspects of the measures were provided to affected airlines.

GASEP'S FIVE PRIORITIES



This sequence of events shows yet again that unilateral security measures are not as effective as globally coordinated schemes that benefit from aviation industry input. The security of civil aviation and its passengers is indeed a fundamental responsibility of individual governments. And airlines stand ready to assist and comply with all such security measures. Airlines, though, cannot, be held responsible for the implementation of security measures.

Some nations preclude airlines from implementing secondary or carrier-own requirements. In addition, jurisdictional regulations at an airline's point of departure may conflict with regulatory compliance at the point of arrival, placing airlines in a difficult position. Countries need to recognize these challenges within the standards and recommended practices framework that is the bedrock of bilateral air service agreements.

Smart Security

Smart Security is a joint initiative of IATA and Airports council international (ACI) that improves security outcomes in light of ever-evolving threats while delivering increased operational efficiency and an enhanced experience in the passenger and cabin baggage screening process. It does this through innovative technologies and processes combined with risk-based security concepts.

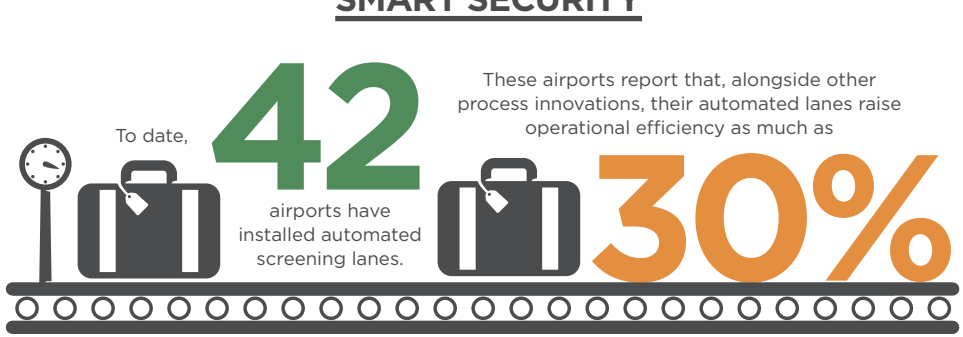
Many of the technologies and process improvements spearheaded by Smart Security are becoming mainstream. For instance, lane automation, centralized image processing, and checkpoint management systems, which were in their infancy when Smart Security commenced, have become standard, and their adoption is spreading quickly.

Smart Security guidance documentation and global outreach have contributed to Smart Security's success. A focus in 2017 was support for the industry's implementation of improved explosive detection capabilities. Guidance was produced on technology, hardware, operational concepts, and standards for consideration by airports, screening authorities, airlines, and authorities. IATA also leveraged expertise from Smart Security to support its members in responding to the March 2017 PED ban on certain flights.

Another focus in 2017 was the development of key performance metrics (KPM) to allow airports, screening authorities, and other stakeholders to measure the efficiency of a specific passenger checkpoint using standardized definitions and data collection methodologies. The KPM are not exhaustive but, rather, are a common base and a common language with regard to checkpoint efficiency.

In 2018, IATA will dedicate efforts to realizing the long-term vision for Smart Security for a more sustainable, efficient, and effective passenger and cabin baggage screening process. Accelerating the development and proliferation of advanced screening technologies will be considered as will overcoming the impediments to establishing a risk-based regulatory framework that advances differentiated screening for passengers and their belongings. IATA will also continue to focus on the primary checkpoint and other strategies that will help remove or reduce the imposition of extraterritorial measures.

> "Many of the technologies and **process improvements** spearheaded by Smart Security are **becoming mainstream**."



Cybersecurity and personal data protection

The increasing digitization of aviation necessitates a robust cybersecurity strategy. IATA proposed and launched a task force to address cybersecurity in 2017. The Aviation Cyber Security Task Force (ACSTF) of industry experts in this emerging area of risk to air transport will report to the SEG. The aim is to gather information, determine the scope of the threat, and identify best practice for airlines regarding the increasing probability of a cyber breach of aircraft systems.

In Europe, meanwhile, the European Union General Data Protection Regulation (EU GDPR) comes into effect in May 2018. It introduces obligations for any organization that offers services to "data subjects who are in the Union," whatever their nationality or place of residence and regardless of their actual place of business operations. This extraterritorial reach means that all major airlines are likely to be covered by the EU GDPR and should plan for compliance. Noncompliance is punishable by fines equal to 4% of global turnover—akin to fines imposed on multinational corporations under EU competition laws.

Airlines will need to ensure that they handle the personal data of EU passengers correctly and that third parties processing personal data on their behalf also comply. The EU GDPR is stringent about permissions for using personal data and about where that data is held, how it is protected, how long it is kept, and what to do if a personal data breach occurs.

Consent for using data needs to address a single, specific purpose of processing. If an organization's services involve multiple processing operations for more than one purpose—as is likely in an end-to-end air journey—separate consent for each purpose must be obtained.

Understanding legal obligations on data protection on a global basis is complicated. The United States, for example, has a patchwork of federal and state laws governing data protection. The best way forward for airlines is to use the set of laws that are the most stringent and applicable to their operations as baseline standards. For many, that will be the EU GDPR.

Conflict zones

July 2017 marked three years since the shooting down of MH17 over Ukraine. In the time since, militarized hostilities have continued and arguably increased in areas where civil aviation aircraft are known to operate.

IATA member airlines are engaged in risk assessments prior to the dispatch of aircraft based on IOSA standards. But better intelligence and information-sharing by nations is required. In May 2017, ICAO adopted a standard on information sharing for Annex 17 that deals with security. And in 2018, ICAO is expected to publish a risk assessment manual for civil aircraft operations over or near conflict zones.

> "Airlines are engaged **in risk assessments prior to the dispatch of aircraft** based on IOSA standards. But better **intelligence and information-sharing** by nations is required."

Working together we can focus on innovating security for the 21st century, on creating an innovative system that acknowledges its interconnected nature. In the future, I envision a system where security measures are seamless, capable of detecting and addressing threats instantaneously, and where passengers can be screened at walking pace.

DAVID P. PEKOSKE, ADMINISTRATOR, U.S. TRANSPORTATION SECURITY ADMINISTRATION

04

SMARTER REGULATION: **BEST PRACTICES DEFINED**


1961 TEHRAN
N 0034 DOHA
T3 0529 LONDON
PN 2415 RIYADH
GI 1872 MADRID
T3 0944 DAMASCUS
SF 2778 AMMAN
OD 0061 MOSKOW
BK 1532 PARIS
OD 3487 FRANKFURT
PN 0194
0028 BAHRAIN

Smarter regulations

Smarter regulations deliver clearly defined, measurable policy objectives in the least burdensome way. A smarter fiscal policy, for instance, will encourage air connectivity, not restrict it through overtaxation. A policy framework based on smarter regulation principles positions a country for sustainable aviation growth.

Examples of smarter regulation approaches witnessed in 2017 include

- Colombia's introduction of a slots regulation that is consistent with the *Worldwide Slot Guidelines* (*WSG*) reflecting the "consistency and coherence" principle);
- Brazil's removal of Horario de Transporte (HOTRAN), an additional layer of slot allocation procedures (reflecting the "reducing burdens and regular reviews" principle); and
- Nigeria's establishment of clear procedures for the release of blocked airline funds (reflecting the "clarity and certainty" principle), resulting in the release of backlogged funds.

An important step forward in 2017 was the publication of smarter regulation methodology (referred to as "good regulatory practices") in ICAO's *Manual on the Regulation of International Air Transport* (Doc 9626).

SMARTER REGULATION PRINCIPLES

Smarter regulation policy design principles

- **Consistency and coherence.** Regulations should not overlap and lead to contradictions nationally or internationally and should be applied with oversight responsibility clearly delineated.
- **Proportionality.** The cost of regulations should be proportionate to the benefits they promise.
- **Targeted at risk.** Regulations should have specific and well-defined objectives that respond directly to the risk identified.
- **Fair and non-distortive.** Regulations should be applied fairly and should not place discriminatory burdens on any particular group.
- **Clarity and certainty.** Regulations should clearly define the groups they apply to, should furnish those groups with clear information about what is expected of them, and should give groups sufficient time for compliance.

Smarter regulation process principles

- **Defining a clear need.** The objective of a regulation should be identified based on sound evidence, and available alternatives must be considered.
- **Assessing impact.** There should be an assessment of the impact of any regulation.
- **Consulting.** The drafting of regulations should involve those who are potentially affected.
- **Reducing burdens and regular reviews.** The development and review of regulations should focus on reducing the compliance burden.
- **Granting opportunity to respond and revise.** There should be clear procedures for responses to adjudications and appeals and for any needed revisions to regulations.

Consumer protection

The aviation industry operates in an ultracompetitive marketplace and prizes customer loyalty. Social media and citizen journalism can magnify any incidents where standards of customer care are perceived to fall short. Airlines, therefore, are highly incentivized to offer good customer service and, if problems occur, to try to put them right. Problems in 2017 included overbooking and pet carriage incidents and the poor application of best practices in serving passengers with reduced mobility.

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

If governments put in place consumer protection regulations that go beyond international conventions and airline practice, it is important that these be developed in accordance with smarter regulation principles. It is particularly vital that governments, regulators, and the flying public understand the balance between protecting consumer rights and providing sustainable air services.

In 2017, several large markets took action to strike a better balance between protecting consumers and ensuring a vibrant, competitive aviation marketplace. Brazil put in place its Resolution 400, which liberalized the baggage allowance on domestic and international flights; Turkey suspended EU-like compensation for long delays; and Korea moved away from a proposal that would require tickets to be refundable if purchased 91 days or more in advance.

FUTURE TRENDS

In June 2017, IATA published a report on the future of the airline industry with three goals in mind:

1. Anticipate the 2035 public policy agenda and allow the industry to identify actions that it can take now to better prepare for risks and opportunities ahead
2. Provide thought-provoking substance to advance similar discussions at an airline or alliance level as the case may be
3. Engage with a wide range of government departments and use the report as a platform to partner with regulators on preparing for the future

TAXATION

Excessive taxes on aviation impede economic growth, and affect the ability of air transport to meet demand. Aviation taxes, moreover, should not be used to subsidize other modes of transportation or to make up budget deficits.

