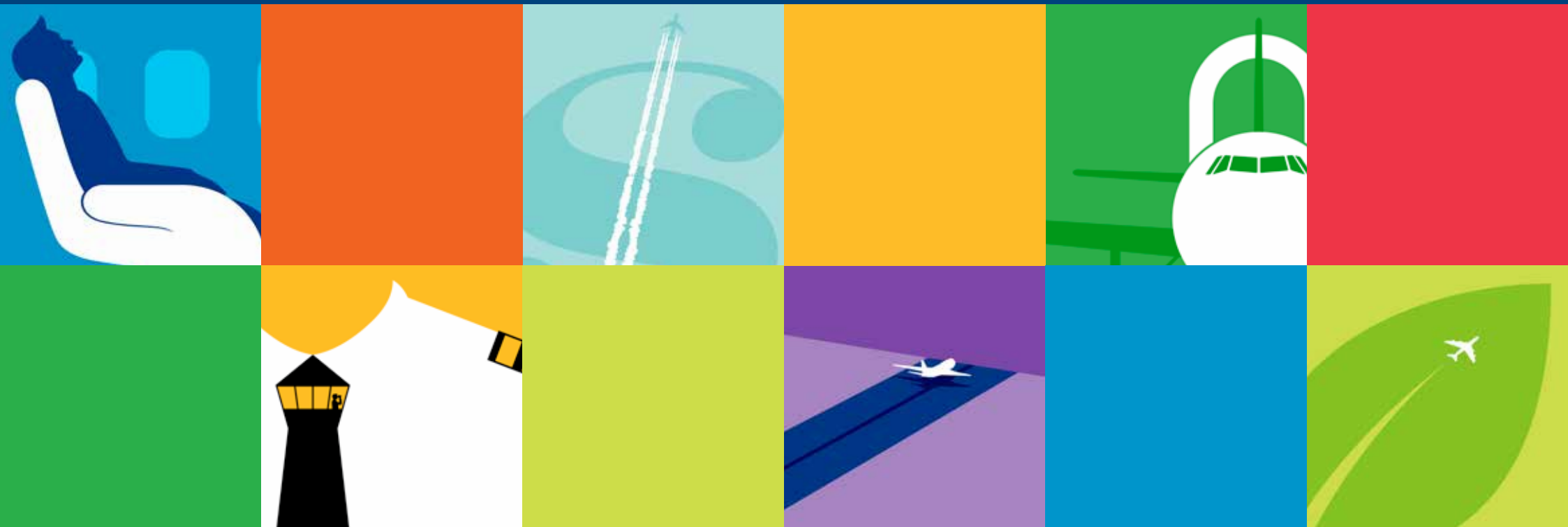
# Annual Review 2014



Tony Tyler
Director General & CEO
International Air Transport Association
Annual Review 2014
70th Annual General Meeting
Doha, June 2014

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

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# MEMBERS LIST

a

ABSA Cargo Airline
Adria Airways
Aegean Airlines
Aer Lingus
Aero República
Aeroflot
Aerolineas Argentinas
Aeromexico
Afriqiyah Airways
Aigle Azur
Air Algerie
Air Arabia
Air Astana
Air Austral
Air Baltic
Air Berlin
Air Botswana
Air Caledonie
Air Canada
Air China Limited
Air Corsica
Air Europa
Air France
Air India
Air Koryo
Air Macau
Air Madagascar
Air Malta
Air Mauritius
Air Moldova
Air Namibia
Air New Zealand
Air Niugini
Air Nostrum
Air One
Air SERBIA a.d.Beograd
Air Seychelles
Air Tahiti
Air Tahiti Nui
Air Transat
Air Vanuatu
AirBridgeCargo Airlines
Aircalin
Airlink
Alaska Airlines
Alitalia
All Nippon Airways
AlMasria Universal Airlines
ALS
American Airlines
Arik Air
Arkia Israeli Airlines
Asiana Airlines
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Atlasjet Airlines
Austral
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AVIANCA
Avianca Brasil
Azerbaijan Airlines

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Bangkok Air
Belavia - Belarusian Airlines
Belle Air
Biman
Binter Canarias
Blue Panorama
Blue1
bmi Regional
British Airways
Brussels Airlines
Bulgaria air

c

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Cargojet Airways
Cargolux
Caribbean Airlines
Carpatair
Cathay Pacific
China Airlines
China Cargo Airlines
China Eastern
China Southern Airlines
CityJet
Comair
Condor
Copa Airlines
Corsair International
Croatia Airlines
Cubana
Cyprus Airways
Czech Airlines

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Delta Air Lines
DHL Air
DHL Aviation
Donavia
Dragonair

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Egyptair
EL AL
Emirates
Estonian Air
Ethiopian Airlines
Etihad Airways
Euroatlantic Airways
European Air Transport
Eurowings
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Hi Fly
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Israir Airline

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Jet Airways
Jet Lite (India) Limited
JetBlue
Jordan Aviation
JSC Aircompany Yakutia
JSC Nordavia-RA
Juneyao Airlines

k

Kenya Airways
Kish Air
KLM
Korean Air
Kuwait Airways

# MEMBERS LIST

## l

LACSA
LAM - Linhas Aéreas de Moçambique
LAN Airlines
LAN Argentina
LAN Cargo
LAN Perú
LAN Ecuador
Libyan Airlines
LLC “NORD WIND”
LOT Polish Airlines
Lufthansa
Lufthansa Cargo
Lufthansa CityLine
Luxair

## m

Mahan Air
Malaysia Airlines
Malmö Aviation
Martinair Cargo
MAS AIR
MEA – Middle East Airlines
Meridiana fly
MIAT- Mongolian Airlines
Montenegro Airlines

## n

NIKI
Nile Air
Nippon Cargo Airlines (NCA)
Nouvelair

## o

Olympic Air
Oman Air
Onur Air

## p

PAL – Philippine Airlines
Pegasus Airlines
PGA-Portugália Airlines
PIA – Pakistan International Airlines
Precision Air
PrivatAir

## q

Qantas
Qatar Airways

## r

Rossiya Airlines
Royal Air Maroc
Royal Brunei
Royal Jordanian

## s

SAA – South African Airways
Safair
Safi Airways
SAS
SATA Air Açores
SATA Internaçional
Saudi Arabian Airlines
Shandong Airlines
Shanghai Airlines
Shenzhen Airlines
SIA – Singapore Airlines
SIA Cargo
Siberia Airlines
Sichuan Airlines
Silkair
South African Express Airways
SriLankan Airlines
Sudan Airways
SunExpress
Surinam Airways
SWISS
SYPHAX AIRLINES
Syrianair

## t

TAAG - Angola Airlines
TACA
TACA Peru
TACV Cabo Verde Airlines
TAM - Transportes Aéreos del Mercosur
TAM Linhas Aéreas
TAME - Linea Aérea del Ecuador
TAP Portugal
TAROM
Thai Airways International
THY - Turkish Airlines
Tianjin Airlines
TMA – Trans Mediterranean Airways
TNT Airways
Transaero
TransAsia Airways
TUIfly
Tunis Air

## u

Ukraine International Airlines
United Airlines
UPS Airlines
US Airways, Inc.
UT air

## v

Vietnam Airlines
Virgin Atlantic
Virgin Australia
Vladivostok Air
Volaris
Volga-Dnepr Airlines
VRG Linhas Aéreas

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White Airways
Wideroe

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Xiamen Airlines

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Yemenia

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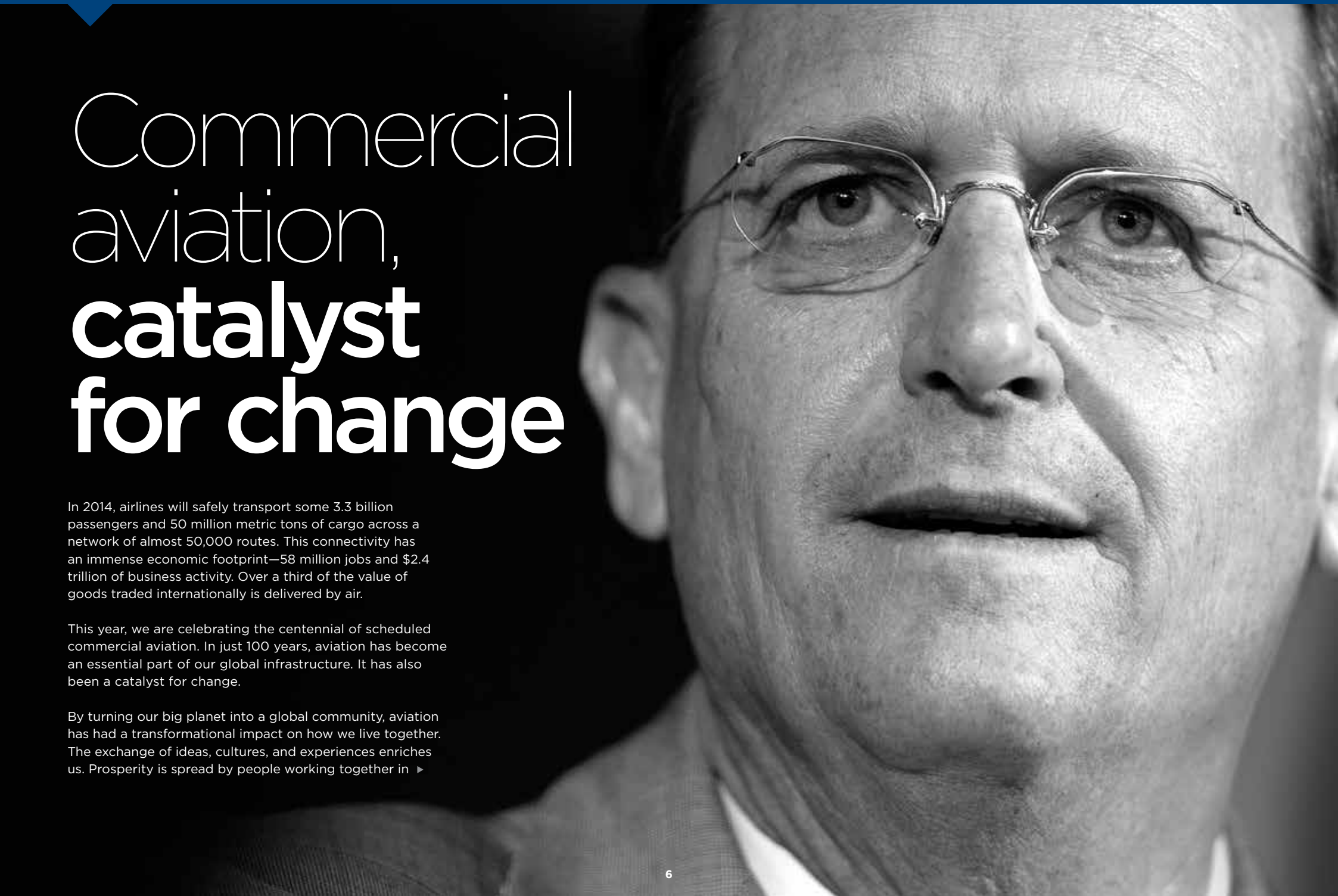
# Commercial aviation, **catalyst for change**



In 2014, airlines will safely transport some 3.3 billion passengers and 50 million metric tons of cargo across a network of almost 50,000 routes. This connectivity has an immense economic footprint—58 million jobs and $2.4 trillion of business activity. Over a third of the value of goods traded internationally is delivered by air.

This year, we are celebrating the centennial of scheduled commercial aviation. In just 100 years, aviation has become an essential part of our global infrastructure. It has also been a catalyst for change.

By turning our big planet into a global community, aviation has had a transformational impact on how we live together. The exchange of ideas, cultures, and experiences enriches us. Prosperity is spread by people working together in ▸

global supply chains. And uncountable opportunities—human and economic—are generated by the freedom to be almost anywhere in a short 24 hours.

Aviation is a romantic industry with very practical purposes. Our world would be very different—poorer in spirit and wealth—without it.

IATA plays an important role in the industry's success. Airlines compete vigorously to generate profits. But there are many areas where cooperation and global standards deliver value for all industry players and consumers.

The IATA Operational Safety Audit (IOSA), a condition of IATA membership, demonstrates the important contribution of global standards. In 2013, the safety performance for IOSA-registered carriers was more than two times better than the rate for non-IOSA carriers. And the superiority of that performance will only rise as Enhanced IOSA is progressively adopted.

The IATA Settlement Systems (ISS) play an important role in the global distribution of airline products. Fully 46% of airline passenger revenues are channeled reliably through the Billing and Settlement Plan (BSP).

The industry also has a strong global voice in IATA. Running an airline is challenging, especially when you do business across borders. Harmonization in the regulatory and operational environment assures a better passenger experience and helps airlines to manage costs efficiently. Governments and regulators need constant reminding of this.They also need reminding of the unintended consequences of their actions—or inactions.

Taxes illustrate the former. Airlines and airline passengers are a soft target for taxes. Taxes may provide short-term budget relief for governments. But taxes dampen demand for connectivity in the long run, and eventually that places a greater burden on the economy.

Government inaction on such critical issues as delivering Next Gen air traffic management in the United States or the Single European Sky in Europe is equally problematic. The inefficiency of European air traffic management is a burden on the airline industry and a €5 billion disadvantage for Europe's economic competitiveness.

It has been an honor to serve as the Chairman of the IATA Board of Governors over the past year. This review highlights the considerable progress made in 2013 on the industry's main challenges.

We can be proud of aviation's many achievements and contributions during its first 100 years. But in marking this important milestone, it is more important to look forward. IATA's challenge is to continue supporting its members so that they can profitably deliver efficient global connectivity that is safe, secure, and sustainable.

**Richard Anderson**
**Chairman**

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# Strong partnerships, **strong business**

This is a special year for the global airline industry. On 1 January 2014, we marked the first 100 years of scheduled commercial aviation. Our industry took root with the transport of a single paying passenger on a 23-minute flight across Tampa Bay, Florida, on New Year's Day 1914.

In the century since, aviation has grown and made amazing progress. Aviation is today the lifeblood of the global economy.

It is also a competitive and difficult business. In 2013, the airline industry made a collective profit of $12.9 billion on revenues of $708 billion. That is a 1.8% net profit margin. Put another way, airlines made a profit on average of just $4.13 for every passenger carried. ▸

# DIRECTOR GENERAL TONY TYLER

In 2013, the main challenges were high oil prices and a weak global economy. The cargo side of the business has been particularly challenging. Cargo volumes have not grown since their postrecession spike in 2010. The passenger business has been more robust, with demand growing in the historical 5% to 6% range. This, combined with an improved industry structure and efficiency gains, kept the industry in the black in 2013.

The current year promises an improvement in profitability, with developed economies leading growth. Passenger demand remains strong, and rising business confidence is expected to stimulate the cargo business as 2014 progresses.

This review highlights the progress that aviation is making in fulfilling its vital role of connecting people and linking economies. It also discusses the challenges that must be overcome.

For both, the role of global standards and strong partnerships are critical. The greatest example of this is in safety.

Safety is the top priority for everyone in aviation. As a result, flying is very safe and accidents are extremely rare. Of the 29 million flights of Western-built jets (WBJ) in 2013, there were 12 hull losses. That is 1 hull loss for every 2.4 million WBJ flights. It was a step back from the exceptional performance of 2012 but a 14.6% improvement on the five-year average hull loss rate. Each hull loss nevertheless is a tragedy that rededicates the industry and its regulators to making flying even safer.

In March 2014, the world was shocked with the loss of a passenger jet on a routine flight from Kuala Lumpur to Beijing. IATA is working with the International Civil Aviation Organization (ICAO) and other industry stakeholders to ensure that an aircraft cannot simply disappear ever again.

Working in partnerships to find global solutions for common problems has been a hallmark of our industry throughout its history. Aviation is a team effort. Every flight involves interaction across a complex chain of partners—airlines, airports, air navigation service providers (ANSPs), ground handlers, caterers, fuel suppliers, travel agencies, systems providers, security screeners, and many more. Partnerships have been critical in recent progress on several key industry challenges:

**Security:** IATA and Airports Council International (ACI) are working together to deliver Smart Security. Security processes are effective, but there is ample scope for improvement. Building on the foundation of the Checkpoint of the Future program, Smart Security aims to strengthen effectiveness, increase efficiency, and improve the passenger experience.

**Distribution:** The New Distribution Capability (NDC) initiative took a major step forward in January 2014 with the signing of an agreement with Open Allies for Airfare Transparency. Several NDC pilot projects are now operating, and it is anticipated that the US Department of Transportation will soon provide the approval needed to make NDC's consumer benefits broadly available.

**E-freight:** The e-freight initiative will replace paper-based air cargo processes with the exchange of electronic data and messages. Airlines, freight forwarders, ground handlers, shippers, and customs authorities are aligned with the need for modernization. Airlines, for example, are working toward 80% e-air waybill implementation by 2016. This will be a key enabler of the broader e-freight vision.