1 THE AMERICAS

COLOMBIA

Colombia introduced its Connectivity Tax in June 2017 as a passenger ticket tax on domestic and international departures to fund an access tunnel and routes linking Jose María Córdova International Airport with the city of Medellin and its suburbs. Following industry advocacy challenging the tax from a policy and standards perspective and from the perspective of its negative economic impact, a Colombian court suspended the tax with effect from 1 December 2017.

MEXICO

The Mexican state of Baja California has established a tax on all foreign tourists. There are, however, indications that this tax is being reevaluated.

ST. LUCIA

St. Lucia increased taxes and fees, including its Airport Development Fee, in 2017 to fund its repair of roads and to construct a cruise ship terminal. IATA opposes the increase and the use of the funds.

UNITED STATES

IATA and Airlines 4 America (A4A) combined to persuade US lawmakers to reject a proposal that would have nearly doubled the Passenger Facility Charge (PFC) that US airports impose on travelers and that airlines are obliged to collect as part of their ticket price. The proposal would have allowed airports to raise the PFC from $4.50 to $8.00, or up to $13 per customer one way, adding an estimated $2.6 billion to the PFC charge levied on US air travelers annually.

2 EUROPE

AUSTRIA

The decision by the Austrian government in 2017 to reduce its ticket tax 50% on 1 January 2018 was a welcome development.

GERMANY

Germany's Air Transportation Tax continues to penalize German consumers, to disadvantage German carriers, and to hamper the German economy. It is hoped that the country's new coalition government will make reviewing the tax a priority.

ITALY

The IRESA tax, the Italian noise emissions tax for civil aircraft, is applied in some Italian regions, while others have rejected it as unconstitutional. The industry is seeking clarity on this inconsistency and believes that the tax should not be applied anywhere in Italy.

NETHERLANDS

The newly formed Dutch coalition government announced in 2017 its intention to introduce a minimum price for carbon. It explicitly refers to seeking a Europe-wide agreement on the taxation of air transport and the possible introduction of a tax on aircraft noise and emissions. It also proposes to introduce an air transport tax by 2021 if the other measures are deemed insufficient. IATA coordinated a joint industry letter to the Dutch government and will continue to consider further actions to prevent the implementation of this taxation proposal, which runs counter to ICAO policies.

SWEDEN

A new aviation tax for passengers departing Swedish airports came into effect on 1 April 2018. The tax ranges from SEK80 to SEK400 depending on the distance flown and is supposedly for environmental purposes. Yet, the Swedish government's own study states that a tax is not an appropriate measure to reduce emissions.

UNITED KINGDOM

The UK government's devolution of responsibility for the UK Air Passenger Duty (APD) led in late 2016 to a draft bill to replace the APD with an air departure tax (ADT) at airports in Scotland. The Scottish government proposes the ADT set at 50% of the APD rate, a move it believes will boost the Scottish economy. The bill remains on hold.

3 MIDDLE EAST AND AFRICA

MOROCCO

Morocco withdrew its ticket stamp tax with immediate effect at the end of February 2018.

GULF COOPERATION COUNCIL COUNTRIES

Among Gulf Cooperation Council (GCC) members, Saudi Arabia and the United Arab Emirates introduced a value-added tax (VAT) on 1 January 2018. IATA advocated to ensure best practices were applied for international air transport leading up to VAT implementation in those nations. The other four member nations of the GCC will introduce VAT most likely in early 2019.

4 ASIA-PACIFIC

AUSTRALIA

The Australian government introduced a bill increasing Australia's Passenger Movement Charge from AUD55 to AUD60 effective 1 July 2017, despite industry opposition. The bill, however, does include a government commitment to not increase the AUD60 rate for five years.

NEW ZEALAND

IATA is fighting a proposed tourism tax in New Zealand. IATA argues that the charge would contravene accepted ICAO guidelines and could result in a reduction of 78,000 international passengers per year to New Zealand and lower the country's GDP $70 million.

INDIA

India introduced a goods and services tax (GST) regime on 1 July 2017. Despite industry engagement with the authorities prior to and since the GST's introduction, rates applicable to air transport include 5% for economy-class and 12% for premium-class travel. International best practice is zero taxation. The GST's implementation involves many outstanding issues, and industry advocacy continues.

JAPAN

A bill including a departure tourism tax is expected to be tabled in the Japanese Diet soon and is likely to pass despite strong industry concerns.

Montreal Convention 1999

Montreal Convention 1999 (MC99) is an example of smarter regulation. MC99 sets out rules on airline liability during international carriage that deliver significant benefits for all stakeholders. It ensures protection for passengers and is a prerequisite to cargo transformation initiatives, such as the electronic air waybill (e-AWB) and e-freight, that deliver shipments faster and more efficiently than ever. MC99 also ensures that airlines benefit from streamlined claims management and heightened processing regarding their liability for passengers, baggage, and cargo.

There was significant progress in 2017 in IATA's campaign to obtain the universal ratification of MC99. Chad, Indonesia, Mauritius, Russia, Sudan, Thailand, and Uganda ratified the convention, bringing the total number of signatories to 130, fully 70% of ICAO member nations.

Unruly passengers

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

From 2007 to 2016—the latest year of available statistics—there were 58,000 reported cases of unruly passengers. But in 2016 alone, there were 9,837 such incidents, amounting to 1 incident per 1,424 flights.

The type of incident varied significantly, from low-level disobedience of crew instructions to major disruptions involving aircraft diversions and passenger deplanement. In 2016, 12% of reported cases were physical, including damage to the aircraft and safety equipment. There was also a significant rise in cases where all forms of conflict de-escalation were exhausted and the cabin crew had to physically restrain a passenger to preserve aircraft safety.

The industry has set out a strategy for dealing with unruly passengers. It involves improving the prevention and management of incidents, including enhancing the legal deterrent. A legal deterrent to unruly behavior is prosecution and enforcement powers for countries to deal with misbehavior. Montreal Protocol 2014 (MP14) provides those legal powers, but 22 nations must ratify MP14 before it can come into force.

By year-end 2017, 12 nations had ratified MP14, Egypt and Portugal being among the most recent countries to do so. Turkey and a number of other countries are in the final stage of ratification, and IATA expects MP14 to enter into force in 2019.

Human trafficking

The trade in people is an illegal industry worth $32 billion a year that the United Nations Office of Drugs and Crime estimates involves the trafficking of almost 25 million people annually. A significant number of traffickers are suspected of taking advantage of the global air transport network. The aviation industry is determined to play its part in preventing this and in helping law enforcement identify traffickers and their victims.

In 2017, IATA focused on raising the awareness of human trafficking through presentations at its 72nd AGM and through its #EyesOpen social media campaign. IATA is looking at a range of further activities in 2018, including guidance and training material and partnering with other industry groups.

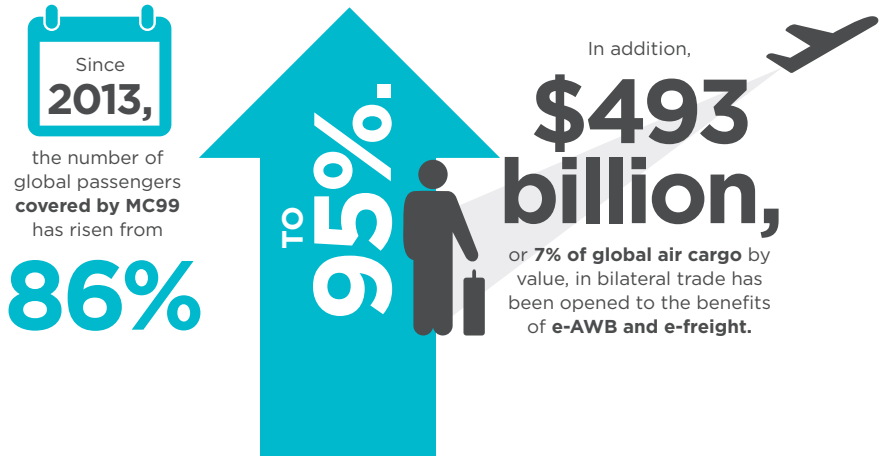
Slots

More than 190 airports worldwide are slot constrained, meaning that they have insufficient capacity to meet demand at all hours of the day. This number is set to rise substantially over the coming decades, as airport construction fails to keep pace with the increase in demand for aircraft movements.

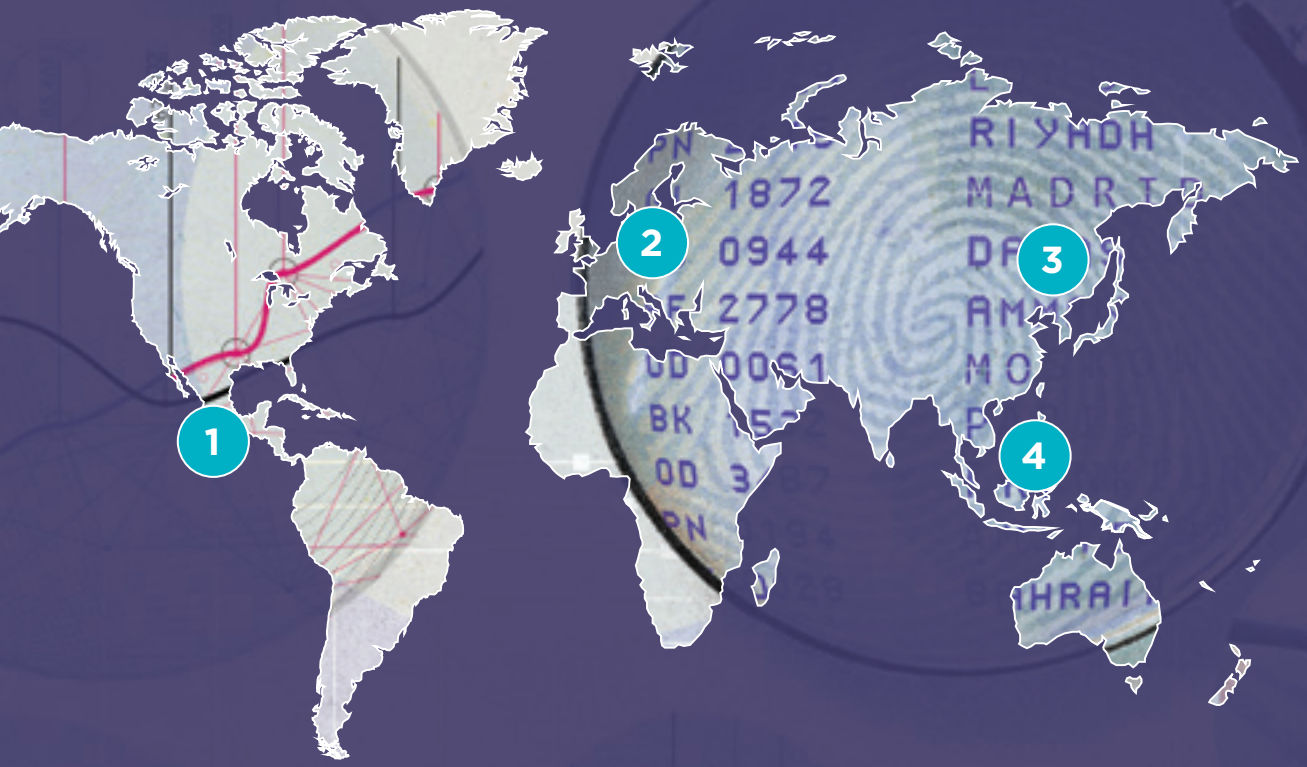
IATA's *Worldwide Slots Guidelines* is the global standard for the policies, principles, and procedures of airport slot allocation and management. Consistent application of the *WSG* provides for the certainty, sustainability, flexibility, and transparency that the industry requires and that passengers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