**Environment:** Governments and the aviation industry are committed to achieving carbon-neutral growth from 2020. The long-term strategy is to achieve this through advances in technology, operations, and infrastructure. Market-based measures (MBM), however, will be needed at least in the short term. The 69th IATA Annual General Meeting resolved that a global mandatory carbon offset scheme is the preferred industry option. Shortly thereafter, governments agreed at the 38th ICAO Assembly to develop a framework for a global MBM by 2016. These two landmark developments place aviation in the forefront of industries in achieving sustainability. Nonetheless, much hard work lies ahead, and the industry is fully engaged in supporting ICAO as it builds consensus among governments.

These are but a few of the collaborative efforts of the industry and its regulators to ensure that every day 100,000 flights are able to link our world with amazing efficiency.

Behind the scenes, IATA, through its various settlement systems, contributes directly to the industry's ability to operate efficiently and globally. In 2013, the IATA Settlement Systems (ISS) managed $387.2 billion, with a 99.96% on-time settlement rate. In the spirit of constant improvement, an initiative (New Gen ISS) has been launched to ensure that the ISS keeps pace with industry developments, including the NDC, and remains relevant well into the future.

As we celebrate the centennial of scheduled commercial aviation, the focus is on the future. Aviation is part of the fabric of modern life in a globalized world. Yet aviation's strong performance on safety and reliability frequently means that its contributions are taken for granted.

Our centennial is an opportunity to raise awareness of aviation and its needs, particularly among governments. Governments have a critical role in creating the environment for aviation to continue to be a catalyst of economic and social development. We encourage governments worldwide to look to the future within the parameters of harmonized global standards, reasonable taxation, enabling regulation, and growth-supporting infrastructure.

Our mission is to represent, lead, and serve the airline industry. We are committed to being the driving force for a safe, secure, and profitable air transport industry—one that sustainably connects and enriches our world.

**Tony Tyler**
**Director General and CEO**

100 YEARS OF COMMERCIAL FLIGHT

# Small world, **big future**

1 January 1914—A Benoist flying boat takes off from St. Petersburg, Florida, and crosses the bay to Tampa. On board with pilot Tony Jannus is Abram C. Pheil, the world's first scheduled commercial air passenger. This historic flight marked the dawn of the commercial air transport age. The St. Petersburg-Tampa airboat line was the brainchild of local entrepreneur Percival Fansler, who recognized the commercial potential of linking the two towns with a daily air service. As the inaugural flight prepared to take off, Fansler gave a speech where he predicted, "The airboat line to Tampa will be only a forerunner of great activity along these lines in the near future...what was impossible yesterday is an accomplishment of today—while tomorrow heralds the unbelievable."

Pheil, who bid $400 for his ticket at auction (the regular fare was $5), was the first passenger. The industry has carried more than 65 billion people in the 100 years since then. From one route, one plane, and one passenger in January 1914, the industry will in 2014 serve 3.3 billion passengers with a fleet of 25,000 planes on almost 50,000 routes. Air transport has touched every country on earth, bringing social and economic benefits and transforming the way we live and do business.

To mark this historic milestone, in 2014 IATA launched a website—www.flying100years.com— that is gathering together the industry and its supporters to join the celebration and join the conversation on aviation and its future. The site features a timeline of significant events, and stories from the public on what air connectivity means to them. Videos, pictures, and comments from airlines, airports, manufacturers, and many other organizations connected to aviation are being showcased on the site each month. And using social media, the story of aviation's incredible century is being shared around the world.

Aviation has made a small world. And if connectivity and the benefits of aviation can continue to grow, the world is guaranteed a big future.

**#flying100** **flying100years.com**

## 100 years of aviation: Key milestones and passenger numbers

**1914**
***1,205 passengers***
First commerical passenger flight, commercial airline

**1919**
***6,549 passengers***
KLM starts operations: oldest airline still in service

**1921**
***13,559 passengers***
First air traffic controllers employed at Croyden Aerodrome, London

**1922**
***19,285 passengers***
First use of aircraft for government business by Colombian president

**1930**
***290,000 passengers***
First flight attendant with Boeing Air Transport (today's United)

**1934**
***652,000 passengers***
First transatlantic airmail services operated by Deutsche Luft Hansa (Lufthansa)

**1935**
***976,000 passengers***
First transpacific airmail services operated by Pan American's China Clipper

**1936**
***1,300,000 passengers***
Douglas DC-3 enters service with American Airlines

**1939**
***2,000,000 passengers***
First scheduled passenger transatlantic flights operated by Pan American

**1944**
***5,500,000 passengers***
Chicago Convention signed—the foundation of global aviation today

**1945**
***2,000,000 passengers***
The International Air Transport Association (IATA) founded in Havana

**1952**
***39,500,000 passengers***
First commercial jet passenger service by BOAC

**1971**
***411,000,000 passengers***
First low-cost carrier, Southwest Airlines, enters service

**1970**
***383,000,000 passengers***
The Boeing 747 enters service with Pan American

**1976**
***576,000,000 passengers***
Concorde enters service as first supersonic passenger aircraft

**1978**
***679,000,000 passengers***
United States deregulates the airline industry

**1981**
***752,000,000 passengers***
First frequent flyer program launched by American Airlines

**1998**
***1,471,000,000 passengers***
First transpolar passenger flight by Cathay Pacific

**2007**
***2,422,000,000 passengers***
The Airbus A380 enters passenger service with Singapore Airlines

**2011**
***2,824,000,000 passengers***
First passenger biofuel flights by KLM and Lufthansa


# Continuing recovery, challenges remain

## Achieving improved profitability

In 2013, airlines saw improved profitability as they continued to claw back ground lost in the global economic recession that began in 2008–2009.

Net posttax profit for 2013 was $10.6 billion, a 1.5% margin on revenues. This was the fourth successive year of profitability, and it builds on the $6.1 billion profit (0.9% margin) in 2012.

Profitability in 2013 was achieved largely on increased demand, the positive impact on cash flow of industry restructuring, and slightly lower than expected fuel costs. Jet fuel averaged just under $125 a barrel, about $5 less than in 2012.

Demand for cargo and passenger services—manifested in freight tonne kilometers (FTKs) and in revenue passenger kilometers (RPKs), respectively—showed signs of accelerated growth. This reflected the rebounding global economy and an increase in world trade. Business confidence strengthened to its highest level since 2011, but the trend is flattening.

Consumers in mature economies gained confidence from a 2% increase in global GDP. In emerging economies, GDP growth had an even greater impact, as each unit of GDP generates more air travel in emerging economies than in mature markets. This trend was bolstered by significant price drops in airline fares in some African and Asian markets because of increasing competition.

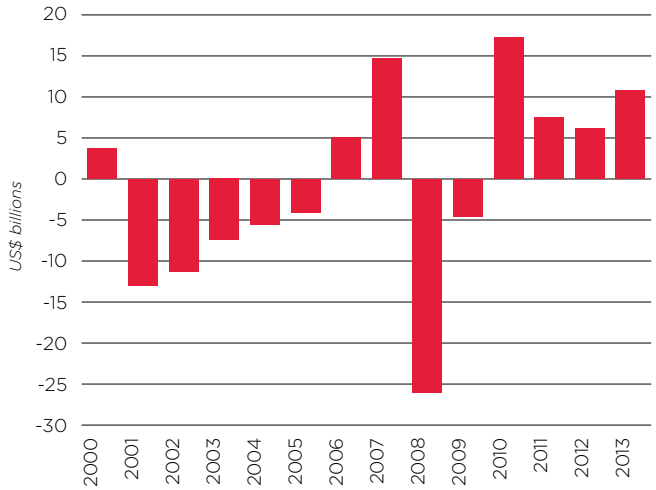
More than 31.6 million scheduled flight services were provided in 2013, a 2% increase on the previous year. There was also an increase in aircraft deliveries in 2013, to over 1,400 new aircraft. The in-service fleet rose to 25,310 aircraft, from 24,613 in 2012. Replacements for older aircraft were generally larger in size than their predecessors, adding yet more seats to the market. Overall, the number of seats rose to 3.4 million, adding 5% capacity to the global market.

## Examining traffic by route area

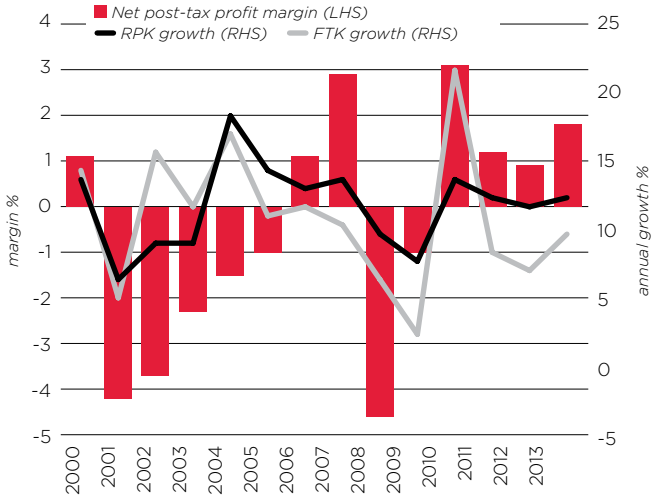
RPKs between regions of the world continued to grow for the most part, although the rate of growth decreased. Given increasing demand, this flattening is proof that airlines have improved their capacity management. Increasing aircraft size and high load factors have helped, as has a more cautious approach to adding destinations and frequencies.

Exceptions to the trend are RPKs between Europe and Africa, which have decreased because of weaker growth and political uncertainty in parts of Africa and continuing economic weakness in much of Europe. RPKs across the North Atlantic show a modest increase in growth rate, although this comes from a low baseline. Improvements in employment and consumer spending in the United States are likely behind the upswing.

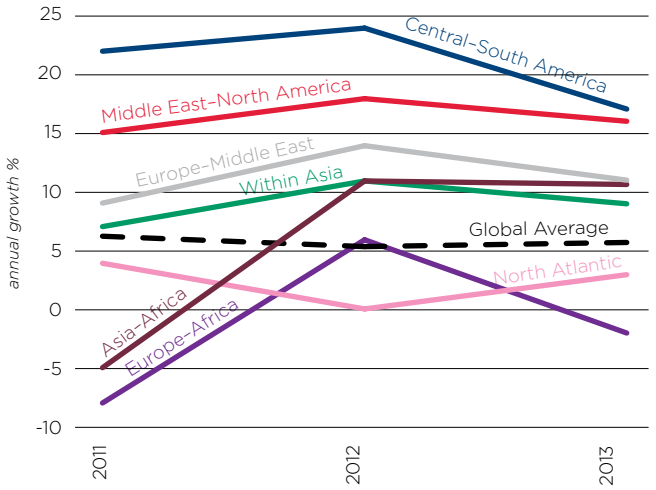
### Industry net profits *(Sources: IATA, ICAO)*




### Annual traffic growth and profit margin *(Sources: IATA, ICAO)*




### RPK growth by route area *(Sources: IATA)*



## Facing high jet fuel prices

Jet fuel averaged $124.5 a barrel during the year under review, to remain within the high range of the past three years, during which it averaged $127 a barrel. In 2012, jet fuel averaged just under $130 a barrel.

The growth in the US energy supply forced a moderate decrease on jet fuel, but fuel continues to be the largest number in the airline debit column, accounting for 31% of airline costs. The economic outlook for growth in the United States and in Chinese exports and an improved economic situation in Europe suggests fuel prices will remain high in 2014.

## Reaching records in passenger load factors

Passenger load factors reached a record high in 2013, at 80%. This is the result of an increase in passenger volumes, coupled with strong capacity management, particularly in such key sectors as the North Atlantic.

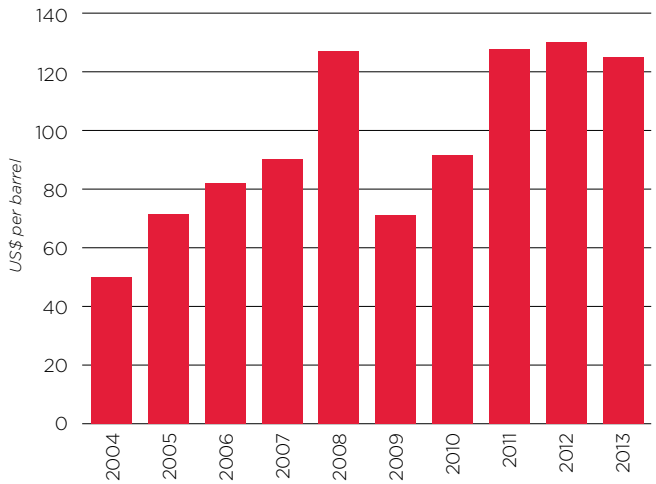
Cargo load factors remain rooted below the 50% mark. Enlarged belly-hold capacity in new passenger aircraft has exacerbated the situation, with capacity growing irrespective of cargo demand.

Just as passenger load factors and asset utilization reached record highs, the breakeven load factor came down for the first time since 2009. The breakeven load factor dipped to 64.2% in 2013, from 64.8% the previous year.

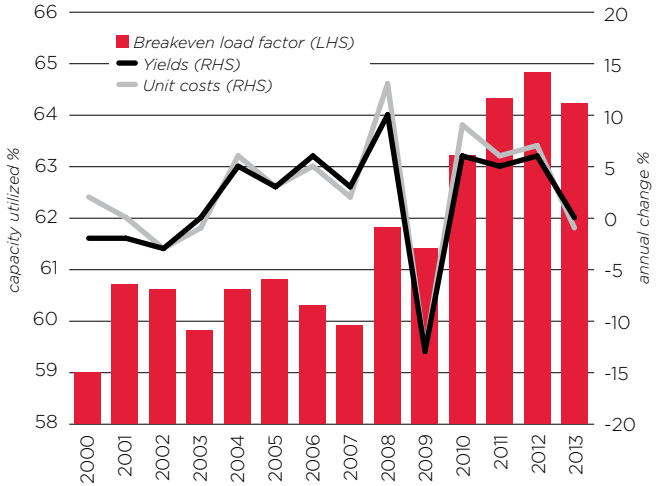
Improving asset utilization marks a significant change from previous business cycles. Rising aircraft deliveries—which is the case in the industry—usually hit on the down cycle, crushing profitability. Consolidation in the mature markets of North America and across the North Atlantic has underlined this reversal of trends and allowed airlines to generate better returns from their aircraft.

Passenger yields in 2013 remained unchanged from 2012 for various reasons. Fierce competition provided downward pressure, but increased ancillary sales and a more robust industry structure generated some buoyancy. Overall yields, though, were disappointing in light of increases of around 5% in each of the previous three years, but robust load factors should positively influence yields going forward. ▸

### Jet fuel price per barrel *(Sources: IATA, ICA))*

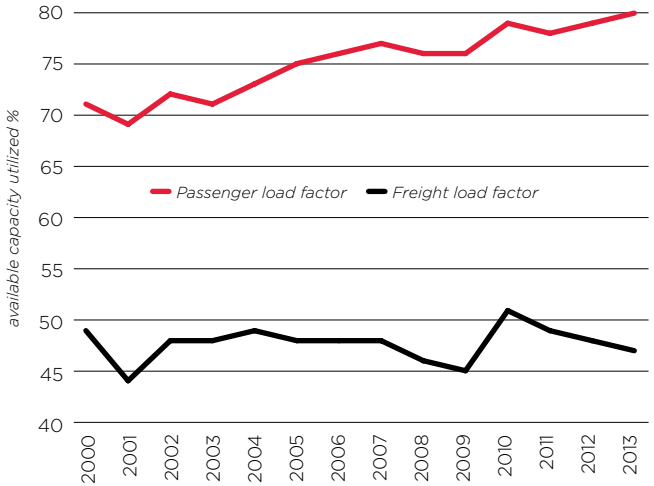



### Unit costs, yields, and breakeven load factor *(Sources: IATA, ICAO)*




### Passenger and freight load factors

*(Source: IATA)*



Cargo rates were relatively stable in 2013, although the long-term trend of slow deterioration continued. As with passenger yields, decreases in cargo rates were notable in Asia, where new aircraft deliveries and slow growth in such key markets as India had an impact.

Other challenges for cargo included increased space availability in the belly hold of passenger aircraft, which has led to a rise in overall capacity despite freighters being parked or retired. A growing tendency toward protectionist measures as governments attempt to protect jobs and domestic economic recovery has also had an impact on cargo operations.

Airlines, however, have continued to make progress in managing costs. And the slight fall in unit cost has forced the breakeven load factor lower.

## Inceasing role for ancillary revenues

Passenger ancillary revenues are playing an increasing role in the industry. Revenues from added-value services improved from $36 billion to $42 billion in 2013 from a year earlier, or more than $13 a passenger, and form an increasing share of passenger yield. Airlines, though, managed to keep as net profit an average of just $3.39 from each passenger served.

Overall, the return on invested capital in the industry rose from 4% to 4.5% in 2013. This is still well short of the 7%–8% expected by investors based on the returns available through investments in other industry sectors. It is, nevertheless, a marked improvement over 2012's return of 3.6%.

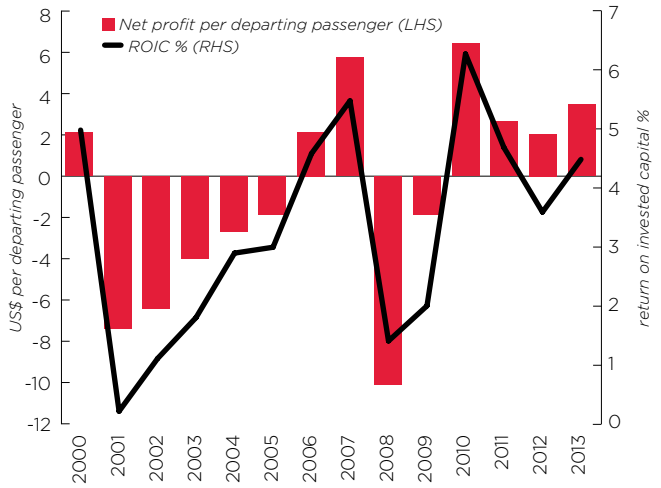
## Challenging cargo markets remain

Cargo markets remain challenging. In 2013, some confidence returned, although not to any significant degree. Load factors were weak, at 45.3%, while capacity outstripped growth, 2.6% versus 1.4%. The 2% growth in FTKs in 2013 was mainly achieved in the last six months of the year, after a period of stagnation. A trend of accelerating growth and confidence in air freight has marked the beginning of 2014.

The relationship between world trade and air freight is looser than previously because of the loss of air freight business to alternative transport modes and the move toward onshoring. At the top end of the air freight market, integrators are taking an increasing share of the business. At the bottom end, there is a continuing modal shift to less-expensive maritime transport. World trade, meanwhile, grew 3% in 2013.

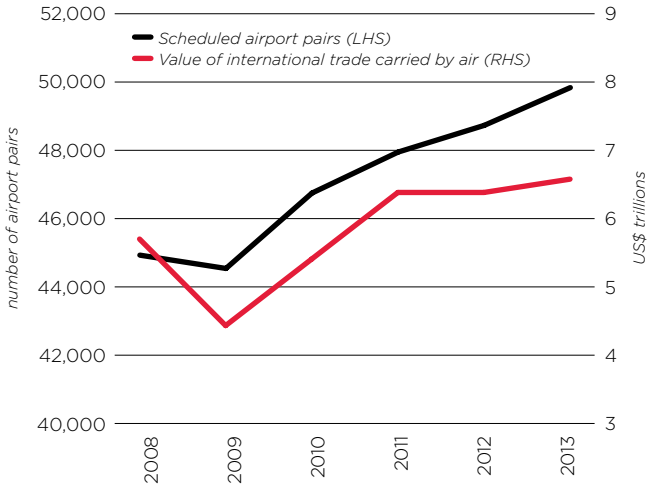
The value of connectivity is nevertheless clear. Airport connections continue to grow. There are some 50,000 scheduled airport pairs, and that connectivity resulted in goods worth $6.6 trillion being carried by air in 2013. Total air freight tonnage was near 50 million metric tons.

## Profit per passenger and return on capital *(Sources: IATA, ICAO)*



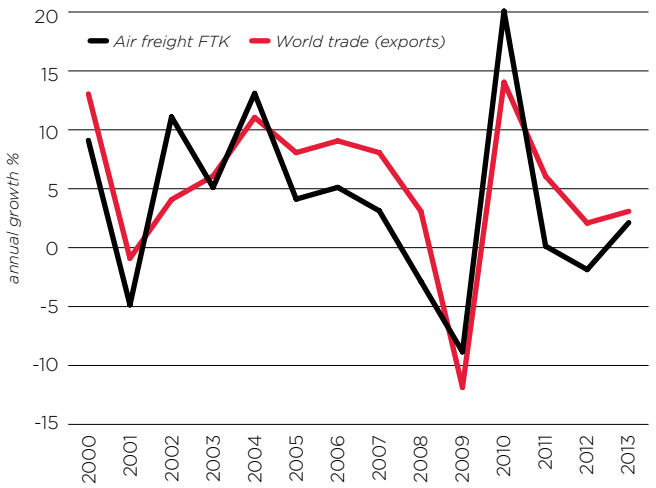

## Airport connections and value of international air freight

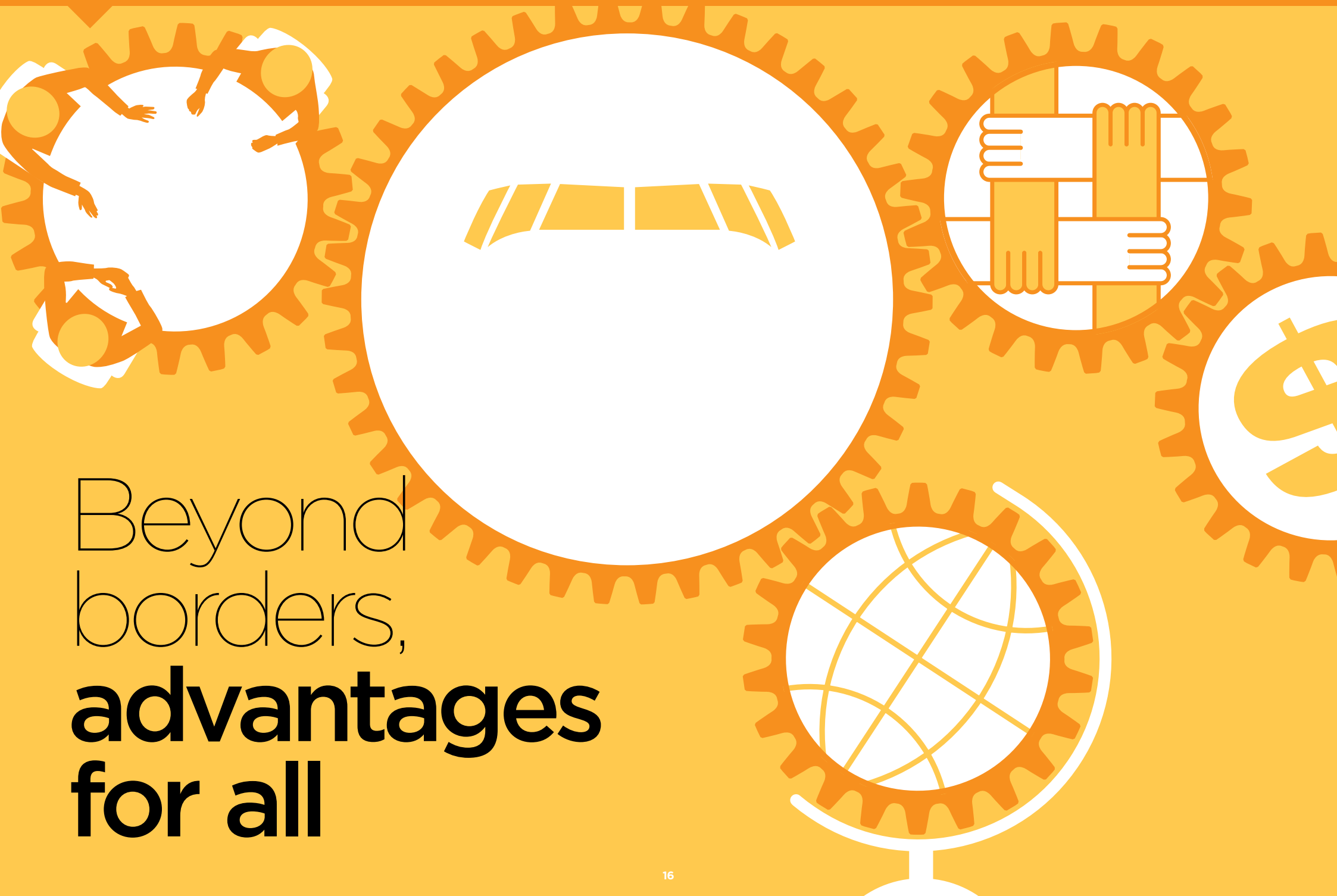
*(Sources: SRS Analyser, WTO, Colography Group)*




## Air freight and world trade growth

*(Sources: IATA, WTO)*





# Beyond borders, **advantages for all**

## Featuring benefits across all borders

The 2014 *Aviation: Benefits Beyond Borders* report, published by the Air Transport Action Group (ATAG) and compiled by Oxford Economics, shows that air transport supports $2.4 trillion in economic activity and 58 million jobs globally.

Oxford Economics analyzed the economic and social benefits of aviation at a global, regional, and national level in over 50 countries to build a comprehensive picture of air transport's many benefits. ATAG has built on that analysis to tell the story of an air transport system that ensures jobs, trade, connectivity, tourism, and vital lifelines to remote communities.

# Benefits of aviation

### 1 Passenger 1

This businesswoman is on her way to conclude a deal that will provide jobs and prosperity. Aviation's total global economic impact is $2.4 trillion, equivalent to 3.4% of world gross domestic product (GDP). The industry supports more than 58 million jobs worldwide.

And these figures do not include other economic benefits of aviation. Take, for example, the jobs and economic activity that occur when companies or industries exist solely because air travel makes them possible. Or consider the intrinsic value that the speed and connectivity of air travel hold for economic activity.

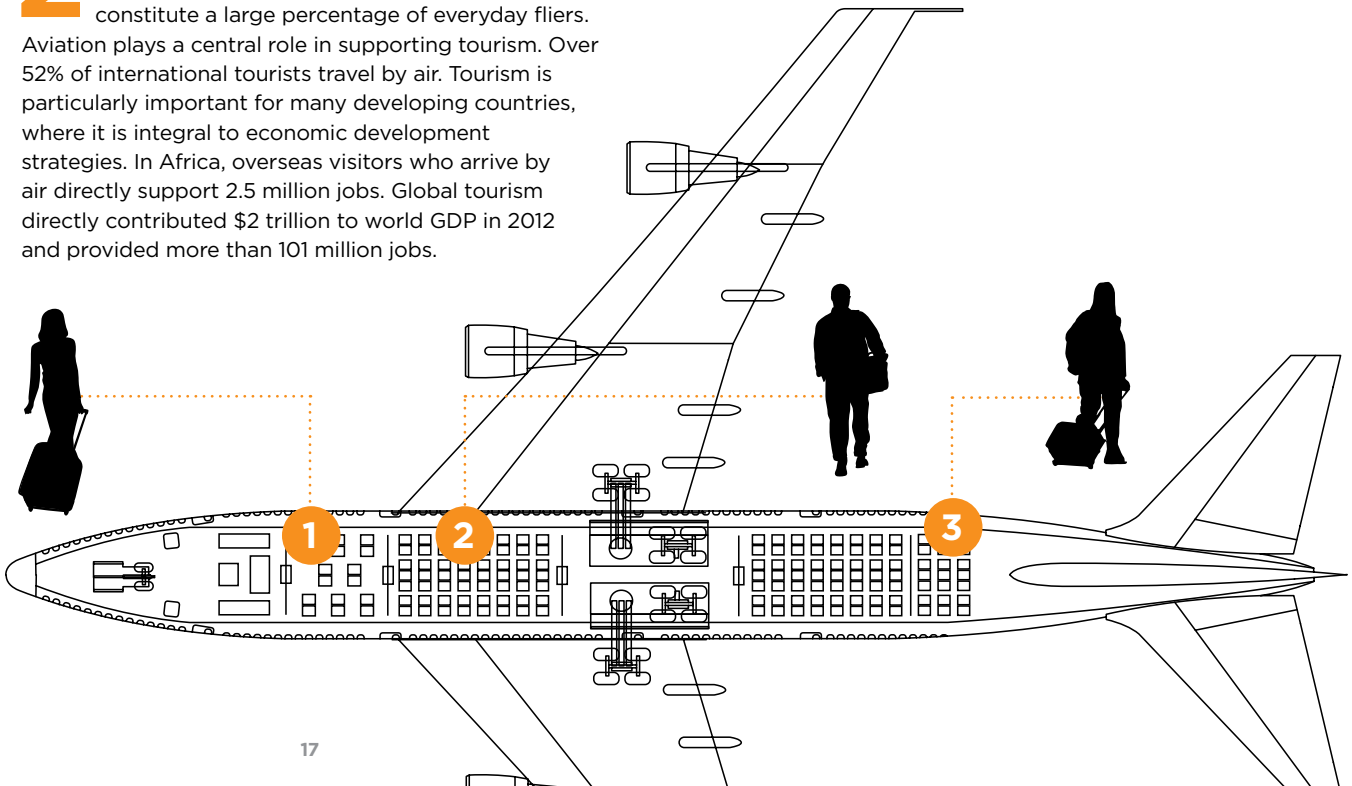
### 2 Passenger 2

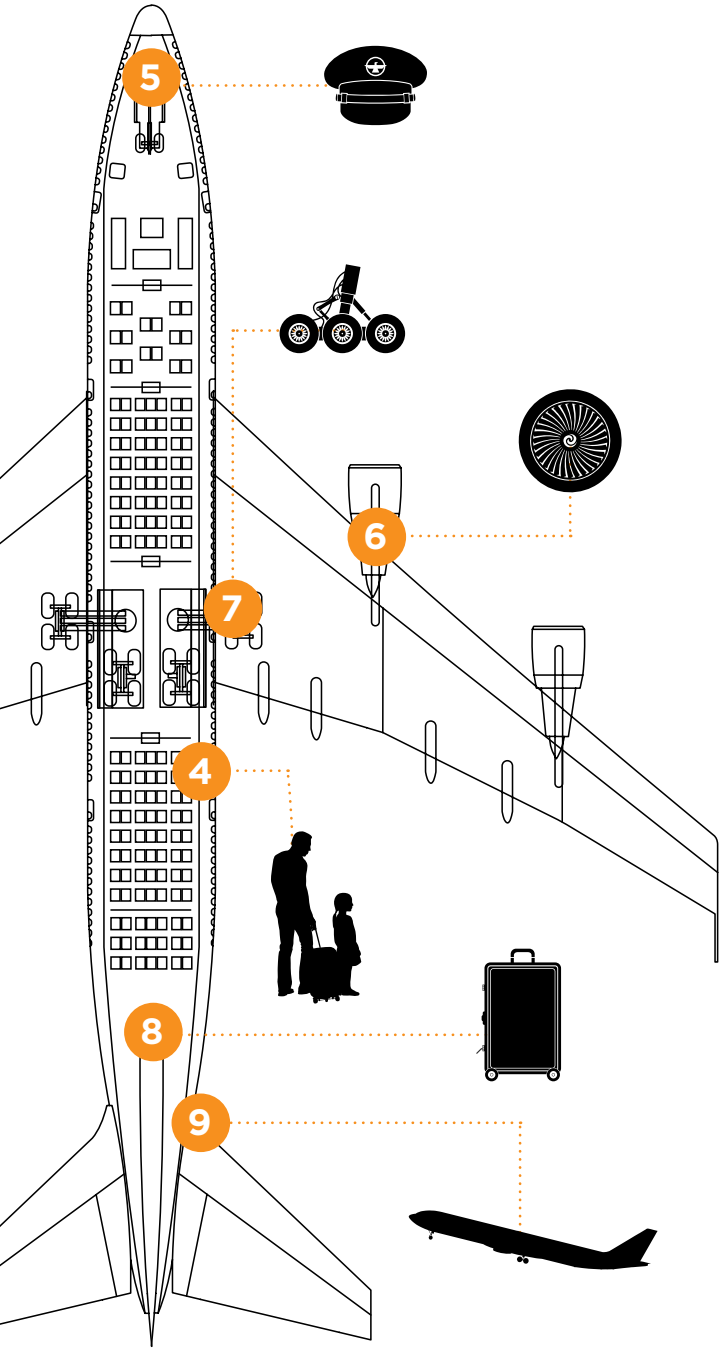
Vacation travelers such as this gentleman constitute a large percentage of everyday fliers. Aviation plays a central role in supporting tourism. Over 52% of international tourists travel by air. Tourism is particularly important for many developing countries, where it is integral to economic development strategies. In Africa, overseas visitors who arrive by air directly support 2.5 million jobs. Global tourism directly contributed $2 trillion to world GDP in 2012 and provided more than 101 million jobs.

### 3 Passenger 3

Students, too, avail themselves of air transport to carry them to studies abroad. Aviation thus is an enabler of international learning. According to the US-based Institute of International Education, there were over 800,000 international students in the United States in 2012–2013. US Department of Commerce figures show that these students contributed $24 billion to the US economy in 2013 and supported some 300,000 American jobs.