IATA undertook a comprehensive strategic review of the *WSG* in 2017 in conjunction with ACI and the Worldwide Airport Coordinators Association (WWACG) to ensure that the *WSG* remains relevant in meeting the industry's needs. The review focused on access to congested airports using fair, transparent, and neutral processes that enable competition; the process for handling airports with peak, not constant, congestion; the enhancement and clarification of slot performance and management through best practices; and the timelines and activities that make up the *WSG* historic determination process.

BENEFITS OF MC99



REGIONAL SLOT DEVELOPMENTS



1 THE AMERICAS

- Colombia and Peru, following training and education, adopted *WSG*-aligned regulations to manage their congestion issues.

- Mexico recognized the need to align with global standards, and IATA is supporting its quick implementation of the *WSG*.

- Brazil made efforts towards eliminating links between punctuality and historic slots in Brazilian Slot Regulation Resolution 338.

2 EUROPE

- Europe remains the most significant region for congestion, accounting for just over 50% of the world's most congested airports.

- IATA continues to work closely with the European Commission to see that EU Slot Regulation 95/93 is effectively applied by all EU members and that the benefits of independent, transparent, and neutral coordinators are fully realized.

3 NORTH ASIA

- The Civil Aviation Authority of China (CAAC) released a slot regulation in 2017 that incorporates some *WSG* elements. IATA participated in a workshop and shared best practice with the CAAC. China continues to focus on performance and punctuality and, in 2018, is putting into force new rules by the CAAC that require regular reporting and remedial action as necessary.

- IATA worked with Hong Kong International Airport and Hong Kong's Civil Aviation Department in 2017 as they implemented their quota count scheme to manage night flights. The goal is a balanced approach that meets the needs of the local community and that optimizes the benefits of aviation.

4 ASIA-PACIFIC

- At Melbourne Airport, IATA helped avert a proposal that could have affected the neutrality of the airport slot allocation process.

- In Thailand, IATA helped prevent a planning disruption caused by a sudden transfer of airport slot coordination services from Thai Airways to the Civil Aviation Authority of Thailand.

05

INFRASTRUCTURE IMPROVEMENTS: **CREATING THE RIGHT BALANCE**


9917132
JET FUEL ONLY
BRITISH PASSPORT
UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND
JET FUEL O
£201
£129
£202
£162
£204
£170
£216
605 2MU
9723 NZ
EUROPEAN UNION
UNITED KINGDOM OF
GREAT BRITAIN
1961
0034
0529
2415
FREIGHT
DPE 4605 2MU
AKE 19723 NZ
IMMIGRATION
UA 7997
CX 271
EK 381
CX 207
JL 7905
QR 813
DL 7916
CX 745
AA 6118
DPE 4605 2MU
AKE 19723 NZ
294 03 05
TURMANTAS 26

Operational and financial improvements

The number of passengers using air transport is set to nearly double by 2036. Infrastructure, though, is not keeping pace, and a crisis is looming. Airlines require access to sufficient, high-quality infrastructure at competitive costs to meet the rising demand for air freight and passenger travel and to continue to deliver social and economic benefits. The industry's collaboration with infrastructure partners is critical to maximize customer service and to boost air connectivity.

Cost-efficiency and lower charges

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

For several years, IATA highlighted shortcomings in the European Commission (EC)'s Airport Charges Directive. And in 2017 the EC formally acknowledged that airports could misuse their market power and is therefore evaluating changes to its legislation.

IATA has been successful in promoting the industry's agenda. Results in 2017 included charges reductions in South Africa and India, in Delhi, and changes in the Danish regulation that will have important favorable consequences on the level of airport charges at Copenhagen airport.

It also became apparent that the 2015 fee reduction at the airport in Cartagena, Colombia—from $92 to $38—was a positive move. Tourism arrivals rose 38%, with the additional tourist spending doing much more for the local economy than the airport fee ever could.

Sustainable airport governance

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

Airport privatization or corporatization is not new. But its success must be measured in service levels and cost-effectiveness and not in financial gain for governments or investors.

The provision of aviation infrastructure should be considered a fundamental public service and an essential economic generator for any country. It must be seen as part of a long-term vision serving consumer demand for air transport and for economic development. Airports do not naturally or usually have competition. When they are privatized or corporatized, the pressure to maximize shareholder returns too often outweighs the core objective of delivering user and consumer benefits. Ironclad regulation must prevent a privatized or corporatized airport from becoming an out-of-control monopoly.

The issues are becoming particularly disturbing with new investors entering the private or corporate airport market and pushing back on regulation designed to protect consumers. Short-term returns are being maximized at the expense of long-term economic benefits.

IATA is campaigning to change the way governments approach the privatization and corporatization of airports. IATA's objectives include

- ensuring airlines, as a major stakeholder, are consulted on privatization or corporatization plans;
- confirming that the rationale for any privatization or corporatization is in the interests of the industry and users and customers;
- exploring alternative business models that do not necessarily involve the transfer of assets to private owners;
- following best practice public-private partnership models focused on efficiency and service levels should there be no alternative to privatization or corporatization; and
- ensuring governments put regulatory safeguards in place that protect the interests of airlines, passengers, and other airport users.

INFRASTRUCTURE DEVELOPMENT

The airline industry is prioritizing infrastructure development that will

- accommodate growth in demand;
- drive cost-efficiency and lower charges at airports;
- promote sustainable airport governance;
- align airport investment with airline capacity needs;
- secure a reliable supply of jet fuel at competitive and transparent prices;
- shape a common vision of the airport of the future; and
- build modernized, efficient air traffic management (ATM) systems.

CHARGES CAMPAIGN HIGHLIGHTS

1 THE AMERICAS

BRAZIL

IATA worked with Brazil's air navigation service provider (ANSP) to reduce an increase in overflight fees, resulting in a cost avoidance of $216 million.

CANADA

IATA worked with NavCan, the Canadian ANSP, to save $131 million through reductions in air traffic control (ATC) charges in Canada for 2017–18.

COLOMBIA

IATA convinced the Colombian government not to introduce a carbon tax for international fuel uplift.

2 EUROPE

AUSTRIA

IATA was part of a campaign that saved $62 million through reductions in Austria's air travel levy for 2018.

GREECE

IATA saved airlines $69 million through reductions in charges at Greek airports for 2017–18.

3 AFRICA

SOUTH AFRICA

IATA had input into a new charges agreement that resulted in $232 million in reductions for 2017–18.

TANZANIA

IATA efforts helped avoid a rail development levy application on jet fuel.

4 NORTH ASIA

CHINESE TAIPEI

IATA and the industry lobbied to postpone the implementation of fees at Taipei airport, resulting in a cost avoidance of $44 million instead of a proposed increase of $66 million.

5 ASIA-PACIFIC

INDIA

IATA influenced a reduction in airport charges at Delhi airport, saving airlines $197 million for 2017.

JAPAN

IATA achieved a reduction in airport charges for Narita and Kansai airports, saving airlines $26 million for 2017–18.

Airport investment aligned with airline needs

There are more than 190 capacity-constrained airports worldwide, including such important hubs as Amsterdam, Guangzhou, Jakarta, Mumbai, and São Paulo. The lack of runway and terminal capacity worldwide is a major concern that urgently needs to be addressed. Airlines need functional facilities that balance capacity with demand to facilitate growth and that deliver adequate levels of service while improving operational efficiency, now and in the future. Capacity expansion must occur faster than at present and follow an airport master plan that guides infrastructure design and construction and triggers appropriately timed investments based on demand.

Infrastructure providers often enjoy monopoly or quasi-monopoly status, so governments and regulators must maintain vigorous oversight of charges and development activities. Building more infrastructure is essential, but any investment in airport facilities must be underpinned by a robust business case that clearly demonstrates a return on investment for the airlines that fund developments.

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

Jet fuel supplied reliably at competitive and transparent prices

Jet fuel costs accounted for about 20% of airlines' operating costs in 2017, down from over 30% when the oil price spiked in 2012–13. Not all carriers have been able to maximize the benefits of reduced oil prices, because of a lack of competition in fuel supply and unjustified duties, fees, and taxes on jet fuel in some parts of the world.

It is important that airlines have access to a reliable supply of jet fuel priced transparently and competitively. In 2017, jet fuel prices in some countries in Africa, the Americas, and Central Asia were still significantly higher than the global average, and this had a negative impact on airline profitability.

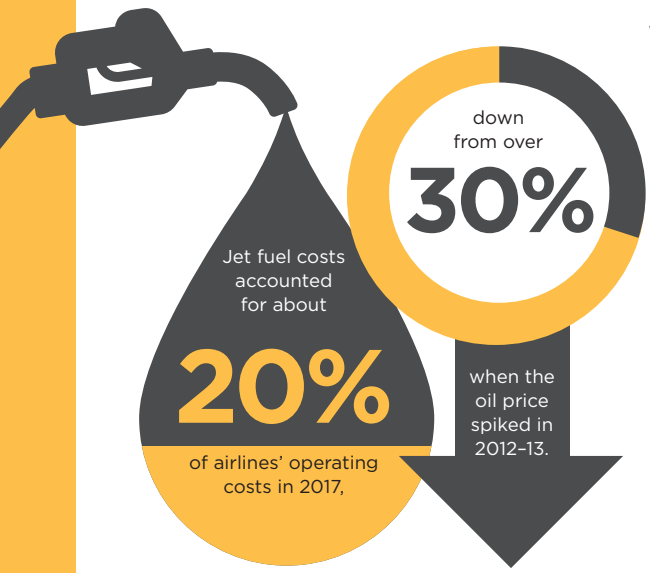
The aviation industry continues to remind governments that bilateral air service agreements and ICAO tax policies stipulate that jet fuel for international flights must not be taxed. Where such taxes exist, the industry campaigns to remove them. In 2017, IATA managed to mitigate taxes in Colombia, Tanzania, and the Brazilian state of Bahia. IATA also helped to reduce fuel costs in Botswana by a cumulative $23.6 million.

Joint IATA and industry efforts to open up the jet fuel market for competition continue in many countries, including Australia, China, Cuba, Kazakhstan, and Mexico. Efforts also continue to ensure the reliability of supply in a number of jurisdictions, including Australia, New Zealand, Nigeria, and the United Kingdom.

A common vision of the airport of the future

The New Experience Travel Technologies (NEXTT) initiative is a partnership between IATA, Airports Council International (ACI), and other airport service providers. It defines how technology and advanced processes can deliver more capacity and enhance the ground journey for every person and thing—passenger, baggage, cargo, and aircraft—that moves through an airport.

NEXTT involves developing a common vision to guide industry investments and help governments establish a smart regulatory framework. It is provisionally planned as a three-year program. Success will be defined by the provision of a forward-looking and aligned approach to investment in ground infrastructure that promotes operational improvements and capacity growth.



MAJOR AIRPORT DEVELOPMENTS

1 MEXICO CITY AIRPORT

IATA supports the building of a new airport in Mexico City to enable the Mexican capital to benefit more fully from its geographic position linking North America and Latin America. An IATA study shows that for a country of its size, Mexico underperforms in its integration with the global air transport network. If the new airport is not built, it could mean 20 million fewer passengers per year for Mexico by 2035. This translates into a loss of up to $20 billion in GDP contributions and as many as 200,000 jobs.

2 BRASÍLIA INTERNATIONAL AIRPORT

IATA convinced Brasília International Airport to revise the design of its terminal expansion. The new plan will improve capacity utilization and connection times and simplify passenger flows through the flexible and efficient introduction of swing gates for international and domestic operations.

3 MANCHESTER AIRPORT

IATA-led airline community engagement has ensured that Manchester Airport's £1 billion investment in terminals, piers, and aprons is optimized and aligned to airlines' needs. This will improve passenger experience, operational resilience, cost avoidance, and performance measurement.

4 LONDON HEATHROW AIRPORT

IATA is advocating for the decision to build a third runway at Heathrow to be realized in a cost-effective manner. The current proposal has an unacceptable price tag for the capacity gained. Costs are projected at between £14 and £17 billion, double the price of the London Olympics. Heathrow Airport charges are already the highest in the world, and any expansion of the airport must be accompanied by a commitment that charges will not rise further. The construction of the third runway must enhance Heathrow's competitiveness, not destroy it.

5 O. R. TAMBO INTERNATIONAL AIRPORT

As a result of IATA's support of the airline community, Airports Corporation South Africa (ACSA)'s investment plan has been aligned and prioritized with airline requirements. This will speed up much-needed capacity, ensure phased deployment, adjust scope, delay unwarranted investments, and ensure the timely delivery of a $2.3 billion capital program.

6 NEW MUSCAT INTERNATIONAL AIRPORT

Following IATA advocacy and training with Oman airports, Oman's Ministry of Transport has adopted IATA's new level of service concept as published in the 10th edition of IATA's *Airport Development Reference Manual* (*ADRM*). The design capacity of the New Muscat International Airport, therefore, now follows IATA's optimum level of service guidelines. This change enables the airport to increase its annual capacity from 12 million to 20 million passengers with no additional investment or capacity expansion needed.

7 HONG KONG INTERNATIONAL AIRPORT

IATA supports the construction of a third runway in Hong Kong, with completion scheduled for 2023. The new runway will be 3,800 meters long and parallel to and north of the existing two runways. It is expected to be dedicated for arrivals and will increase aircraft movement by 33 per hour. The new runway and a planned new concourse and expansion of the terminal will enable Hong Kong International Airport to serve an additional 30 million passengers annually.

06

ENVIRONMENTAL MITIGATION: CARBON-NEUTRAL GROWTH DRAWS NEARER

Pushing for progress

As with all industrial sectors, air travel must mitigate its environmental impact. The successful delivery of a robust sustainability strategy will provide the industry with a license to grow and enable increasing numbers of people to enjoy the social and economic benefits of air connectivity.

The Carbon Offset and Reduction Scheme for International Aviation (CORSIA) was IATA's primary focus in 2017. IATA sought to ensure increased voluntary participation by countries and that preparations for CORSIA implementation by airlines continued.

In addition, the industry continues to push for progress on operational, technical, and infrastructure improvements that complete the industry's long-standing, four-pillar strategy. The aim is to deliver on its commitments for carbon-neutral growth from 2020 and a 50% cut in 2005 carbon emissions by 2050. The widespread deployment of sustainable aviation fuels (SAF) will be crucial.

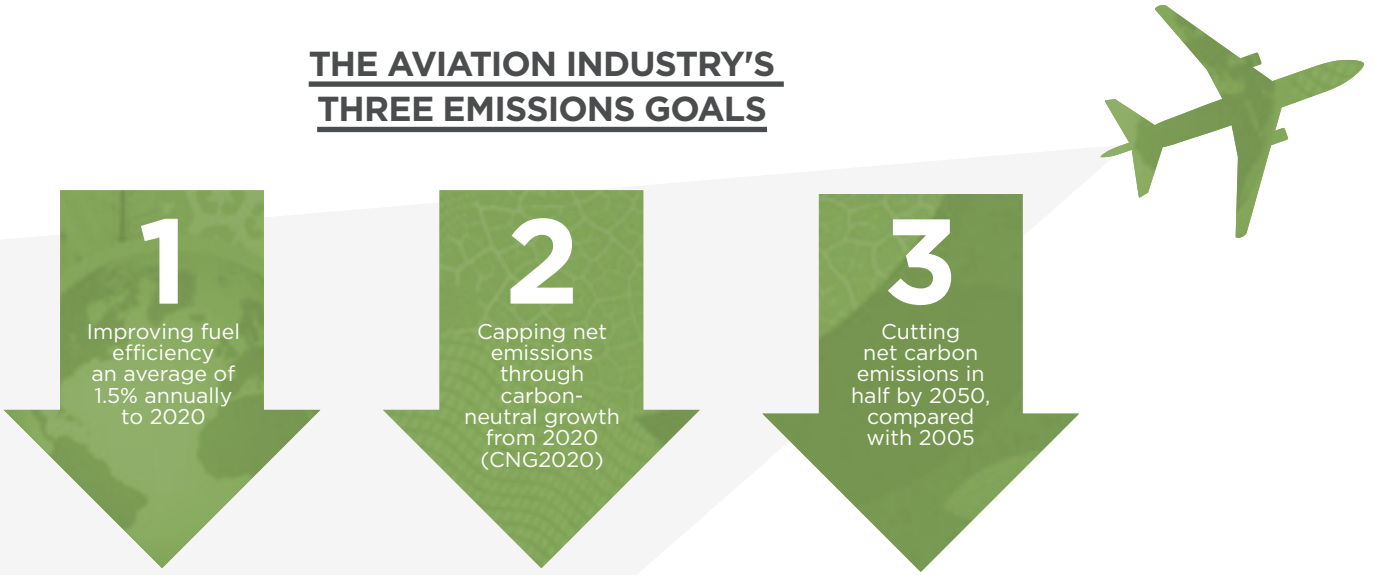
The industry also seeks to manage and reduce its environmental impact in such other areas as noise and waste. And airlines are committed to raising awareness of the illegal trafficking of animals and plants.

Carbon Offset and Reduction Scheme for International Aviation

As of 1 March 2018, 73 ICAO member nations, including 36 developing countries, have volunteered to apply CORSIA. Only flights between volunteering countries will be subject to offsetting requirements in the initial stages of the scheme. All airlines, however, will need to be ready starting 1 January 2019 to monitor the emissions from their international flights and report them on an annual basis to their regulatory authorities.

In September 2017, ICAO's Committee on Aviation Environmental Protection (CAEP) formalized for the ICAO Council its recommendations on the technical rules and guidance for the implementation of CORSIA. IATA, in turn, has been holding workshops worldwide in 2018 to help airlines prepare for the monitoring, reporting, and verification work they will need to undertake and will develop tools to facilitate airlines' compliance with CORSIA.

THE AVIATION INDUSTRY'S THREE EMISSIONS GOALS



Support for CORSIA is unfortunately undermined by the decisions of some governments to use carbon pricing to justify levies on air transport. Recent examples include proposals to introduce environmental taxes in the Netherlands, Sweden, and the possible extension of the Swiss Emissions Trading Scheme to European flights.

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

Sustainable aviation fuels

The aviation industry is increasing its efforts to encourage the development of SAF. These are sourced from a variety of renewable or recycled feedstocks and can deliver up to an 80% reduction in carbon emissions over the complete lifecycle of the fuel.

Significant milestones in the production and uptake of SAF in 2017 included the following:

- the 100,000th flight using a SAF blend since 2008
- the global production of approximately 12 million liters of SAF
- the use of a SAF blend on more than 55,000 flights in the course of the year
- the commencement of continuous SAF supply at Oslo and Bergin airports in Norway and the continued supply, supported by United Airlines, of SAF at Los Angeles International Airport

In February 2018, the industry marked the 10th anniversary of the first airline flight using a SAF blend. IATA used the opportunity to suggest that with appropriate policies in place to encourage production, up to one billion passengers may have the opportunity to fly on a SAF-blend flight by 2025.

The main challenge for SAF deployment is to ensure sufficient production and a competitive end-user price. Governments must develop appropriate policy frameworks, including guaranteeing that SAF can, at a minimum, compete at the same level as automotive biofuel. Effective policies can reduce SAF production risk and enable access to more competitive debt and equity capital.