Among the many benefits of international study is the global perspective instilled in students and the boost that this may give to international and economic relations, especially when former students attain positions of influence in their home countries or elsewhere. ▸






## 4 Family

Families such as this one commonly utilize air transport as a reliable and speedy way for a return trip home. Modern demographics mean that airlines are often the only viable means of traveling to visit family and friends.

According to the United Nations, more than 230 million people live outside their country of birth. Labor mobility is a particularly important aspect of this trend. Workers from emerging economies often send money back to support their home economy. The World Bank discloses that in 2012 such "remittances" were up to three times the level of official, government development assistance flows to developing countries, reaching an estimated $401 billion.

## 5 Cockpit

- Nearly 1,400 airlines worldwide operate a global fleet of over 25,000 aircraft.
- Airlines are served by almost 4,000 international airports through a route network managed by 173 air navigation service providers.
- Airlines carry 8.6 million passengers and conduct 99,700 flights every day.

## 6 Engines

Airline operations produced 705 million metric tons of $CO_2$ in 2013, just under 2% of the total of man-made carbon emissions of over 36 billion metric tons. Aviation has had tough sector-specific climate change targets since 2008. The industry is already delivering on the first target—to continue to improve fleet fuel efficiency 1.5% per year until 2020. From 2020, aviation will cap its net carbon emissions while continuing to grow to meet the needs of passengers and economies. By 2050, the industry has committed to reduce its net carbon footprint 50% compared with 2005.

Aviation stakeholders are collaborating to reduce emissions using a four-pillar strategy of new technology, efficient operations, improved infrastructure, and market-based measures.

Aircraft noise is also being tackled. Modern jet aircraft are 75% quieter than the original models, and each new generation of aircraft continues this trend toward quiet operation.

## 7 Wheels

Aviation pays for the vast majority of its infrastructure costs, unlike other transport modes. In 2012, airports invested $19.3 billion in construction projects, creating jobs while building infrastructure.

## 8 Cargo hold

Aviation is responsible for 35% of world trade by value. That is equivalent to $6.4 trillion worth of goods annually, or $17.5 billion worth of goods every day. Getting perishable goods from developing economies to markets in industrialized nations wouldn't be possible without air transport. Kenya's cut flower industry, for example, supports 90,000 Kenyan jobs and 1.6% of Kenya's economy. It yields around $1 billion in foreign exchange each year and is dependent on air transport.

Air freight is integral to many facets of modern life. The pharmaceutical industry relies on air transport to deliver time-sensitive medical supplies, particularly vaccines. Most people have personal electronic devices that were built using a global supply chain linked by air. And Amazon.com and other e-commerce websites rely on the express delivery services made possible by aviation to get those devices and so much more to their customers.

## 9 Fuselage

The manufacture of aircraft has a global impact. More than 65 Japanese companies support Boeing programs, for example, accounting for about 22,000 direct and indirect jobs—or more than 40% of Japan's aerospace employment. Japan builds 35% of the 787 Dreamliner airframe and more than 20% of the 777. When the Airbus A350 XWB reaches its full production, it will account globally for 34,000 direct and 68,000 indirect jobs.

Economic gain, moreover, will be married to environmental responsibility. At the A350 XWB final assembly plant, 22,000 square meters of solar panels will produce the equivalent of 55% of the total energy needs to power the production processes.

# Flying safely, **the number one priority**

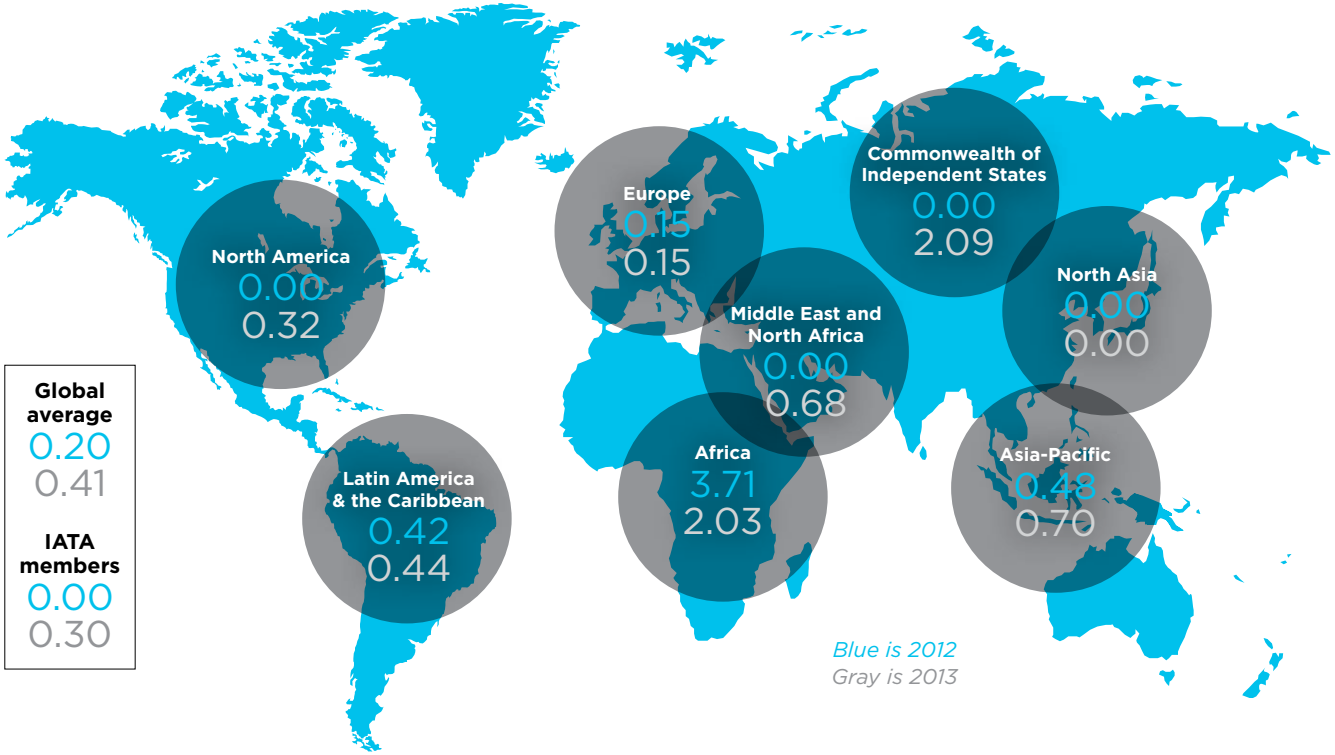
## Emphasizing safety as the aviation industry's top priority

Of the more than 29 million flights of Western-built jet aircraft in 2013, there were 12 hull losses. That is one major accident for every 2.4 million flights and a 14.6% improvement on the five-year industry average (see map for regional breakdown). Aviation accidents are exceedingly rare, and fatal accidents are rarer still. But tragedies still occur, and the industry cannot be complacent on safety.

The disappearance of Malaysian Airlines MH 370 has identified an unprecendented challenge to which the industry is responding. An aircraft tracking task force will, by December 2014, have identified the best solutions to ensuring that never again can an aircraft simply vanish.

Safety throughout the first century of commercial aviation has depended on partnerships, information sharing, and global standards. No matter how hard airlines may compete within an industry sector or how differently they may see the world when it comes to commercial issues, airlines do not compete on safety. Every improvement is a gain for the industry. And that has allowed aviation to develop a tradition of transparently sharing information, experiences, and best practices to make flying ever safer.

## Western-built jet hull-loss rate per million sectors




## Addressing today's biggest challenges

Managing risk is essential to safety. IATA works with airlines and other industry partners to identify risk mitigation measures and produces guidance and standards to reduce operational risks, such as loss of control in flight (LOC-I), controlled flight into terrain (CFIT), and runway excursions.

LOC-I accidents are rare but almost always involve fatalities. In the five years from 2009 through 2013, LOC-I accidents caused 1,546 fatalities, or nearly 60% of all accident fatalities, despite accounting for just 10% of aviation accidents overall. IATA is collaborating with its aviation-safety partners in developing a Loss of Control Prevention website and toolkit to provide a single point of consultation where LOC-I and aircraft upset recovery training aids will be available.

Although the number of CFIT incidents is rare, CFIT has been identified as the second greatest cause of fatalities in aviation. Most CFIT accidents occur in the approach and landing phase of flight, and there is a strong correlation between the lack of instrument landing systems or state-of-the-art approach procedures, such as performance-based navigation (PBN), and CFIT accidents.

From 2009 through 2013, 52% of CFIT accidents involved an imprecise approach. IATA is raising awareness about the risks of non-precision approaches and is seeking accelerated PBN implementation in accordance with ICAO Assembly resolution A-37-11. Unfortunately, implementation continues to be slow, with only a 10 percentage point rise between 2008 and 2012, from 32% to 42%.

Runway excursions were the most frequent accident from 2009 through 2013, representing 23% of all accidents. Data also reveals that over the same period 58% of all accidents occurred in the runway environment. A broad approach to runway-related events is therefore required that focuses not only on overruns but also on other events, related risks, and conditions. ▸

An IATA-led initiative is investigating incidents, such as runway incursions, hard landings or tail strikes, and contributing factors. The latter encompass but are not limited to approach procedures, including the availability of PBN; landing aids for all weather conditions; runway conditions; crew training; and ATC.

Improving runway safety is a team effort. IATA has helped to develop a Runway Safety Implementation Kit in collaboration with numerous stakeholders. It provides the latest guidance updates to assist aviation safety, including a centralized online resource. It also includes the ICAO Runway Safety Team Handbook and the contents from 12 regional safety seminars. IATA is working toward a common taxonomy for runway safety from which to develop a universal set of key performance indicators.

## Working to raise cabin safety

Accident survivability has increased since 2009. Data for 2009 shows that 85% of passengers and crew members involved in accidents survived. In 2013, survivability was at 96%.

Upgraded cabin safety requirements and improved cabin crew training are among the chief contributors to positive developments in cabin safety. IATA is strongly committed to improving cabin safety and in 2013 produced the Cabin Operations Safety Best Practices Guide. Also in 2013, IATA hosted the first Africa Cabin Operations Safety Seminar. More recently, in May 2014 in Madrid, Spain, IATA held the first Cabin Operations Safety Conference.

## Driving safety improvements through data

Historically, aviation safety has improved through a well-established process of accident investigations that identify the probable causes and recommend mitigation measures. The information provided from this process has helped aviation take steps to reduce the risk of similar accidents. Accidents, however, are on a downward trend—only 81 accidents were reported in 2013. So future safety improvements will be driven largely by analyzing information from all of the 36.4 million flights on jet and turboprop aircraft that operate normally each year and not just from the handful of flights where something went wrong. The data will enable us to identify challenges long before they become safety risks.

Aviation generates an enormous amount of data. Every stakeholder, from airlines to flight crew and ground staff, aircraft and engine builders, systems providers, airports, air navigation service providers, and governments, has something to contribute.

The outcomes of data analysis only improve by combining data gathered from diverse sources and viewpoints. And IATA's vision is to collect data from as many information sources as possible and to develop the analytical tools to unlock the insights that data holds. The Global Aviation Data Management project, or GADM, is helping realize IATA's vision.

GADM is an ISO-certified 9001 master database that supports a proactive, data-driven approach for advanced trend analysis and predictive risk mitigation. Sources for GADM include the IATA accident database; the Safety Trend Evaluation Analysis and Data Exchange System (STEADES); IOSA and ISAGO audit findings; Flight Data Analysis (FDA) and Flight Data eXchange (FDX); the Ground Damage Database (GDDB); and operational reports; among others. More than 470 organizations around the globe and over 90% of IATA member carriers submit data to GADM, making it the most comprehensive airline operational database available.

The European Aviation Safety Agency, the US Federal Aviation Administration, the International Civil Aviation Organization, and others have signed agreements with IATA to join the GADM project. Already, de-identified data from some five million recorded flights and more than a million incidents is stored in GADM. It's a powerful tool that grows stronger with each additional piece of data.

A "just culture" of reporting that captures as many insights as possible is a prerequisite for gathering meaningful data. Within the aviation industry, the concept of nonpunitive self-reporting is well established but not yet universally or sufficiently applied. Such reporting, moreover, needs to extend even to third parties, again so that issues can be seen from as many angles as possible.

With GADM, the industry will have access to comprehensive, cross-database predictive analysis. This will enable the identification of emerging trends and, more, the flagging of risks for mitigation through safety programs.

To further GADM's predictive analysis capabilities, IATA is working with the Technical University of Munich. That institution has developed a methodology to predict the risks of particular accidents or incidents, such as runway overruns or excursions, for example.

## Auditing to global standards and practices

Auditing programs are crucial to driving safety improvements. They ensure that globally recognized standards and best practices are followed.

The IATA Operational Safety Audit (IOSA) is the gold standard for operational audits in the air transport industry. All 240 of IATA's members are among the 391 airlines on the IOSA registry. Their safety performance in 2013 was more than two times better than that of airlines not on the registry. IOSA registrants experienced 1.46 Western-built jet hull loss accidents per million flights compared with 3.60 for non-IOSA registrants.

IOSA is a key part of the Africa Strategic Safety Improvement Action Plan. And the implementation of two important developments will ensure that IOSA continues to evolve with industry advancements to support that plan and overall industry safety objectives: safety management systems (SMS) and Enhanced IOSA.

The IATA Safety Audit for Ground Operations (ISAGO) is the global standard for the oversight and auditing of ground service providers (GSPs). It helps improve safety and reduce billions of dollars in annual costs related to ground damage. Additionally, ISAGO provides cost savings of up to 30% for airlines and GSPs by decreasing the number of redundant audits.

More than 700 ISAGO audits have been performed worldwide since 2008. As of 29 March 2014, the ISAGO registry had 147 registered providers with 263 registered stations in 181 airports worldwide. The ISAGO audit pool comprises 44 member airlines, consisting of 280 ISAGO-qualified auditors. Globally, 28 regulatory authorities and 37 airports worldwide support ISAGO.

Other audit programs include the IATA Fuel Quality Pool, the IATA Drinking Water Quality Pool, and the IATA Deicing/Anti-icing Quality Control Pool. Ensuring that global standards and best practices are being followed in all areas of aviation is the best way to remove risk from daily operations.

## Implementing SMS

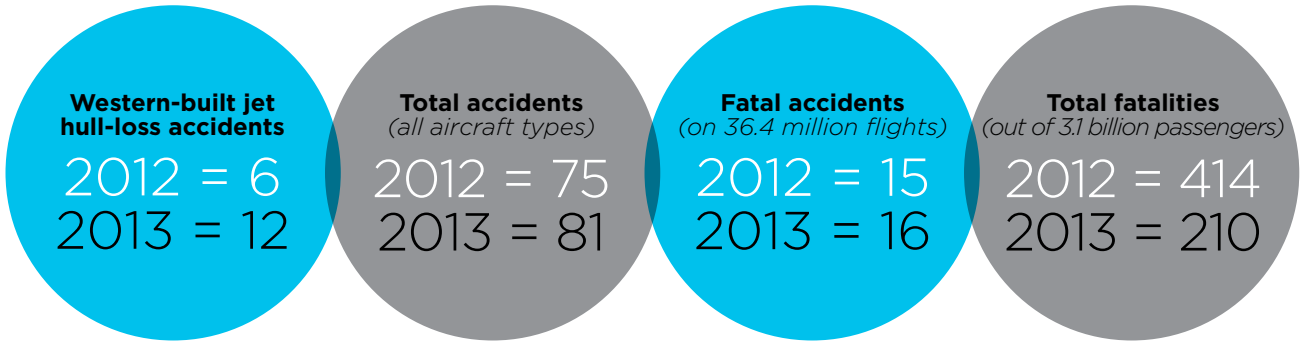
An SMS is a systematic approach to managing safety that includes organizational structures, accountabilities, and procedures. As per ICAO requirements, airlines and other service providers are responsible for establishing an SMS.

IATA is an active member of the ICAO Safety Management Panel and was involved in the drafting of the latest ICAO annex, namely Annex 19—Safety Management. That annex came into effect on 14 November 2013 and underpinned the development and launch of the Regional SMS Network. IATA is committed to helping IOSA members implement an effective SMS.

Aviation safety enhancement remained the priority of the International Airline Training Fund (IATF) in 2013. The IATF in particular continued the SMS Implementation Training Program in Africa, the Middle East, and Latin America and launched the new IOSA Implementation Training Initiative for African airlines in support of the Abuja Declaration.

In 2013, 34 SMS Implementation Training Program workshops were held in Africa (13), Latin America (13), the Middle East and North Africa (8). Fully 27 IOSA Implementation Training Program workshops were held exclusively for African airlines. In 2014, a new round of IOSA Implementation Training Initiative workshops will be offered to 10 additional airlines in Africa.