User-friendly SAF accounting methods; a global, mutual recognition of sustainability standards; and effective recognition within the ICAO CORSIA scheme are equally important policy enablers.

PREPARING FOR CORSIA IMPLEMENTATION

A

MONITORING, REPORTING, AND VERIFYING CO_2 EMISSIONS

Applies to **all** airplane operators (with some minor exemptions) with international routes and to **all** ICAO states globally from 2019.

B

OFFSETTING THE GROWTH OF CO_2 EMISSIONS

Applies to **all** airplane operators flying on included routes between ICAO states from 2021.

Illegal wildlife trade

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

IATA member airlines unanimously condemned illegal trafficking at IATA's 72nd AGM. The relevant IATA governance bodies have since worked on providing guidance to members to help them combat the trade. That guidance includes an addendum to the Live Animals Regulations (LAR), the recommended practices adopted by the Joint Passenger Services Conference (JPSC), and the recommended procedures in IATA's Cabin Operations Safety Best Practices Guide.

IATA, 46 airlines, and other aviation stakeholders have also signed the Buckingham Palace Declaration, an initiative from the United for Wildlife (UfW) foundation set up by the Royal Foundation that includes a transport taskforce. IATA is in addition a core member of the USAID's Reducing Opportunities for the Unlawful Transport of Endangered Species (ROUTES) Partnership, which aims to disrupt the illegal wildlife trade by preventing its use of legal transportation supply chains.

IATA environment assessment

IATA leads the application of the ISO 14001 international standard for environmental management systems to the airline sector through the IATA Environmental Assessment (IEnvA) program. The IEnvA provides a simplified solution for airlines to improve their environmental performance, adopt industry recommended practices, and comply with domestic and international standards and obligations.

IATA will increase the IEnvA's value to the industry by adding to it optional modules. Those modules will allow IEnvA operators to include standards, guidance, and assessment for energy management based on ISO 50001—the international standard for energy management systems—and specific obligations arising under the Buckingham Palace Declaration.

As of 1 February 2018, 15 airlines have achieved IEnvA Stage 1 certification and 6 more have achieved IEnvA Stage 2 certification.

> The trade in **endangered** wildlife and plants is the **fourth-largest illegal trade** after drugs, weapons, and human trafficking.

The agreement on CORSIA represents a very important milestone for air transport, and indeed for the entire world given that it is the very first commitment of its kind for any global industrial sector.

DR. OLUMUYIWA BENARD ALIU, PRESIDENT OF THE ICAO COUNCIL

07

DIGITAL CARGO: HARNESSING THE POWER OF DATA


AirCargo
AirCargo
ForkLift
ForkLift

A year of growth

Air cargo connects the world. It provides a vital bridge to global markets. Without air shipments, global supply chains could not function, and the availability of many time- and temperature-sensitive products, such as flowers, fruit, and life-saving pharmaceuticals, would be restricted. The industry brings significant economic and social benefits to the global economy.

Air cargo's growth in 2017 buoys a renewed commitment by the air transport industry to transform and strengthen its position as the preferred mode of transport for the global economy's high value to weight manufactured products. Among these items are microelectronic devices, pharmaceuticals, aerospace components, and medical devices.

2017 focus

Throughout 2017, IATA worked with shippers, freight forwarders, and the entire air cargo value chain to further a common agenda toward

- concluding the digitization of the supply chain to allow all information to be shared instantly, improving efficiency, and simplifying the transport process;
- adopting modern and harmonized standards that facilitate safe, secure, and efficient operations, particularly in relation to the carriage of dangerous goods;
- using enhanced technology to provide customers with responsive services based on intelligent systems able to self-monitor, send real-time alerts, and respond to deviation; and
- harnessing the power of data to drive efficient and effective industry quality improvements.

In parallel, IATA continued to press governments to improve trade efficiency by reducing tariffs and ratifying international agreements that make global trade easier. The focus of this activity is Montreal Convention 1999 (MC99), the revised Kyoto Convention, and the World Trade Organization (WTO) Trade Facilitation Agreement (TFA).

Digitization of the supply chain

The industry has been pursuing a transformation to a digital process known as e-freight for over a decade. A key element of e-freight is the market adoption of the electronic air waybill (e-AWB). In 2017, global penetration of the e-AWB surpassed the 50% barrier but fell short of the industry-endorsed target of 62%.

The industry agreed in 2017, therefore, to amend a number of resolutions and recommended practices to make the e-AWB the default standard on enabled trade lanes. The benefits of these amendments should spur e-AWB efforts in 2018.

GLOBAL TRADE IN 2017 BY VALUE

Challenges, however, remain in digitizing the supply chain. Trade lanes and airports in countries not signed up to MC99 face regulatory limitations in the transfer of digital data and are unable to adopt the e-AWB. Perceived complexity and a lack of harmonization in e-AWB procedures among stakeholders also need to be overcome. The industry will continue to address these challenges to further e-AWB penetration in 2018.

IATA is facilitating and supporting air cargo's modernization through its transformative Simplifying the Business (StB) Cargo program.

Harmonized regulatory standards and industry cooperation

Harmonized regulatory standards are essential to secure the air cargo supply chain while ensuring the flow of commerce.

In 2017, there was an increase in the number of countries issuing or maintaining bans or restrictions on air cargo from certain origin countries. IATA continues to work with regulators to mitigate the security risks and to provide feasible operational solutions for air cargo.

Dangerous goods

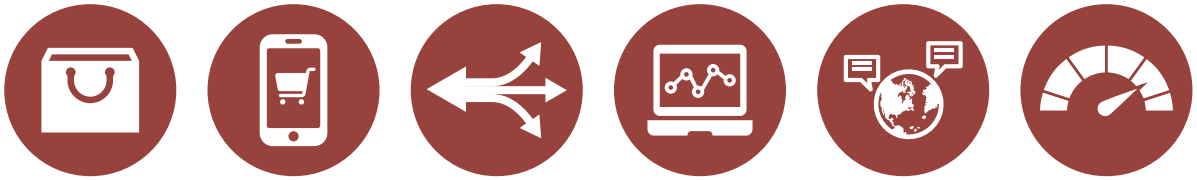
Safety is the industry's priority. Global standards and regulations are in place to ensure the safe transport of dangerous goods, including lithium batteries. However, mis-declared or noncompliant dangerous good shipments, especially involving lithium battery consignments, continue.

IATA intensified its efforts to improve regulatory compliance and called on governments to step up their enforcement of dangerous goods regulations. In particular, IATA asked that governments take a tougher stance on rogue shippers and impose significant fines and custodial sentences on those violating the regulations.

In March 2018, the industry took a significant step forward in the digitization of the dangerous goods supply chain following the adoption of the e-Dangerous Goods Declaration (e-DGD). The e-DGD is an electronic approach to managing the IATA Dangerous Goods Declaration (DGD) and leverages industry initiatives to digitize data and to embrace data-sharing platform principles.

The benefits of implementing the e-DGD with clearly defined data governance include improved transparency, traceability, and data quality. This, in turn, will improve process efficiency and reduce errors and delays.

THE SIX GOALS OF CARGO TRANSFORMATION



Modernizing cargo distribution | Capitalizing on e-commerce | Optimizing the end-to-end journey | Moving to data on demand | Developing real-time interaction | Making quality relevant

Making air cargo easier, smarter, and faster

Special cargo

Standardized air cargo processes are critical to manage the handling and transport of special cargo, such as pharmaceuticals, live animals, and perishable commodities. IATA standards are continually enhanced to comply with the latest regulatory requirements and with shippers' demands.

IATA's Center of Excellence for Independent Validators in Pharmaceutical Logistics (CEIV Pharma) addresses issues related to pharmaceutical transport. CEIV Pharma, operated in partnership with industry stakeholders worldwide, offers a standardized, global certification program that trains people to handle pharmaceuticals and to conduct consistent, on-site assessments of the handling of pharmaceuticals for transport. Some 209 cold chain logistics businesses and facilities are CEIV Pharma certified, with 75 more undergoing the certification process.

Building on the success of CEIV Pharma, in 2017 IATA launched a standardized global certification program to improve the safety and welfare of animals traveling by air. The Center of Excellence for Independent Validators for Live Animals Logistics (CEIV Live Animals) provides stakeholders across the air cargo supply chain with the assurance that CEIV Live Animals–certified companies are operating to the highest standards.

One digital language

A common language across platforms facilitates trade growth, improves security, and accelerates market access for air cargo. IATA's Cargo-XML has emerged as the preferred standard for the electronic communication of air cargo data among airlines, other air cargo stakeholders, and customs authorities.

In 2017, IATA's Cargo-XML messaging standard was integrated into two important customs systems: the World Customs Organization's Cargo Targeting System (WCO CTS) and the Automated System for Customs Data World (ASYCUDA World), a system used by 90 countries. The integration of Cargo-XML with the WCO CTS makes communication simpler and more effective and facilitates more accurate risk assessment by customs authorities using the WCO CTS application to capture advance electronic cargo manifest information.

The integration of Cargo-XML with ASYCUDA World standardizes electronic communications between airlines and customs authorities. The new data standard reduces message duplication and simplifies communication across the supply chain, facilitating trade growth, improving cargo security, modernizing customs operations, and fostering participation in global commerce through advance electronic data submission for air cargo shipments.

Powerful data

IATA's Cargo iQ is a quality management group with close to 80 members that helps airlines and freight forwarders monitor and benchmark delivery performance against their service promise, define common processes and procedures, and promote best practices. In 2017, Cargo iQ launched its Smart Data Project and an audit and certification scheme.

The Smart Data Project portal will monitor over 150 million lines of industry performance data annually with the intent of assisting Cargo iQ members to improve their processes and add value to the air cargo industry. The portal provides valuable analytics of shipment performance and indicators on where optimization could occur. It also allows members to compare their performance against the performance of others in the air cargo community on a lane and process level and from an airline and a forwarder perspective.

> “Some **209 cold chain logistics businesses and facilities** are CEIV Pharma certified, **with 75 more undergoing the certification process.**”

Nearly 90% of business-to-consumer e-commerce today is delivered by air. Remarkably, this percentage grew from 16% to 83% in just the six-year period between 2010 and 2016. This tremendous growth, over such a short period of time, provides a concrete testament to the direct relationship which exists between air transport capability, and e-commerce profitability.

DR. FANG LIU, SECRETARY GENERAL OF ICAO

08

PERSONALIZED TRAVEL: **A CUSTOMER-CENTRIC APPROACH**

Customers first

Aviation is a customer-focused industry. Passengers want their journeys to be tailored, seamless, hassle free, and efficient, from booking and check-in, through security, to collecting their luggage at their destination airport. With passenger numbers set to double over the next 20 years, delivering this degree of personalized experience will benefit travelers and facilitate the most efficient use of constrained airport infrastructure to cope with demand.

IATA is working with the industry to develop and implement innovative solutions to meet the needs of passengers and to accommodate growing demand.

One ID

Passengers want to use a single biometric identity token for all their travel transactions, from booking flights to passing through security and border control to collecting their bags.

Individual stakeholders, however, such as airlines and border control, customs, and screening authorities, have designed their own processes to meet their individual obligations and requirements. And there's little or no coordination between them.

IATA's One ID project seeks to overcome this fragmented approach. One ID introduces a collaborative identity management solution that spans all processes and stakeholders in the end-to-end journey from booking to destination and puts the passenger front and center.

A dedicated task force comprising representatives of airlines, airports, governments, and solutions providers further developed the One ID concept in 2017. One ID relies on the early validation of a passenger's identity and controlled access to this information by the various public and private stakeholders on an authorized-to-know basis. It ensures that passengers are recognized and attended to in the most efficient way in each successive step of their journeys with the use of trusted digital identity and biometric recognition technology.

In 2018, the task force will continue to research One ID's enabling technologies. It will examine how those technologies can be deployed in airports and how best to establish the trust to facilitate stakeholder collaboration. The task force will also determine the level of harmonization, standardization, and interoperability required to make One ID viable internationally. And it will examine the legal aspects of privacy and data protection, drawing from lessons learned through various proof-of-concept and test implementations of One ID around the globe.

Fast Travel

Passengers want increased control over airport processes. They desire to take advantage of the latest digital, self-service options.

Fast Travel transforms the passenger's airport experience. It ensures that passengers can walk from the door of the terminal to their seats on the plane with minimal inconvenience. The program provides self-service options at six airport touch points: self- or automated check-in, self-tagging of baggage, self-checking of documentation, self-rebooking of flights, self-boarding, and self-recovery of baggage.

In 2017, 45% of travelers had access to the complete Fast Travel experience. Fast Travel implementation, however, varies regionally. Africa and North Asia have focused on mobile boarding pass and self-tagging options, while the more mature markets of North America and Europe have focused on end-to-end, biometric self-service implementations.

IATA's focus in 2017 was on removing obstacles that prevent airlines from implementing Fast Travel solutions. The approval to use mobile boarding passes in China is an instance of IATA's success in this regard. Airlines and airports are responding to trends and technologies by emphasizing off-airport concepts, such as remote drop-off points for baggage; digital self-service options; and on-airport biometric implementations.

DELIVERING ON PASSENGER EXPECTATIONS

The keys to delivering on passenger expectations are listening and innovating. The 2017 IATA Global Passenger Survey identified passengers' desire for technology that gives them heightened control over their travel experience through

the automation of a growing number of airport processes;

a single identity token for all travel processes, using biometric identification;

real-time flight information sent directly to personal devices;

increasingly efficient airport security that does not require having to remove or unpack personal items; and

seamless border control.

2017 GLOBAL PASSENGER SURVEY KEY RESULTS

IATA's 2017 Global Passenger Survey revealed that passengers are looking for technology to improve their travel experience.

Baggage

More than four billion bags are carried by airlines annually. Fully 99.57% of those bags arrive with their owners. But the industry is determined to do even better and has agreed to IATA Resolution 753 (R753).

By mid-2018, airlines have committed to being able to track a bag through key touchpoints: when it is accepted at the airport, loaded onto the aircraft, and unloaded from the aircraft and placed into the arrival system or put into the transfer system for carriage by another airline. Airlines must also be able to share this tracking information with interline carriers as needed.

Baggage tracking technology

The global deployment of radio frequency identification (RFID) technology, which can accurately track passengers' baggage in real time across key points in a journey, holds the potential to save the air transport industry more than $3 billion over the next seven years. RFID tracking is therefore an IATA priority for 2018.

IATA has drafted a recommended practice for RFID that it will present for approval to airlines in 2018. IATA is also developing implementation guidance for RFID, including reusable RFID.

New Distribution Capability

The New Distribution Capability (NDC) program continued its progress in 2017. A rise in the number of NDC deployments confirmed the industry's embrace of the NDC's modern, XML-based data transmission standard for communications between airlines and travel agents.

NDC is also transforming airline industry retailing. It is bringing to such third-party shopping channels as traditional travel agencies and travel websites access to airlines' optional products and services, rich content, and personalization, which are already available to consumers when they shop on airline websites.

By the end of 2017, 50 airlines had deployed NDC, and more carriers will follow suit in 2018 and beyond. Fully 113 of the 196 airlines IATA surveyed in 2017 plan to deploy or already have deployed NDC, up from 86 in a similar survey in 2016. All three global distribution systems (GDS), moreover, committed in 2017 to achieving Level 3 NDC certification, the highest level, by the end of 2018. Travelport became the first to achieve this level in December 2017. Additionally, China's TravelSky is committed to achieving at least Level 2 in 2018.

NDC offer and order management coverage, meanwhile, continues to increase, and according to the latest *NDC Deployment Report* 80% of NDC-certified airlines have implemented both. Additionally, 70% of NDC-certified airlines are using the schemas to sell flights and ancillaries, bundled and unbundled. Adding further momentum to NDC growth was the release of the 17.2 standard in the fourth quarter of 2017. This standard builds on feedback from early NDC adopters and includes significant restructuring. As such, it is a notable improvement over previous standards and has been well received by the industry.

The next phase of NDC implementation is about driving a critical mass of NDC transactions. The focuses for 2018 will be on NDC adoption across the travel value chain and on NDC implementation support. In keeping with these objectives, IATA has launched the NDC Leaderboard (LB) of airlines wishing to grow their NDC volumes rapidly.

Each participant in the LB aspires to contribute to an industry goal of having 20% of sales powered by NDC advance passenger information (API) by 2020. The LB consists of airlines whose combined passenger boardings represent around 30% of total passengers carried by IATA member airlines.

In tandem with the LB, IATA is continuing to expand its NDC outreach to all parts of the travel value chain. Activities include a continuing series of hackathons around the globe to stimulate innovative travel solutions and apps using the NDC standard. IATA also has introduced NDC propathons (proposition marathons) in which travel buyers are asked to develop ideas for airline products and services for the business travel community and to visualize what the main components of an airline-travel manager relationship might look like.

Early in 2018, IATA held the first meeting of the Global Travel Management Executive Council, which comprises 14 C-level representatives from global travel management companies (TMCs). They addressed initiatives in distribution and payment. IATA will convene twice-yearly meetings of the council to determine TMC challenges and priorities and to explore possible cooperation.

ONE Order

ONE Order will leverage NDC data communication advances to simplify airlines' core reservation, ticketing, and fulfilment systems. For passengers, ONE Order means the gradual disappearance of multiple reservation records associated with a customer purchase, such as the GDS reservation number, the ticket number, and the airline reservation number. The only thing passengers will need to locate their itinerary and be recognized throughout their journey is a single order number.

ONE Order will greatly simplify the passenger experience and remove one of the major hassles of air travel—trying to find the correct document or number when dealing with an itinerary change or a travel disruption. ONE Order also has the potential to facilitate greater interoperability between traditional and ticketless carriers, bringing further benefits to air travelers through heightened network opportunities.

Travel agents will benefit from ONE Order by gaining an identical process to book airline flights and products regardless of an airline's business model or technology. This will expedite their service and increase their productivity.

For airlines, meanwhile, ONE Order will continue the business transformation that began with the e-ticket. It will modernize back-office processes by replacing multiple rigid, paper-based booking, ticketing, delivery, and accounting methods with a standard order management process. Industry benefits will accrue in three main areas: costs, revenues, and innovation.

Costs will be lowered by

- eliminating the inefficiencies inherent in handling multiple passenger name records (PNR), e-tickets for flights, and electronic miscellaneous documents (EMD) for ancillary services and moving to simpler systems, and by
- closing the integration gap between passenger service systems (PSS) and airlines' e-commerce retailing platforms.