## Key safety figures at a glance



## Implementing enhanced IOSA

In the 11 years since its launch, IOSA has become aviation's global standard for operational safety management. But IOSA's protocols have remained largely unchanged, with all IOSA participants required to undergo audits on a two-year cycle. To increase IOSA's effectiveness, it has been upgraded to Enhanced IOSA, which incorporates systems to monitor compliance in the time between the two-year audit cycle.

Airlines began undergoing Enhanced IOSA on a voluntary basis in 2013. Enhanced IOSA will become mandatory for all renewal audits in September 2015.

Carriers that are outside the IOSA criteria—either because of aircraft types operated or the nature and scale of their operations—also need to be supported. To address this segment of the market, IATA is developing the Standard Safety Assessment Program (ISSA).

## Following a Six-Point Safety Strategy

All IATA safety-related activities are coordinated in a comprehensive Six-Point Safety Strategy. That strategy is established in close cooperation with IATA member airlines and strategic partners through the IATA Safety Group and Operations Committee and was again updated in 2013. It is regularly monitored and revised for relevance to ensure a comprehensive approach to identifying organizational, operational, and emerging safety issues, including

- reducing operational risks, such as CFIT, LOC-I, and runway excursions;
- enhancing quality and compliance through audit programs;
- advocating for improved aviation infrastructure, such as the implementation of performance-based navigation approaches;
- supporting the consistent implementation of safety management systems;
- encouraging effective recruitment and training to enhance quality and compliance through programs such as the IATA Quality and Training Initiative and ICAO's Multi-Crew Pilot License; and
- identifying and addressing emerging safety issues, such as lithium batteries, and the challenges posed by the outsourcing of commercial functions to third-party service providers, which is one of the largest corporate risks for legacy carriers.

# Examples of regional aviation safety developments in 2013

## 1 NORTH AMERICA

IATA and the US Commercial Aviation Safety Team (CAST) signed a letter of understanding in 2013 to align their safety programs and objectives centered on shared data. This involves jointly developing and harmonizing data-sharing programs.

## 2 AFRICA

IATA and stakeholders committed to ICAO and other aviation-related governance bodies have united behind the Africa Strategic Safety Improvement Action Plan. That plan aims to achieve world-class safety levels in Africa by 2015 by addressing safety deficiencies and strengthening regulatory oversight capabilities.

The good news is that we are seeing significant progress. African airlines experienced only one Western-built jet hull loss in 2013, for a hull loss rate of 2.03 per million flights. That was still well above the global average, but it represented a significant improvement from the five-year average for Africa, of 6.44.

A key focus for African governments in their efforts to achieve better safety oversight will be the implementation of ICAO's safety-related standards and recommended practices (SARPS) under the Universal Safety Oversight Audit Program (USOAP). Only 11 African nations had achieved 60% implementation of SARPS at year-end 2013. Meeting the Abuja Declaration's 2015 commitment will require an accelerated pace of implementation.

The Abuja Declaration also commits African governments to require that all airlines complete an IOSA. To support this effort, IATA is sponsoring in-house training through the International Airlines Training Fund for 10 nonmember airlines to complete an IOSA gap analysis, paving the way for the completion of an IOSA.

## 3 LATIN AMERICA AND CARIBBEAN

It was an important year for air transport safety in Latin America and the Caribbean in 2013. The region's stakeholders, through the Regional Aviation Safety Group Pan-America, agreed to a common objective of reducing the fatal accident risk in the region by 50% by 2020 compared with 2010. The focus is on reducing runway excursions, LOC-I, CFIT, and traffic collision avoidance system events, which are the main contributors to fatalities in the region.

The region's IOSA-registered carriers have not experienced a fatality in five years. That is why IATA is working with regional governments and stakeholders, such as the Latin American and Caribbean Air Transport Association, to broaden the use of IOSA and make it a part of the operational approval process.

The IATA-Latin American and Caribbean Air Transport Association (ALTA), meanwhile, is proving to be an effective information-sharing partnership. It is providing crucial de-identified safety data to ALTA-member airlines to help them focus their safety efforts where they will have the biggest impact.

## 4 COMMONWEALTH OF INDEPENDENT STATES

The Commonwealth of Independent States (CIS) was the only region where IATA members experienced zero accidents in 2013. Overall, however, the CIS experienced a significant deterioration in safety compared with 2012 when the performances of all airlines are included.

IATA's proposed safety enhancement strategy for the CIS seeks to boost individual nations' oversight capabilities and ensure compliance with ICAO standards and recommended practices. It encompasses introducing SMS; launching an IATA Training and Quality Initiative (ITQI)-based model; and developing infrastructure, including assistance in the implementation of PBN. IATA is encouraging the regulators in each CIS country to benefit from such internationally recognized audit programs as IOSA to enhance safety oversight systems already in place.

# Security processes, **effective and efficient**

## Focusing on outcomes

Security is a key priority for the aviation industry. Equally crucial is that security measures be efficient and effective.

So IATA is exploring the benefits of an outcome-focused approach to security regulation, whereby it is the result and not the implementation of aviation security that counts. IATA hopes that this allows stakeholders the flexibility to determine the most resource-efficient method of implementing measures to deter, detect, and disrupt potential attacks against the air transport system.

The outcome-focused approach to security is a work in progress. Efforts are continuing to define its scope and mechanics and to understand how it meshes with legal and regulatory requirements.

## Providing data for border security

Border control and policing are the well-established responsibility of governments. But for security to function smoothly and effectively, all stakeholders need to work together.

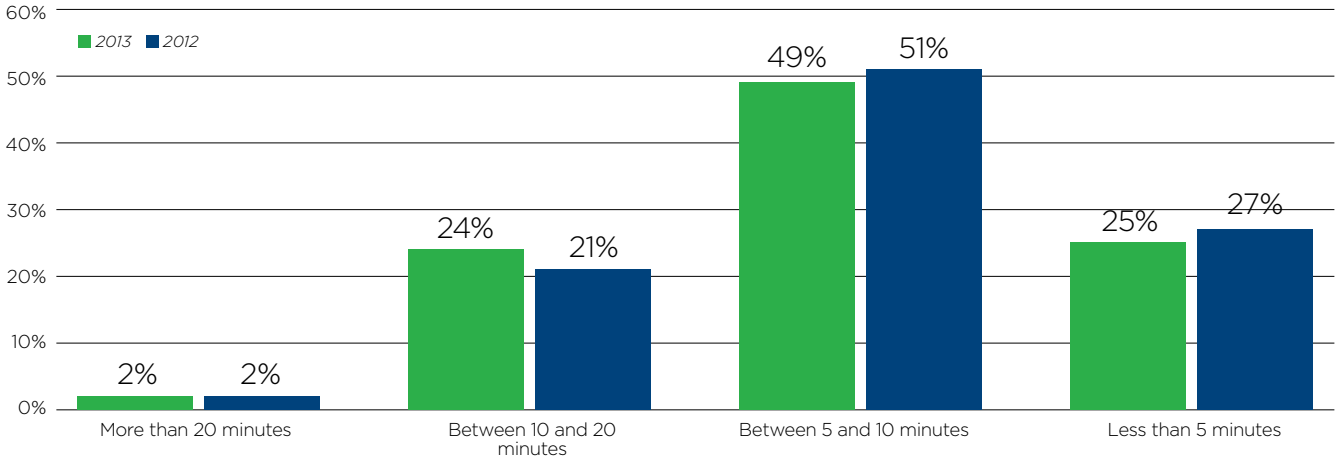
The Advance Passenger Information (API) and Passenger Name Record (PNR) systems are cases in point. Almost 60 nations require airlines to provide API, and the industry goes to great lengths to ensure that their governments receive reliable data, including passport information.

In return, government processes for vetting and using API in conjunction with, for example, the Interpol Stolen and Lost Travel Documents database and other, national databases must be constantly and consistently applied.

- Governments should conform to ICAO standards when asking for passenger data. The nonstandard requirements of some governments should be eliminated, as they complicate the system with no benefit to security.
- Governments must modernize their collection of data. Airlines are transmitting data electronically, so it is time for governments to do away with the paper forms that they demand airlines and passengers submit.
- Governments should establish a single harmonized means by which passenger data can be sent.
- Governments should explore how passenger data can improve not only the effectiveness of border control but also its efficiency. It should be possible to measure the effect of applying passenger data correctly.

IATA is developing an online security data toolkit in collaboration with ICAO and the World Customs Organization that complies with global standards. In 2014, IATA is also hosting a series of workshops to engage regulators and stakeholders in security-related issues.

## Acceptable queuing time at a security point




*(Source: IATA Global Passenger Survey)*

## Bolstering cyber security

Commercial aviation depends on reliable, robust, and secure IT systems. This reliance extends to all business-critical functions, including for reservations, aircraft maintenance, and flight management.

Yet there are thousands of entry points to aviation's IT infrastructure. These include connectivity through the Internet, mobile devices, global distribution systems, governments, financial systems, and other access points. The industry has consequently become increasingly sensitive to the potential of cyber threats.

In 2013, IATA analyzed the management of cyber security by airlines and the industry as a whole. The result is a five-year industry strategy for bolstering cyber security. That strategy has three areas of activity:

- Risk management
- Advocacy
- Intelligence and reporting

Guidance material for pursuing the strategy will be published in 2014. That material will look at key threats, limitation strategies, and how to establish a cyber security management system.

## Driving the implementation of Smart Security

Smart Security is the evolution of the Checkpoint of the Future project launched in 2011. The Smart Security vision is to improve the journey from curb to airside so that passengers proceed through security checkpoints with minimal inconvenience. Under Smart Security, security resources will be allocated based on risk, and airport facilities will be optimized for efficiency and effectiveness.

Smart Security checkpoints will focus on components that deliver process innovation, contribute to the evolution of risk-based security, and make use of technologies that enhance detection. There will be less divestment of clothing and personal items and fewer intrusive processes on the whole.

Smart Security has three goals:

- Effective security
- Efficient operations
- Enhanced passenger experience

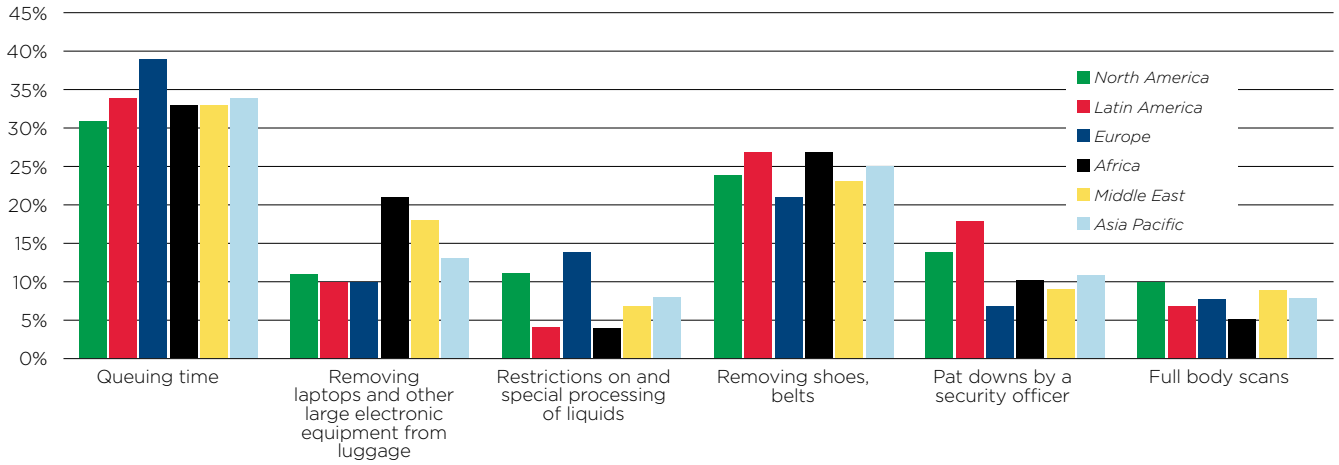
In 2014, the Smart Security work program will focus on two areas:

- Testing components in an operational environment and assessing the impact on operational efficiency, the passenger experience, and security effectiveness. Amsterdam Schiphol Airport and London Heathrow Airport will run trials in 2014.
- Continued testing of components to advance the vision documented in the 2017 and 2020 Smart Security blueprint.

A key driver for Smart Security is collaboration with Airports Council International (ACI) World. IATA and ACI World signed a memorandum of understanding (MoU) regarding Smart Security in 2013.

The MoU covers projects that will drive improvements in airport throughput capacity and efficiency as well as cyber security. It also includes the Security Access and Egress project, which focuses on streamlining access to and egress from the passenger-screening checkpoints that will be integrated with Smart Security in 2014.

### Most frustrating elements of the security screening process (by region of residence)




*(Source: IATA Global Passenger Survey)*

# Smarter regulation, **the fair way forward**

## Pushing for smarter, coordinated regulations

The airline industry needs smart regulation. That means a regulatory structure that ensures safety, promotes the industry's success, and takes a harmonized approach to facilitating the global aviation system that is so critical to modern life.

This is the vision of the 1944 Chicago Convention that is the regulatory bedrock of global aviation. That convention set up the International Civil Aviation Organization (ICAO) and put in place a framework for global cooperation in moving people and goods by air and in ensuring the safety of air travel and the legal rights of air passengers. Some 70 years later, the Chicago Convention's principles remain as integral as ever to global aviation's ambition and success.

The 38th triennial ICAO Assembly held in late September, early October 2013 was the focal point for aviation regulatory activity over the previous 12 months. Its outcomes affirmed in most cases the need for greater global regulatory convergence. There was a landmark agreement to develop a global, market-based measure to tackle aviation emissions (see Environment chapter). The assembly also encouraged the universal adoption of Montreal Convention 1999 (MC99); approved the development of high-level, nonprescriptive core principles on consumer protection; and agreed updates to the Tokyo Convention on dealing with unruly passengers.

## Analyzing costs and benefits

In dealing with ICAO and with governments worldwide, IATA and the industry are focused not only on influencing specific regulatory proposals but also, at a more general level, on promoting the benefits of aviation and air connectivity. *Benefits of Aviation* papers were developed in 2011 and 2012 to give a country-by-country analysis of the employment and economic activity generated and supported by aviation. The research was collated as a single global document, *Aviation: Benefits Beyond Borders*. That document was updated in April 2014 (see Benefits of Aviation chapter) and shows that the economic impact of aviation is increasing. *Aviation: Benefits Beyond Borders* gives governments more information to take into consideration when performing cost-benefit analyses on proposed regulation and taxation of the air transport industry. That information, moreover, serves to remind governments that aviation is an enabler of economic and social growth and of rising living standards.

## Focusing on smart regulation

There is, amid the enduring legacy of the Chicago Convention's principles, much aviation regulation that remains unharmonized. Wherever possible, the aviation industry advocates for smart regulation that can be applied globally and consistently. But local variations exist and potentially add cost, complication, and confusion. They also can lead to unintended consequences—most damagingly: an impact on the level of air connectivity.

IATA and its members are promoting a smart approach to regulation to reduce the regulatory burdens on the industry. The priority is to pinpoint the growing number of disjointed regulations that specifically affect connectivity. Target countries and issues will be identified, and action plans and campaigns will be developed to address those countries and issues.

Countries, conversely, where governments are adopting a positive approach to regulation will be championed. Singapore and Australia, for example, have questioned the need for aviation-specific regulations on consumer protection, arguing that governments should only intervene when there is a market failure and that airlines should have the ability to operate like any other business. Both countries referenced their independent consumer protection agencies, which monitor all industries. Countries such as these are mindful of overregulation that adds unnecessarily to business costs.

Focusing on smart regulation allows the industry to open up a positive advocacy with governments whereby government and industry interests are aligned around impartial policy design and the principles of smart regulation. Some of the issues that IATA is engaging governments on include passenger rights, MC99 ratification, unruly passengers, slots, appropriate taxation, and blocked airline funds.

## Promoting harmonized passenger rights

Passenger rights legislation exemplifies uncoordinated global regulation with the potential to harm connectivity. More than 60 passenger rights regimes are in place—each with differing requirements (see map for examples). This patchwork is confusing to passengers, who should clearly understand what they are entitled to, and has engendered an almost unworkable situation for the industry. Air transportation is highly competitive, and market forces provide a strong incentive for airlines to operate on schedule. On the rare occasions where problems occur, the effectiveness of an airline's response is often a key element of the service that it offers to passengers.

Proliferating prescriptive passenger rights regulation is significantly costly and yet adds little value for passengers. IATA estimates that the potential liability to airlines posed by the expansion of such regulation could nearly triple in the next five years, from over $4 billion in 2012 to $12 billion in 2017.