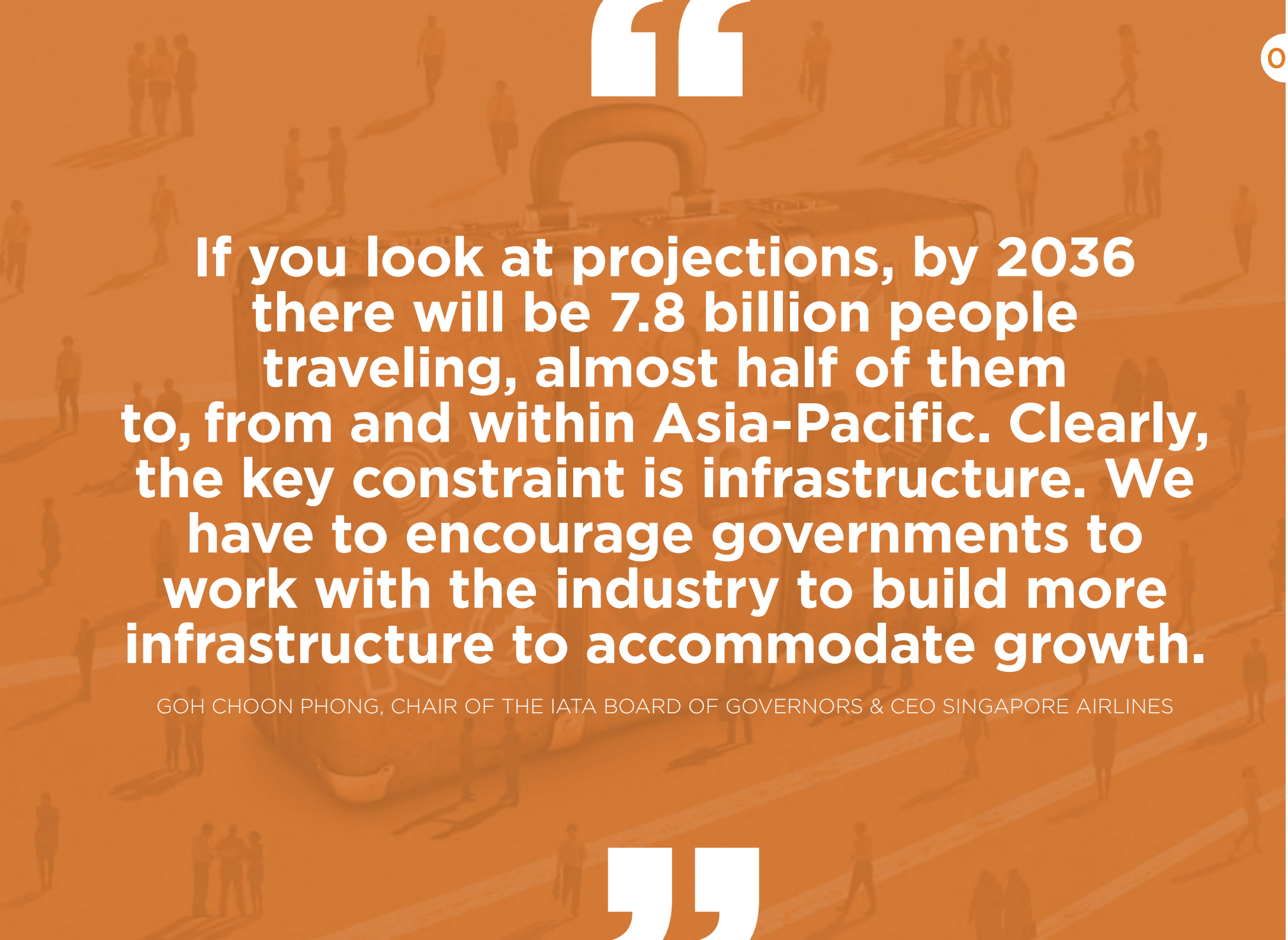
Revenues will be enhanced by

- enabling interoperability between different airline business models, including connectivity between full-service carriers and ticketless low-cost and hybrid model carriers, and by
- ensuring new products enabled by the NDC are easily delivered.

Innovation will be achieved by

- refreshing airline PSS and revenue accounting system technologies and opening the market to other vendors, and by
- liberating the PSS from constraining pre-Internet capabilities and aligning airline order management processes with the modern retailing world.

The release of the first ONE Order messaging standard is planned for 2018. With that, ONE Order will finish its initial phase and enter its second phase: industry capability and adoption. Test programs are under way to evaluate the candidate schemas and their impact on standards and processes. ONE Order is a long-term transformation project and will require strong engagement across the value chain.

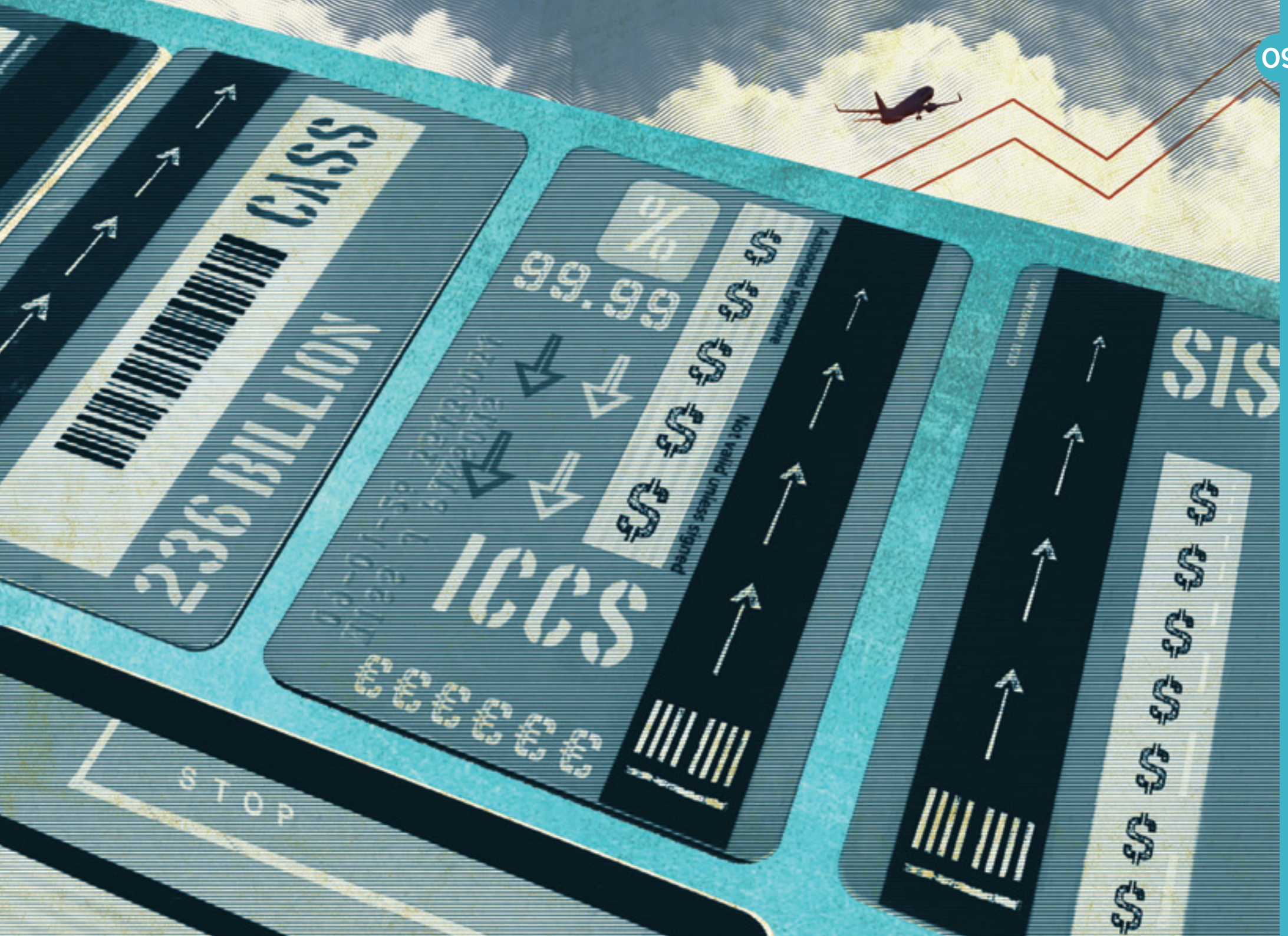


If you look at projections, by 2036 there will be 7.8 billion people traveling, almost half of them to, from and within Asia-Pacific. Clearly, the key constraint is infrastructure. We have to encourage governments to work with the industry to build more infrastructure to accommodate growth.

GOH CHOON PHONG, CHAIR OF THE IATA BOARD OF GOVERNORS & CEO SINGAPORE AIRLINES

09

FINANCIAL EFFICIENCY: **FASTER SETTLEMENT, SAFER FUNDS**


CASS
230 BILLION
99.99
ICS
SIS
STOP

Integrated globally

Global standards and systems that ensure the swift, secure, reliable, and cost-effective movement of funds among the participants in the air travel value chain are essential components of the global aviation system. IATA Financial Settlement Systems (IFSS) have been the back office of the global air transport system for six decades. They are so reliable that they often go unnoticed, despite the very significant sums of money that they handle. In 2017, the IFSS processed $433.4 billion.

$236.4 BILLION

IATA's **Billing and Settlement Plan** (BSP) processed $236.4 billion of that total. The BSP facilitates and simplifies the selling, reporting, and remittance procedures of IATA-accredited travel agents and improves financial control and cash flow for approximately 400 participating airlines. At the close of 2017, there were BSP operations in 180 countries and territories. Their overall on-time settlement rate was 99.999%. In March 2018, IATA began the implementation of the New Generation IATA Settlement Systems (NewGen ISS, see page 61).

$32.2 BILLION

IATA's **Cargo Account Settlement System** (CASS) is designed to simplify the billing and settling of accounts between airlines and freight forwarders. It operates through CASS link, an advanced, global, web-enabled e-billing solution. At the end of 2017, CASS was processing 94 operations serving 201 airlines, general sales and service agents (GSSAs), and ground handling companies. The on-time settlement rate for CASS was 100%, and $32.2 billion was processed.

$56.8 BILLION

The IATA **Clearing House** (ICH) provides fast, secure, and cost-effective settlement services to more than 435 airlines, airline-associated companies, and airline travel partner participants. In 2017, the ICH processed $56.8 billion and had a financial settlement success rate of 100%.

$35.2 BILLION

IATA **Currency Clearance Services** (ICCS) offer global cash management that enables airline treasurers to centrally control and repatriate their worldwide sales funds. The ICCS are used by more than 330 airlines and are available in over 200 IATA BSP and CASS operations worldwide. The ICCS were responsible in 2017 for repatriating over $1.7 billion from countries with severe currency liquidity issues and restrictions, including Nigeria and Egypt. Overall, the ICCS processed $35.2 billion.

$69 BILLION

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

In 2017, SIS had more than 2,507 participants, including 424 airlines, 304 suppliers, and 1,779 others enabled as receivers of SIS e-invoices to maximize efficiency on the invoice sender side. SIS processed over 1.5 million interline and supplier invoices during the year and settled $69.0 billion in volume.

$3.8 BILLION

IATA's **Enhancement & Financing** (E&F) helps air navigation service providers (ANSPs) and airports improve the efficiency and quality of their invoicing and collection processes. The E&F processed $3.8 billion in 2017.

THE IFSS PROCESSED

$433.4 BILLION

IATA Settlement Systems

In the interest of furthering performance of the BSP and CASS, IATA has initiated a review of ISS targets intended for application from 2017 through 2023. The aim for 2018 is to keep the net default rate on gross sales at or below 0.014% and the on-time settlement rate at 99.98% or higher.

The ISO 9001 certification obtained by IATA during 2017 for its quality management system and the ISS provide the foundation for better customer satisfaction and continuous improvement. IATA will strive in 2018 to maintain its global ISO 9001 certification.

New Generation IATA Settlement Systems

On 8 March 2018, Norway became the first market to implement NewGen ISS, the most extensive and ambitious modernization of the BSP since it was created in 1971. The rollout of NewGen ISS across all BSPs will take place in a series of waves and is expected to be completed in the first quarter of 2020.