At the 69th IATA AGM in June 2013, IATA members unanimously agreed to a resolution on baseline passenger rights. The resolution strikes a balance between sustainable air transport and reasonable consumer protection. It fosters compatibility among passenger rights regimes and serves as the foundation for proactively shaping the debate on the need for a balanced approach between safeguarding passenger rights and protecting air connectivity and competitiveness.

The 2013 ICAO Assembly agreed on the need for greater convergence in this area, directing ICAO to work on developing guidance on passenger rights. IATA and its member airlines are seeking to promote a coordinated approach to global passenger rights regimes based on their resolution and are strong supporters of the ICAO work on this issue.

## Ratifying Montreal Convention 1999

Even when global regulations are agreed to, they need to be transposed into national law. Montreal Convention 1999 (MC99) in particular requires ratification by individual countries. Civil aviation, meanwhile, requires a universal liability regime for international carriage by air. Unless MC99 is ratified, a country cannot participate in electronic data transfer, the cornerstone of the e-Freight program, including the e-air waybill. Nor will compensation rates be globally harmonized.

To date, 104 nations have recognized the importance of and ratified MC99. IATA worked with countries attending the 38th triennial ICAO Assembly to forge Resolution A38-20, which calls on all remaining 87 nations to ratify MC99 as soon as possible. Following the assembly, the ICAO secretary general took the unusual step of writing a letter urging those countries to ratify MC99.

Burkina Faso and Mozambique have, as a result, recently ratified MC99. And although some key markets, such as Indonesia, the Philippines, Russia, Sri Lanka, Thailand, and Vietnam, have not yet ratified the convention, for the most part their governments acknowledge its benefits. Only a lack of political will or delays in the legislative process prevent them from changing their local legislation. In Russia, however, the amended local legislation is before the Duma and is expected to be approved by midyear. Kazakhstan, too, has publicly stated that it will ratify MC99 by the end of 2014, and IATA expects that a number of other countries will also ratify the convention during 2014.

## Dealing with unruly passengers

There are more than 8,000 reported incidents of unruly behavior on aircraft every year. The impact on passengers and crew from an unruly passenger can be significant, especially if the aircraft is forced to divert.

The legal framework for dealing with passengers whose unruly or disruptive behavior leads to physical assault or poses a threat to the safety of a flight is the 1963 Tokyo Convention. IATA has supported revisions to that convention to reflect the changes in the structure of the aviation industry over the last 50 years. In March 2014, attendees at a diplomatic conference in Montreal agreed on a number of further important revisions to the Tokyo Convention. Those changes will give airlines and authorities an effective means to deter unruly passengers and include key reforms to the following:

- Jurisdiction
- Protection of flight crew and airlines from legal proceedings
- Scope
- List of offences
- Right of recourse for airlines to recover costs

The requirement now is for countries to ratify the changes to the Tokyo Convention as soon as possible. IATA continues to urge nations to do so and is working with stakeholders to move the process forward.

## Examples of Passenger rights legislation

**Uncoordinated passenger rights regimes cause confusion for passengers and difficulties for airlines. Prescriptive regimes also have unintended consequences, sometimes causing more inconvenience for passengers and a loss of connectivity for markets. Airlines are seeking a harmonized global passenger rights framework based on the key passenger rights principles agreed to at the 69th IATA AGM in June 2013.**

### 1 EUROPEAN UNION

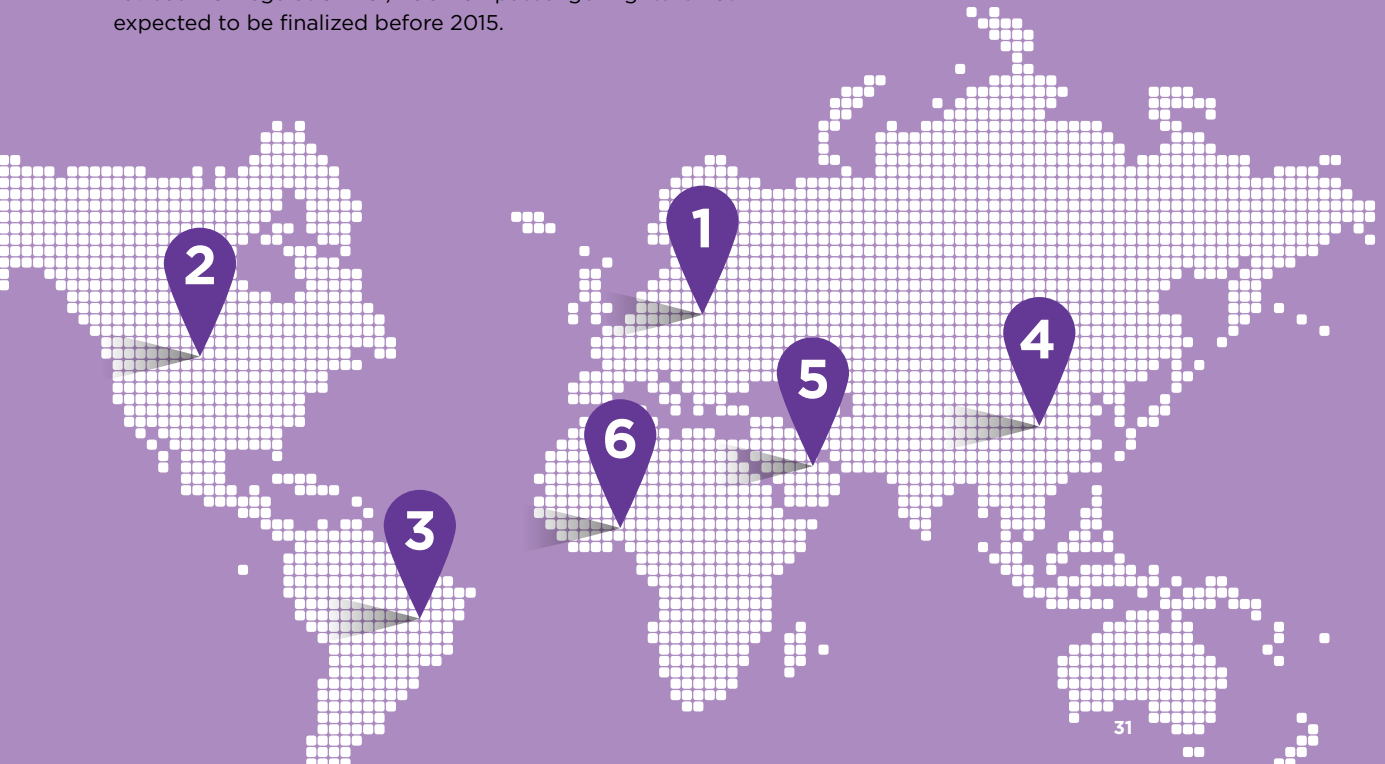
The European Union is revising EU Regulation 261/2004 on passenger rights. This regulation creates an estimated $4 billion in potential liability for airlines every year. There are some positive signs to reduce this burden among the revisions, but the revisions also include several disturbing proposals. The latter include penalizing safety-related delays and cancellations and placing the burden of care and compensation on the first carrier in case of connecting flights, thereby jeopardizing interline traffic. A revised EU Regulation 261/2004 on passenger rights is not expected to be finalized before 2015.

### 2 USA

The US Department of Transportation (DoT) is considering a notice of proposed rulemaking (NPRM) on a new passenger rights regulation called Consumer Rule III. One of the potential new provisions of concern is the requirement that airlines sell ancillary services through GDS's.

### 3 BRAZIL

Brazil's Civil Aviation Agency (ANAC) is revising its conditions of carriage regulations. A proposal allowing consumers the "right to repent" purchase decisions after a set period of time could restrict the pricing freedom of carriers. In addition, efforts to standardize certain conditions of carriage could interfere with the ability of airlines to introduce a diverse array of products and services in the marketplace—and cause difficulty with foreign airlines that file their contracts of carriage in other jurisdictions. Brazilian courts, moreover, often award damages beyond the limits stipulated in Montreal Convention 1999.




### 4 CHINA

The Chinese government is contemplating a revision of its passenger rights regulations, including the possibility of introducing compensation in cases of delays. IATA and the Chinese Air Transport Association (CATA) are working with the Civil Aviation Administration of China (CAAC) to propose revisions to China's passenger rights regime along the lines of the industry's core principles on consumer protection. In the industry view, entitlements related to delays should reflect the reality that a majority of delays are beyond the control of airlines and recognize that airlines are highly incentivized to get their passengers to their destinations on time.

### 5 BAHRAIN

In December 2013, Bahrain introduced consumer protection regulations, the second Gulf Cooperation Council country to do so after Saudi Arabia. The newly introduced rules have several areas of possible inconsistency with Montreal Convention 1999. Additional proposals constitute a costly and complex burden on carriers, such as a requirement to reroute passengers, at their choice, onto other airlines, even at a higher class of travel, or unlimited care and assistance based on the passenger's choice of an alternative flight. Such burdens can have the unintended consequences of reduced connectivity and higher fares for consumers.

### 6 NIGERIA

The Nigerian passenger rights regime is concerning for its extraterritorial reach, meaning that two or more passenger rights laws could apply at once to a given passenger. Ideally, Nigeria's regime should not apply to events occuring outside Nigeria. As it stands, the country's extraterritorial application of its passenger rights regulations makes possible an overlapping of legal regimes that will be confusing for carriers and passengers. That Nigeria's passenger rights regime applies to foreign aircraft after their departure from Nigeria is particularly disturbing and raises questions of conformity with Articles 1 and 11 of the Chicago Convention.

## Evaluating capacity constraints

Airport capacity is a major concern for the industry in the most congested markets. The constraints on capacity are best alleviated through the construction of runways and terminals. Until that is achieved, however, it is necessary to manage scarce capacity through globally coordinated regulations, the rules for which are laid down in the *Worldwide Slot Guidelines* (*WSG*). The *WSG* is the accepted global standard for the policies, principles, and procedures of airport slot management. Adherence to the *WSG* ensures consistent practices and the smooth performance of the system. Conversely, local rules or deviations from the *WSG* can cause disruption to passengers.

There remain several examples of such deviations, and these must be resolved:

- Latin America has many fast-growing markets where infrastructure capacity lags growth. Consequently, many countries in the region are considering slot regulation. Brazil, Colombia, and Mexico in particular have proposed legislation that differs significantly from the *WSG*, but strong advocacy by IATA in 2013 has ensured significant progress in limiting their divergence from international standards.
- IATA also was engaged in Indonesia, Thailand, China, Dubai, Saudi Arabia, Turkey, and Greece in 2013 to help reduce their divergence from or practices contrary to the *WSG*. In 2014, IATA has been asked to engage with Egypt, Morocco, Tunisia, and Russia regarding capacity issues in those nations.

## Calling for appropriate taxation

The Chicago Convention contains a number of provisions with regard to aviation taxation. For example, it states that tax cannot be levied on fuel used for international air transport. ICAO also recommends that value-added tax (VAT) and other sales taxes should not apply to international air tickets. Many governments, however, ignore the recommendations and levy passenger taxes, VAT, or other taxes, including tourism and visa charges ( see map for examples).

IATA and its members and a growing body of independent economic researchers consider such taxes and charges to have a dampening effect on air connectivity and the economic and social benefits of aviation. The industry is willing to pay its fair share of corporate taxes. But given that air connectivity is a proven enabler of economic development, overtaxing flying will have a negative effect on national economies and government revenues.

The air transport industry, therefore, attempts to show governments that taxes

- often contravene bilateral air services agreements or are inconsistent with ICAO policies and
- often are counterproductive; evidence from some countries indicates that the economic loss from taxes can outweigh the expected returns.

## Urging the release of blocked airline funds

There are a number of nations that restrict or block airlines from repatriating funds from ticket sales. Of particular concern are Venezuela, Iran, Sudan, Eritrea, and Algeria. According to IATA's 2013 Remittance of Foreign Balances (RFB) survey, $3.7 billion of members' funds remains delayed or blocked in 13 countries. This is over double the 2012 year-end figure of $1.05 billion. By far the biggest issue is with Venezuela, which accounts for more than 90% of all blocked funds.

IATA is urging the Venezuelan government to honor a commitment it made in March 2014 to permit the repatriation of airline funds at fair exchange rates. The effect of the Venezuelan government's position is measurable in lost connectivity. In 2013, 11 of the 24 airlines operating in Venezuela have reduced operations there between 15% and 78%, and one air carrier has stopped flying to the country altogether.

## Examples of aviation taxation

**Taxing air connectivity for budgetary purposes does not aid economic growth. On the contrary, there is increasing evidence that such taxes diminish the tax-raising potential of national economies. The reduction or the removal of passenger taxes in the Netherlands, the Republic of Ireland, Australia, Northern Ireland and the United Kingdom is evidence that governments are starting to accept this view. Despite successes in this regard, however, airlines and their customers continue to be burdened with a multitude of counterproductive taxes.**

### 1 CHILE

October 2013 brought positive news from Chile following representations there by IATA. The Chilean government decided not to implement its proposed passenger tax of $20 per passenger. This results in an estimated saving of around $62 million.

### 2 REPUBLIC OF IRELAND

To boost the Irish economy and support Ireland's tourism sector, the Irish minister of finance has abolished the country's Air Travel Tax as of 1 April 2014. The tax, which was €3 per departing passenger, represented some $47 million annually.

### 3 UNITED KINGDOM

There was a notable change in the UK Air Passenger Duty (APD), the world's largest single aviation tax, in March 2014. The UK government announced that the upper two tiers of the tax, Bands C and D, would be abolished, harmonizing the tax band for all flights of more than 2,001 miles in length and saving around $300 million annually. The rationalization offered for the change was to promote connections with fast-growing economies. The remaining tiers of the tax, however, will rise with inflation. IATA will continue to argue, therefore, for the APD to be abolished.

### 4 MOROCCO AND TUNISIA

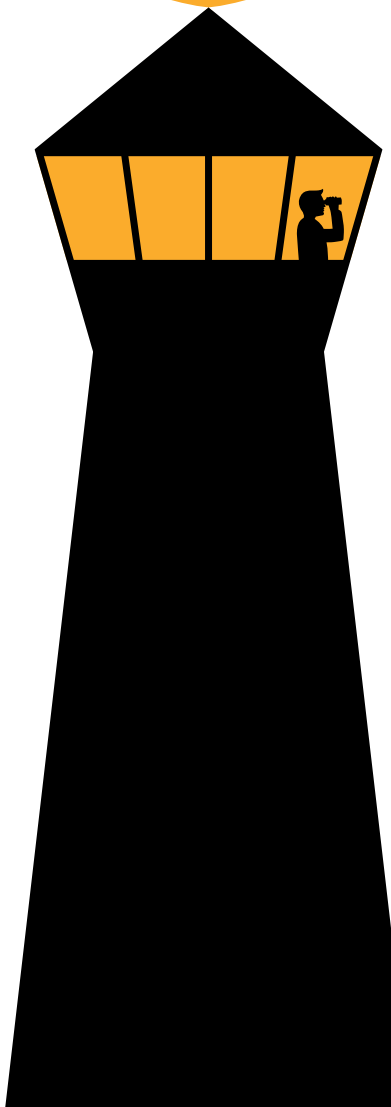
In December 2013, the Moroccan government announced the introduction of a new tax, to come into force on 1 April 2014, of MDH100 ($12) per passenger departing on economy flights and of MDH400 ($48) per passenger departing in premium class. The estimated $50 million annual revenues from this tax are allocated 50% to the Fund of Support for Social Cohesion and 50% to the Moroccan National Office of Tourism. IATA has determined that this tax is self-defeating, as it will not increase travel to the country but, instead, encourage passengers to turn to other destinations. Tunisia introduced a similar tax, although at a much lower rate, of TND2.50 ($1.60), at the beginning of 2014 that covers international departures.

### 5 GERMANY AND AUSTRIA

The German Air Transportation Tax (ATT) raises almost €1 billion per annum. The Austrian tax mirrors that of Germany and garners €75 million per year. These taxes damage their respective national economies, and the tax revenues are outweighed by the long-term economic harm. IATA continues to press the German and Austrian governments to abolish these taxes.

### 6 INDIA

In India, IATA continues to help airlines reduce their exposure to the service tax levied on tickets for air navigation service charges for international flights. Airlines are able to reclaim partial service tax credits, but there is inconsistency in the way different airlines are treated.



# Meeting needs, **the right way to build**

## Working with infrastructure operators on charges and investment plans

Air transport requires plentiful high-quality infrastructure at competitive cost if it is to fulfill present and future demand for air travel. Collaboration with infrastructure partners—especially with airports, air navigation service providers (ANSPs), and fuel suppliers—is crucial. Airlines and airports, for instance, can maximize customer service and boost connectivity by agreeing on fair and cost-efficient airport charges (see map for examples). It is also important that, as per ICAO guidelines, airports align their development plans and capital expenditure with the capacity requirements of airlines as airlines strive to meet their customers' demands for connectivity.

## Examining the importance of economic regulation

In the light of growing concerns within the industry over airport charges, and particularly issues with the application of the EU Airport Charges Directive, IATA published a report, *Airport Competition*, in November 2013. That report investigates the relationship between airport pricing, market power, and competition and concludes that the major changes that have taken place in the airline industry in recent decades, driven by a significant increase in competitive pressure, have yet to be mirrored in the airport sector.

There is evidence that consumers have a preference for using their local airports, conferring considerable local market power on airports regardless of their size, ownership structure, or business model. Robust government economic regulation is therefore required to protect passengers and shippers from unreasonably high airport charges and fees, to ensure service quality levels, and to drive improvements in cost efficiency. The report has provoked a useful debate with Airports Council International and the European Commission on the merits of a strengthened regulatory regime for airports.

## Delivering airport efficiency and quality

The efficiency and quality of operations at airports, in ground handling and overall operations management, are important factors for airlines. The cost of ground damage runs into the billions of dollars per year, and ineffective airport operations cause delays and raise costs and emissions. Because airlines increasingly rely on outsourced ground service providers (GSPs), IATA is working to improve operational practices and cost efficiencies in ground handling through the global standardization of procedures.

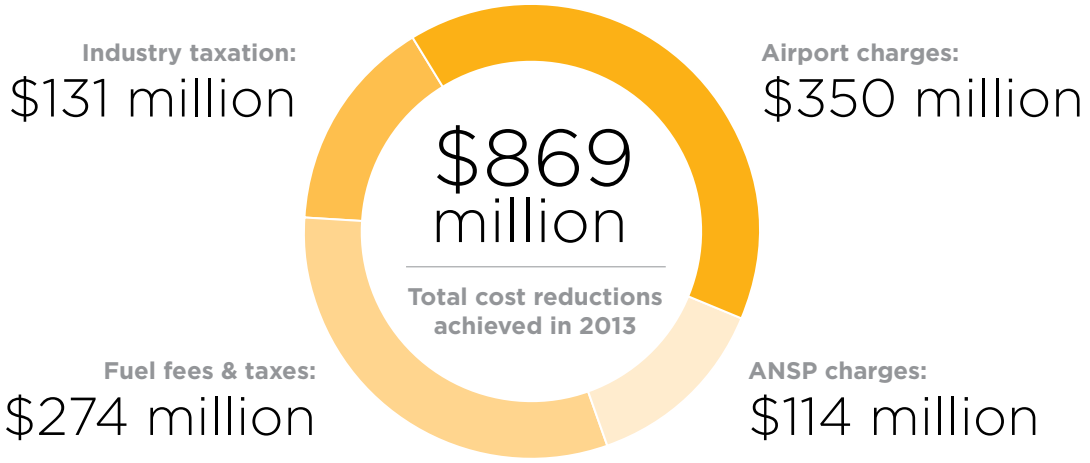
The *IATA Ground Operations Manual* (*IGOM*) consolidates international best practice on ground operations procedures. By promoting the adoption of *IGOM* by airlines and GSPs worldwide, IATA is aiming to harmonize standards. In 2013, the LATAM Airlines Group became the first airline to implement *IGOM* across its operations.

The IATA Safety Audit for Ground Operations (ISAGO) similarly provides a globally recognized set of audit procedures that can improve safety and reduce redundant audits. In 2013, the Greater Toronto Airports Authority mandated ISAGO audits for all of its GSPs as a tool to improve service levels. Work will continue to enlarge the ISAGO audit pool and to promote further *IGOM* adoption throughout 2014.

IATA works with airports to drive greater efficiency in airport operations management in operations, contingency planning, baggage handling, security, infrastructure renewal, asset utilization, and elsewhere. Two particular tools for enhancing this work are airport collaborative decision making and service-level agreements.

- **Airport collaborative decision making** ensures planning and developments enshrine the potential for collaboration between airlines, ANSPs, airport operators, and GSPs to optimize turnaround efficiency and reliability.
- **Service-level agreements** promote a balanced customer-supplier relationship. Service levels are benchmarked to ensure that comparisons can be made across operations.

## Total cost reductions achieved in 2013



## Examples of airport charges and development plans

**Airport development requirements should be agreed on by all parties based on a robust cost-benefit model that is in line with expected demand. Where airport privatization is being considered, early collaboration, including decisions on investment, cost allocation, and charge setting, is needed among all parties to avoid unfair concession agreements. The European Commission, meanwhile, needs to improve the EU Airport Charges Directive, especially with regard to the consistency with which it is transposed into national law.**

**IATA's advocacy work with airports to ensure that charges are justified and reflect a reasonable value for airlines and passengers resulted in some notable results over the past 12 months.**

### 1 USA

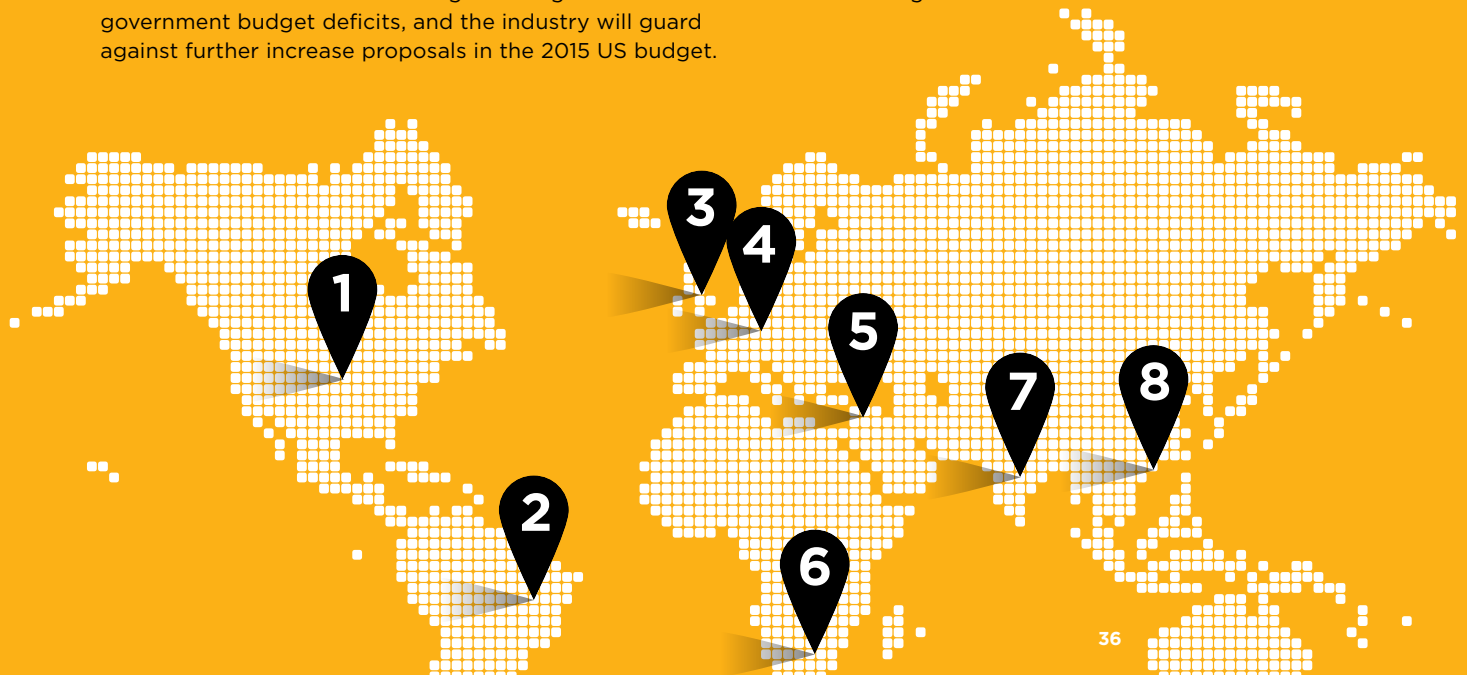
IATA supported a campaign by US airline association A4A to prevent increases in customs fees and the passenger facility charge (PFC) proposed in the 2014 US budget. Revenues from the increase in the security fee will be ring-fenced to fund aviation rather than used to reduce the federal government deficit. It is important that airlines are not used as revenue-generating machines for government budget deficits, and the industry will guard against further increase proposals in the 2015 US budget.

### 2 BRAZIL

Following concerns expressed over the operating concessions awarded at the three key Brazilian airports of Guarulhos, Viracopos, and Brasilia, much effort was spent working with the Brazilian government to ensure that the second tranche of concessions in 2013, to operate the Rio De Janeiro and Belo Horizonte International airports, included a robust regulatory framework. The terms of the new concession agreements include IATA's recommendations of a capped charging model, an annual review involving a productivity factor, and a service-level agreement—all elements that were missing from the first round of concessions.

### 3 LONDON HEATHROW

The UK Civil Aviation Authority (CAA) set a 2014–2019 charges cap at 1.5% below inflation. Although the airlines using Heathrow believe an even bigger cut in charges was possible, overall it was a good regulatory process from the CAA. It sought to protect passengers from airport market power, while encouraging the airport and airlines to agree on investment requirements and improvements to service levels. The overall regulatory process sets a good example for other large international hubs.




### 4 EUROPE

IATA has worked with industry partners on escalating the European Commission's attention to issues concerning concession or price-cap agreements at, for example, Budapest, Lisbon, Vienna, Athens, and Larnaca. The EC is expected to provide guidance on how the EU Airport Charges Directive applies to concession agreements. Engagement continues in countries, such as Greece, where privatization planning is at an early stage.

### 5 TURKEY

IATA is working with Turkish authorities to ensure that operations in that nation will support traffic growth prior to a transition to a new, third airport in 2019–2020. IATA is also assisting with the review of the master plan for the new airport.

### 6 SOUTH AFRICA

IATA and partner associations in South Africa have engaged in constructive dialogue and collaboration with Airports Company South Africa on capacity planning in consultations on the 2015 charges review. This will be an important process considering the previous review resulted in large increases in charges.

### 7 INDIA

The equalization of landing fees for domestic and international flights at Guwahati was a positive outcome for the industry. At Hyderabad, the airport is appealing the application of a single-till approach that, if implemented, will result in the removal of the user development fee and no increases in other airport charges. The industry is continuing with a legal challenge against the high tariff increases implemented at Delhi and Bombay.

### 8 HONG KONG

The Airports Authority of Hong Kong is engaging positively with the aviation community as planning for the third runway and the replacement of Terminal 2 at Hong Kong International continues. A public consultation process is under way. The overall management of the Pearl River Delta airspace is an important project component as well. Interconnectivity for passengers and baggage between existing and planned new facilities to maintain Hong Kong International's competitive minimum connection times is a particular focus of current discussions.

## Working for reliable fuel supplies

On average, fuel comprises 33% of airlines' operating costs. Securing a reliable supply of jet fuel is therefore a vital objective for airlines, and IATA works with jet fuel providers to ensure that the quality and consistency of supply are maintained. In addition, airlines seek from refineries, suppliers, and governments the introduction of internationally recognized benchmarks to set base fuel prices and to show the breakdown of costs that make up the final price.

It is, furthermore, a tenet of the Chicago Convention, of ICAO policies, and of bilateral air service agreements that jet fuel not be taxed. Where such taxes exist, IATA negotiates on behalf of its member airlines for the taxes to be withdrawn (see map for examples). The overall global pattern on the reliability and taxation of fuel is that there have been some improvements but that new issues continue to emerge. Fuel taxation is therefore an issue requiring constant vigilance by the industry.

## Increasing the efficiency of air traffic management

The global vision for air traffic management (ATM) is for a harmonized, cost-efficient, and interoperable ATM system. Airlines and ANSPs need to work together if this vision is to be achieved. A number of ambitious regional projects (see map for examples) are in place to address capacity restraints and the lack of efficiency, but political commitment to the success of these projects is essential. There also remain many examples where ANSP charges are too high.

### ATM efficiency issues

Globally, four issues are being tackled to deliver a more efficient, more cost-effective, and more harmonized ATM system than ever before:

- **Aviation system block upgrades (ASBU).** To ensure that improvements in ATM technology and techniques are being applied worldwide, ICAO has instigated the ASBU program to assist countries with the systematic upgrade of their ATM infrastructure at regional levels. It is essential that ASBU solutions be globally interoperable. Two of the most complex modules being implemented are the US NextGen and the Single European Sky ATM Research programs. Unfortunately, however, their fundamental principles and technical capabilities are not aligned.
- **Air traffic flow management.** As congestion in the air increases, innovative solutions for increasing the amount of airspace available are required. IATA is leading the development of collaborative decision-making training materials and with ICAO and other stakeholders is creating a prototype campaign on the flexible use of airspace.
- **ATM service priority.** IATA developed a position paper in partnership with industry stakeholders for the first meeting of the ICAO working group that is looking to integrate ATM service priority, formerly known as "most capable, best served," into the ASBU work. This is a high priority, as it will define operational and financial incentives for investment by airlines in ATM technology.
- **Approach with vertical guidance implementation.** Controlled flight into terrain (CFIT) is a rare cause of accidents, but those accidents can incur a major loss of life. CFIT risks can be mitigated through the use of vertical guidance procedures. IATA is launching an awareness campaign to accelerate and incentivize the implementation of such procedures.

# Examples of securing reliable jet fuel supply at transparent prices

**Airlines wish to see a globally harmonized, cost-effective, and interoperable ATM infrastructure. A number of initiatives are under way in regions of the world, but, particularly in the case of the US and European programs, these are not aligned. It is important that airlines and governments campaign to ensure the harmonization and interoperability of these technological solutions.**

## 1 VANCOUVER

The approval of a new pipeline to improve supply sustainability at Vancouver airport marked the successful conclusion of a long-term campaign by the airport, its fuel supplier, its user airlines, and IATA.

## 2 PANAMA AND MEXICO

Advocacy efforts dissuaded the governments of Panama and Mexico from imposing new taxes on jet fuel for international uplift. This avoided some $72 million in additional annual costs.

## 3 LONDON HEATHROW

IATA continues to be involved in a project to construct much-needed additional jet fuel storage at London Heathrow. As part of the UK CAA's decision on the 2014–2018 pricing period, $215 million has been earmarked for the fuel tank project.

## 4 EUROPEAN UNION

Following representation from IATA and airlines, the European Council agreed to remove the 4.7% duty on jet fuel imports from Gulf Cooperation Council countries for the next five years beginning 1 January 2013.

## 5 AFRICA

On average, fuel costs are around 21% higher in Africa than elsewhere in the world. IATA continues to work with a number of African countries on reducing costs and improving reliability. IATA is, for example, negotiating with Kenya, where a new rail levy tax applied on jet fuel for international flights adds an estimated $13 million to airlines' fuel bills every year.

## 6 LIBYA

Discussions with Afriqyah Airways and the Libyan government led to an adjustment in Libya's jet fuel price formula and to an estimated reduction of $31 million in 2013. IATA will continue to monitor developments to ensure that Libya's fuel price formula remains transparent.

## 7 SAUDI ARABIA

An agreement with the Saudi government and the Saudi fuel supplier, Aramco, will adjust Saudi Arabia's fuel pricing formula. This will reduce prices an estimated 6%.

## 8 MYANMAR

As a result of representations by IATA to Myanmar's minister of transport in November 2013 and in February and March 2014, the Myanmar authorities agreed to reduce the tax on fuel from 8% to 5% effective 1 April 2014. Myanmar advised that it will also look to align its taxation of fuel, aircraft, and spare parts with taxation by ASEAN states over the next 12 months.

# Reviewing ATM developments regionally

**Airlines wish to see a globally harmonized, cost-effective, and interoperable ATM infrastructure. A number of initiatives are under way in regions of the world, but, particularly in the case of the US and European programs, these are not aligned. It is important that airlines and governments campaign to ensure the harmonization and interoperability of these technological solutions.**

## 1 US: NEXTGEN

The Next Generation Air Traffic Control system in the United States (NextGen) is making steady progress despite the momentary loss of momentum in 2013 as a result of the US budget issues leading to the government shutdown and sequestration. Investment decisions on the next stages of ATM technology implementation will be made in 2014. This is a critical period for ensuring that the US and Europe make genuine efforts to harmonize their ATM modernization efforts, and IATA and its industry partners will be prioritizing this aim.

## 2 EUROPE: SINGLE EUROPEAN SKY

In Europe, the Single European Sky continues to progress only slowly. The development of the airline-supported SES II+ package by the European Commission will ensure stronger economic regulation and help enforce the commitments that European nations have made to deliver functional airspace blocks and other needed efficiencies. The SES II+ package, however, is being opposed by several key countries, including France and Germany. A priority for 2014 is to assist the EC in pushing the SES II+ package forward. SESAR, the technology component of SES, is making progress. But it is not aligned with its US counterpart, NextGen.