For airlines, NewGen ISS means faster settlement, safer funds, and a lower cost of distribution. For travel agents, NewGen ISS will offer more products and services, greater flexibility, and new and more cost-effective solutions.

NewGen ISS is delivering

- IATA EasyPay, a secure and cost-effective pay-as-you-go solution based on the e-wallet concept;
- three levels of travel agent accreditation, with agents given the choice of which level best fits their business model;
- a remittance holding capacity that will ensure a safer selling process; and
- global default insurance (GDI), an optional financial security alternative for travel agents that presents a cost-effective and flexible alternative to bank guarantees and other types of security.

IATA is also introducing an initiative called Transparency in Payments (TIP) in conjunction with NewGen ISS. TIP is focused on providing airlines with increased transparency and control in the collection of their sales revenues through the travel agency channel. As it stands, airlines only see the settlement costs after the fact, if at all. No form of payment is barred by TIP, but agents can only use forms to which an airline has previously given consent. TIP, moreover, allows agents to use their own credit cards if an airline specifically authorizes it. Norway became the first market to implement TIP on 9 April 2018, followed a week later by Finland and Sweden. TIP rollout will continue in a series of waves through to early 2020.

IATA SETTLEMENT SYSTEMS

An improved ISS achieved the following in 2017:

Safer funds, with unrecovered debt of

0.015%

Higher average rate of on-time funds, at

99.999%

Lower operating unit fees

BSP:

30%

below the 2015 actuals

CASS:

42%

below the 2015 actuals

10

INDUSTRY INSIGHTS: SOLUTIONS THAT SUPPORT SUCCESS

SOLUTIONS FOR **AIRLINES**

Direct Data Solutions

- Direct Data Solutions (DDS) is a game-changing, industry-sponsored program that provides the travel industry with timely, accurate, cost-effective access to global airline market data.
- Participating carriers gain easy access to the most comprehensive global data set, aggregated from such multiple sources as ARC Air Logistics, Inc.'s area settlement plan (ASP) transactions, IATA's available Billing and Settlement Plan (BSP) transactions, and carriers' contributions.
- No matter what business intelligence you require—network planning to fleet planning, revenue management, sales and marketing, or business and product development—DDS delivers.

As of December 2017 DDS encompass the following:

93%
of worldwide agency sales

60%
of IATA member airlines' tickets

81
carriers, **52 of which** provide direct sales data, with the data of **8 more** carriers to be added by year-end 2018.

Airs@t

- Airs@t is the only passenger satisfaction benchmarking survey specifically designed for the airline industry.
- It tracks and compares airline customer satisfaction ratings in-depth, with research into all travel service aspects of the preflight, in-flight, and postflight passenger travel experience.
- Airs@t has been collecting data since 2010 and as such provides clear trends to airlines, allowing them to understand the impact of past actions to shape their strategies.

Airs@t at year-end 2017 included

Passengers of

30 AIRLINES

Yearly surveys of more than

62,000 PASSENGERS

Five GLOBAL ROUTES

(Transpacific, Transatlantic, Europe–Middle East–Asia, Intra-Europe, and Transamerica)

The entire preflight, in-flight, and postflight travel experience detailed by passengers who share their exposure to more than 80 travel attributes.

Timatic

- Timatic is the industry's definitive source for ensuring airlines' compliance with passenger travel document requirements.
- Its flexibility allows it to be integrated into airlines' departure control systems and into kiosk and mobile check-in procedures.
- Timatic is updated at least three times daily throughout the year to ensure its application of the latest regulations.

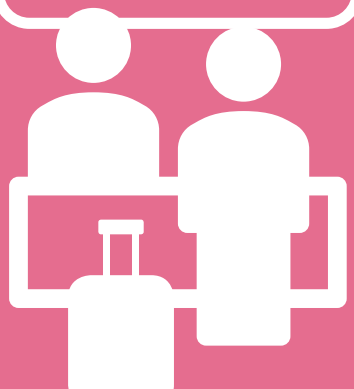
Timatic's highlights in 2017 were as follows:

480 MILLION
passengers had their documents checked

300
airlines used Timatic

63
airlines employed automated document verification powered by Timatic AutoCheck

1,530
government and airline sources gave information



IATA Consulting

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

IATA Consulting's numbers for 2017 were as follows:

120+ projects
45+ countries
50+ airports

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

15+ airlines

- Strategic planning
- Safety enhancement
- Route analysis
- NDC consulting services

5+ CAAs and governments

- Civil aviation restructuring
- Tourism and benefits of aviation studies
- Capacity enhancement

40+ aviation stakeholders
(financial institutions and ANSPs)

- Pharmaceutical handling
- Business planning

SOLUTIONS FOR **CARGO**

CargoIS

- CargoIS is the leading source for air cargo business intelligence.
- Its information spans the entire supply chain: airlines, general sales agents, freight forwarders, ground handlers, airports, and many others.
- CargoIS gets its data from two sources:

- CASS, the Cargo Accounts Settlement Systems operated by IATA and used by airlines to settle with freight forwarders and once the sole data source for CargoIS, and
- contributing airlines, through a new data source, CargoIS Direct Data (CDD), that complements CASS data.

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

In 2017, CargoIS

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

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

19 m provided data sourced from CASS, meaning the more than 19 million records of airway bill information per annum that are fed into Cargo IS; and

$26 b offered data representing $26 billion worth of air freight charges.

70 Since January 2018, 70 origin countries have subscribed to CargoIS.

Dangerous Goods Regulations

- The *Dangerous Goods Regulations* (DGR) are the global reference for shipping dangerous goods by air.
- The *DGR* has been the only standard recognized by the global airline industry for almost 60 years.
- It is the most complete, up-to-date, and user-friendly reference for dangerous goods handling in the industry.

OVER

100,000

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

Dangerous Goods (DG) AutoCheck

- Dangerous Goods AutoCheck is an acceptance validation tool.
- It will automate the checking of dangerous goods against the *DGR* without slowing the check-in process.
- It will provide the acceptance checker with an image of the shipment for physical inspection.
- DG AutoCheck will make significant process, cost, and safety improvements to the acceptance process for dangerous goods.

Before DG AutoCheck's launch in 2018, it involved

11 signed test customers

and an industry working group of **OVER 25** companies from across the supply chain.

Center of Excellence for Independent Validators in Pharmaceutical Logistics

- IATA's Center of Excellence for Independent Validators in Pharmaceutical Logistics (CEIV Pharma) aims to improve the handling of pharmaceutical products by introducing a standardized pharmaceutical-handling process at airports globally that complies with pharmaceutical manufacturers' requirements.

CEIV Pharma's numbers for 2017 were as follows:

1,500+ people trained

250+ entities assessed

209 entities certified

At year-end 2017, there were 13 CEIV Pharma Communities:

North America
1. Miami

Europe
2. Amsterdam
3. Athens
4. Barcelona
5. Basel
6. Brussels
7. Frankfurt
8. Liege
9. Madrid
10. Paris

Asia
11. Hong Kong
12. Singapore
13. Osaka

SOLUTIONS FOR **CARGO** *continued*

IATA Net Rates

- IATA Net Rates will introduce the dynamic and automated delivery of private airfreight rates and charges from airlines to forwarders and eliminate the cumbersome manual creation and e-mailing of thousands of rate sheets.
- It was test marketed in 2017 and launched in 2018 and has signed its first customers.

IATA Net Rates testing in 2017 involved

14 PARTIES representing airlines and cargo agents and

the exchange of more than

10,000 RATES.

SOLUTIONS FOR **AIRPORTS**

AirportIS

- AirportIS offers the most comprehensive passenger, schedule, and cargo traffic data available in the marketplace.
- It is a market leader in airport business intelligence and is used by over 90 airports and airport consulting companies globally for air service development activities.

- The latest version of AirportIS was launched in June 2017 and is powered by the DDS to give users more robust data and unparalleled data quality.

At the 2017 year-end, AirportIS was in use at

OVER 90

airports and airport consulting companies.

SOLUTIONS FOR **TRAINING**

IATA Training

- IATA Training puts participants from around the world through realistic business scenarios and gaming situations to promote industry standards; to help aviation-related businesses operate safely, efficiently, and sustainably; and to foster career paths in support of the more than 62 million jobs related to aviation.
- It carries ISO 9001:2015 certification in recognition of its high quality and its solid quality management system.

In 2017, IATA Training

trained more than

100 k

people from 1,000-plus organizations in 150-plus countries;

offered over

350

courses and more than 40 diploma programs; and

worked with

450

resellers and partnering institutions, including

20+

regional training partners,

270+

authorized training centers, and

170+

accredited training schools.

SOLUTIONS FOR **VR**

RampVR

- RampVR is the aviation industry's first virtual training platform for ground operations.
- It allows participants to experience a variety of scenarios in different operating conditions using high-spec virtual reality (VR) technology that helps it raise the safety, security, and sustainability of the air transport industry.
- RampVR provides users with built-in metrics to track performance and real-time access to key reference material.

Ramp VR launched in May 2017 and is valued because

- VR in the learning context increases knowledge retention by a factor of four while also improving motivation and engagement and
- in November 2017 it won the International Airport Review Award in the technological solution category.

SOLUTIONS FOR **STRATEGIC PARTNERSHIPS**

IATA Strategic Partnerships

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

The numbers for IATA Strategic Partners in 2017 included

400 partners,

40 areas of involvement,

100 work groups and task forces, and

17 strategic partners at the AGM.

IATA MAIN OFFICES

Montreal Head Office

800 Place Victoria
P.O. Box 113
Montréal, Québec H4Z 1M1
Canada

Tel: +1 514 874 0202
Fax: +1 514 874 9632

Geneva Executive Office

33, Route de l'Aéroport
P.O. Box 416
CH - 1215 Geneva 15 Airport
Switzerland

Tel: +41 22 770 2525
Fax: +41 22 798 3553

Asia-Pacific

80 Pasir Panjang Road
#20-81 Mapletree Business City
Singapore 117372

China & North Asia

3rd Floor,
China Digital Harbor
No. 1 Wangjing North Road
Chaoyang District
People's Republic of China

Europe

Torre Europa
95 Paseo de Castellana
Madrid 28046
Spain

Middle East & North Africa

Business Park
Building No. 8
King Abdullah Street
Al Shaab Roundabout
Amman 1194
Jordan

The Americas

703 Waterford Way
Suite 600
Miami, Florida 33126
United States of America

www.iata.org/2018-review