## 3 MIDDLE EAST: HARMONIZED SKIES

Political and economic challenges in some areas of the Middle East have prevented substantial improvements for airspace users. The political situations in Libya, Sudan, and South Sudan are improving, however, and dialogue with airlines is now open. The ICAO Middle East ATM Enhancement Program is promoting regionally coordinated and harmonized solutions based on user requirements. In addition, the Gulf Cooperation Council, comprising Saudi Arabia, Kuwait, Bahrain, Qatar, Oman, and the UAE, is discussing the creation of a virtual flight information region (FIR) to harmonize operations between the six nation's different FIRs. Much work remains to be done on this potentially significant project.

## 4 ASIA-PACIFIC: SEAMLESS ASIAN SKY

In Asia-Pacific—particularly in Southeast Asia—individual, country-by-country solutions to ATM challenges are no longer sufficient to meet forecasted demand. There needs, consequently, to be a multistate solution to managing air traffic in the region. This project is known as the Seamless Asian Sky. In 2013, the Asia Pacific Seamless Air Traffic Management Plan was accepted by the ICAO Regional Planning Group and affected countries. IATA was a strong supporter in the development of this plan and contributed an economic study to the plan's development. The plan is based on available technology and processes. IATA is working directly with the affected countries and such organizations as ASEAN and APEC to drive the plan's implementation.

# Environmental commitments, **a year of progress**

## Reducing carbon emissions

The aviation industry is united in its commitment to manage and reduce its environmental impact. For aviation, the two most significant and complex environmental issues are aircraft carbon ($CO_2$) emissions and noise. The industry, however, also addresses more general environmental issues, such as waste management.

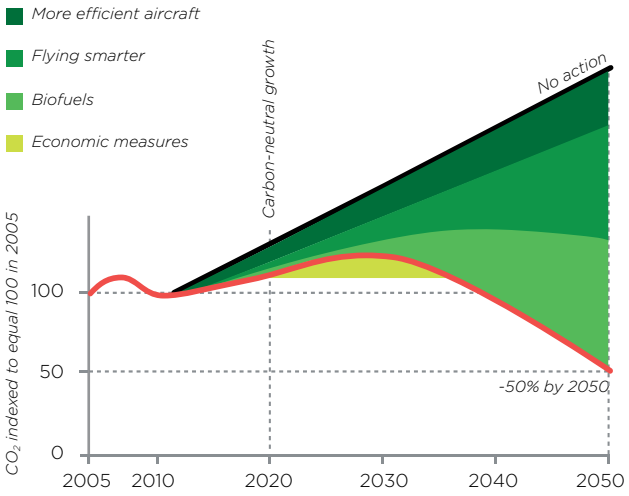
Air transport is responsible for 2% of man-made carbon emissions annually. But the industry recognizes that it must work ever harder on behalf of the environment to achieve long-term sustainability, which will give the industry a license to grow. In 2009, therefore, the industry—comprising airlines, business aviation, airports, airplane manufacturers, and air navigation service providers—committed to a united approach in reducing emissions that includes three carbon-emissions goals:

1. Improving fuel efficiency an average of 1.5% annually to 2020
2. Capping net emissions through carbon-neutral growth from 2020 (CNG2020)
3. Cutting net emissions in half by 2050, compared with 2005

No other industry has set such ambitious global goals. And through ICAO, governments worldwide are aligned with especially the industry's CNG2020 vision.

To achieve its three carbon-emissions goals, the industry has adopted a four-pillar strategy comprising technology, operations, infrastructure, and market-based economic measures. Through continued investment in new aircraft and innovative efficiency improvements, the industry is meeting its 1.5% fuel-efficiency goal. The challenges to achieve the second and third goals, however, are significant and cannot be overcome by the industry alone. The support of governments is required, particularly in the agreement on and deployment of a global market-based measure (MBM) for addressing carbon emissions.

### Emissions reduction roadmap




## Catalyzing ICAO negotiations on a global carbon emissions agreement

The year 2013 was crucial for global negotiations on aviation and climate change. Following many months of in-depth analysis, airlines came together at the 69th IATA AGM in June to adopt a landmark resolution supporting the implementation of CNG2020. The resolution explicitly called on governments to implement a global, mandatory MBM, based on the industry preference of a carbon-offset scheme.

The united position of the airlines generated impetus for a positive result at the 38th ICAO Assembly. Nations attending the assembly decided to develop the framework for a global MBM by the time of the 39th ICAO Assembly in 2016, for implementation in 2020.

The development of a global MBM is a huge task, politically and technically. Following the 38th Assembly, ICAO set up an Environment Advisory Group (EAG) to give guidance on policy issues and a Global MBM Task Force to address technical matters, such as monitoring and reporting protocols.

IATA is actively supporting the work that the nations involved in these bodies are doing and is advocating for a global MBM that is transparent, nondiscriminatory, and cost-effective. IATA is also ensuring close coordination among its Environment Committee (ENCOM), regional airline associations, and other industry stakeholders through the Air Transport Action Group.

The industry has expressed overwhelmingly its preference for a global mechanism in place of a patchwork of local and regional regulations. And the outcome of the most recent ICAO Assembly clearly shows that countries share the desire for a global solution. The strength of this view among nations revealed itself in the widespread opposition to the extension of the EU Emissions Trading Scheme (ETS) beyond EU airspace.

In March 2014, in a positive development, the EU voted to maintain the "stop-the-clock" rule, which prevents the EU ETS from being applied to all carriers flying to and from the EU, even in their own airspace. This decision, though, is contingent upon continued progress by ICAO toward a framework MBM agreement at the ICAO Assembly in 2016.

## Helping airlines deploy affordable and sustainable biofuels

Beyond the development of an MBM, the industry continues to work under the four-pillar strategy on technological, operational, and infrastructure solutions to reduce emissions. The use of sustainable biofuels is a particularly important part of the industry's approach. Biofuels emit $CO_2$, but over their life cycle they save up to 80% in carbon emissions. Aviation, meanwhile, enjoys a distribution system for aviation fuels with advantages compared with other transport sectors' fuel distribution methods. Using that system, potentially 80% of all flights would be covered if biofuels can be delivered to just 190 airports worldwide.

Since the first biojet fuel test flight in 2008, the industry has promoted and assisted biofuel initiatives in many parts of the world alongside national and regional stakeholder groups. Some 1,500 commercial biojet fuel flights by 19 airlines have taken place. In 2013, IATA partnered with new biojet fuel deployment projects in Canada, Germany, and the Nordic countries in addition to continuing to cooperate with multi-stakeholder aviation biofuel initiatives in the United States, South Africa, and Brazil.

The main obstacles to the widespread uptake of biofuels are not technical. They are economic and political. Economically, it is essential that biojet fuel is sufficiently produced and delivered. Increasing the volume and the availability invariably decreases price. Politically, a favorable fiscal and legislative framework is needed to encourage the deployment of aviation biofuel at levels comparable for automotive biofuel.

Especially important in this regard is implementing a means to reduce the risk of investing in biojet fuel production plants. Also crucial is establishing global mutual recognition of sustainability standards. Under US and Dutch regulations, biojet fuel is treated the same way as automotive biofuel in meeting renewable energy targets and in eligibility for incentives. This is a model that could be adopted by nations elsewhere to similar effect. IATA is working toward agreement on global mutual recognition of sustainability standards and on user-friendly methods for reporting biojet fuel use in anticipation that biojet fuels will be eligible for inclusion under a global MBM for aviation.

## Reporting on airline fuel

In December 2009, the IATA Board of Governors agreed that the reporting of $CO_2$ emissions to IATA by member airlines would be mandatory as part of a set of practical steps the industry needed to take to meet its $CO_2$ emissions goals. IATA's subsequent task was to develop and launch an online reporting tool for fuel-consumption data.

IATA launched its online Fuel Reporting and Emissions Database (FRED) in February 2013, and to date 89% of IATA member airlines are participating. FRED enables IATA to monitor and track progress against the annual 1.5% fuel-efficiency improvement target with reliable and consistent results. This accurate data will also be used to demonstrate the benefits of fuel efficiency and mitigation techniques, such as winglets or weight-saving measures. Such techniques often represent modest improvement individually but are enormously effective when applied collectively.

IATA has also developed a harmonized fuel measurement protocol and a common fuel measurement metric. In 2014, IATA will enhance FRED to include greater reporting capabilities and will seek the endorsement of a recommended practice on fuel measurement.

## Driving fuel efficiency with a $CO_2$ certification standard

In July 2012, the ICAO Committee for Aviation Environment Protection (CAEP) approved a metric for a $CO_2$ emissions standard for aircraft. The intent is for this standard to be used to help ensure that aircraft meet a minimum performance level for fuel efficiency and, by extension, emissions.

IATA is involved in discussions about whether the standard should be applied to in-production aircraft or to only new design variants. The priority is to ensure that if the standard is applied to in-production aircraft it will not be an undue burden on airlines. IATA and its members will respond to specific proposals as the development of the $CO_2$ standard continues, in anticipation of final approval of the standard in February 2016.

### Environmental measures for air cargo

Environmental sustainability is of increasing importance to airlines and shippers. IATA is promoting the uptake of new technology, such as lightweight unit load devices (ULDs). And in March 2014 the Cargo Services Conference adopted a recommended practice for a carbon calculation methodology for air freight. This is a shipment-level formula that is aligned with ICAO methodologies and addresses the operational mix between belly and freighter shipments.

## Addressing noise through the balanced approach

Concerns about the effects of aircraft noise are the main obstacle to expanding air links and frequencies at some airports. In addition, noise mitigation measures may adversely affect operators and passengers through reduced connectivity and increased congestion.

ICAO's balanced approach to noise is designed to ensure that the maximum technological and operational benefits are achieved before it is necessary to introduce restrictions or charges. Unfortunately, in many instances authorities fail to follow the balanced approach. What results is a proliferation of operating restrictions and charges, as is especially the case in Europe.

Restrictions often are put in place without an impact assessment and without evaluating alternatives for noise reduction. And the increasing tendency to resort to taxation or charges, for example in Italy and at London Heathrow, is unproven as to any environmental benefit.

Examples of actual and potential noise restrictions include the following:

- Despite submissions from IATA and its member airlines, the Civil Aviation Authority (CAA) in Israel decided to extend the night curfew at Tel Aviv's airport. A consequence will be a loss of connectivity for passengers traveling to and from Tel Aviv. The extension will force some airlines to postpone early-morning departures to European hubs, reducing the number of connecting flights for inbound passengers at Tel Aviv. For some airlines, the share of connecting passengers on early-morning flights from Tel Aviv exceeds 70%.
- The UK CAA is reviewing its night-flight regulations for London airports and began consultations on this issue in 2013. The concern is that the UK CAA will further limit night operations and worsen congestion. After the first stage of consultations, though, the UK CAA opted not to introduce changes. The outcome of a second consultation launched at the end of 2013 remains to be seen.
- The Italian IRESA is a regional tax on aircraft noise introduced in several regions of Italy in 2013. It is designed, however, simply to raise revenues for the treasuries of the regions in question and not to cover costs related to lowering noise. IATA, local stakeholders, and several regional associations collectively expressed strong opposition to the tax, fearing it will set a precedent for other regions in Italy and even for other countries. Fortunately, following robust industry reaction, several Italian regions withdrew the tax and the Italian government legislated a cap on the tax. The tax is nevertheless still in place in Lazio, the region that is home to Rome.

## Driving environmental improvements in the aviation industry

IATA has developed its Environmental Assessment (IEnvA) program to assist airlines with benchmarking and measuring their general environmental performance. Participating airlines are independently assessed for their performances against environmental standards and recommended practices at individual airports, in separate nations, and at international levels.

In 2013, six airlines completed IEnvA Stage 1 planning for compliance with environmental requirements. Two of those airlines are continuing to IEnvA Stage 2, which involves implementation and a review of recommendations. IATA intends to accelerate airline participation in IEnvA in 2014 and beyond.

## Addressing cabin waste

Intentions to recycle airline cabin waste further indicate the industry's environmental commitment and performance. Different countries' varying regulations on waste recycling and a lack of global guidance, however, discourage recycling and maximize waste volumes, adding to costs and confusing passengers and crews. So IATA established the IATA Cabin Waste Working Group to tackle this issue. In 2013, two cabin waste projects commenced: data collection and risk assessment. IATA will continue to liaise with international regulators in 2014 to work on harmonizing waste recycling regulations.

# Faster processes, **faster delivery**

## Addressing cargo challenges

Air cargo is a crucial enabler of the global economy. In 2013, airlines transported 49.8 million metric tons of goods valued at $6.4 trillion.

Despite these impressive numbers, the air cargo industry faces significant challenges. A modal shift from air to maritime and rail transport has been continuing for some years. In addition, the economic trend to onshore, or closer-to-home, manufacturing and markets is affecting air freight. And then there is the delay in shipping time or outright prohibition of transportation of certain goods by air because of the need for greater safety and security.

## Enhancing the competitiveness of air freight

To address the competitive pressures facing air cargo, the industry is challenging itself in 2014 to meet an important objective by 2020. The air cargo industry will seek to cut the average end-to-end shipping time by 48 hours, reducing the delivery schedule of a typical shipment to four or five days, from six or seven days. To meet this goal, the air cargo value chain has agreed to an agenda encompassing a number of interconnected work programs:

- Replace paper and analog processes with digital data transfer through the implementation of e-freight
- Ensure a secure supply chain to minimize security-related delays
- Measure the performance of the end-to-end air cargo chain through quality management and benchmarking
- Develop a global facilities matrix to benchmark air cargo infrastructure, particularly with reference to a cool chain
- Raise air cargo safety through the application of global standards
- Foster closer partnerships among the various players in the air cargo value chain

## Implementing e-freight

Each air cargo shipment travels with a physical pouch containing up to 30 different documents. At various stages of the cargo journey, regulations require that these documents be copied and processed manually, adding cost and reducing efficiency.

The e-freight program is designed to modernize the process, replacing paper with digitized standard documents adapted for electronic commerce. This will help to achieve the goal of cutting 48 hours from end-to-end shipment times. It also will promote efficiencies by eliminating the need for multiple data entry, which will reduce errors, and by enhancing security through enabling advance data transmission to the authorities.

One of the most important documents for air freight shipments is the transport document, the air waybill (AWB). Unlike other documents in the pouch, the AWB's use and formatting lies within airlines' control, and IATA and its members have focused on replacing the AWB with an electronic air waybill (e-AWB) as a first step toward digitizing the entire document pouch.

Significant progress was made in 2013 in implementing the e-AWB. Overall penetration increased from 6.8% to 12.3%. This was, though, significantly lower than the 2013 target of 20%.

Efforts to increase e-AWB penetration were given a significant boost with the advent of a multilateral e-AWB agreement. This was accompanied by the establishment of modern electronic communication standards (Cargo-XML) and the conclusion of successful e-AWB pilot projects in India and China that will enable the introduction of e-freight into these important and growing markets.

With these achievements in place, the industry is committed to advance the adoption of e-AWB rapidly. Milestones are for 22% penetration by the end of 2014, for 45% by the end of 2015, and for 80% by the end of 2016.

## Securing the supply chain

Since the Yemen printer cartridge plot in 2010, the security of the air cargo supply chain has been under scrutiny. Governments have increased their oversight and require enhanced information about or the 100% screening of shipments. The effect of increased regulation, if not managed by the industry, will slow down transit times, damaging the value proposition of air freight as a speedy way to transport goods.

The most onerous requirement facing carriers who transport goods into Europe is the European Union's ACC3 regulation. This regulation applies to air cargo from third countries that is inbound to the EU. It requires that carriers be independently validated for the effectiveness of the security arrangements at their stations by 1 July 2014.

Among the many challenges of meeting the ACC3 regulation was the lack of independent validators. So in 2012, IATA established a Center of Excellence for Independent Validators (CEIV) that to date has trained in excess of 96 candidates, 85 of whom gained EU accreditation as independent validators. IATA also has delivered information and readiness workshops aimed at ensuring 100% awareness among all IATA members of their obligations under ACC3 and at helping them prepare for independent validation.

The ACC3 regulation contains a provision for carriers to apply for a six-month extension to the 1 July 2014 deadline where, for reasons beyond their control, an independent validation has not been possible. IATA is working with airlines to identify such reasons and is urging the EU to look sympathetically on airlines' applications for extension.

In addition to assisting airlines with their compliance with ACC3, IATA is engaged in a number of other cargo security programs:

- **The Consignment Security Declaration (CSD)** is a document that aids the transparency of shipments by providing standard information to governments. To improve the tracking of secure cargo and to enable advance information to be transmitted, IATA led the development of a digital (electronic) version of the CSD. The e-CSD proof of concept was implemented in six countries over the past 12 months, and two further nations are expected to implement e-CSD by the end of 2014. In 2013, the e-CSD was adopted as a recommended practice by the IATA Cargo Services Conference, was endorsed by the Federation of International Freight Forwarders Associations (FIATA), and was published in the eighth edition of the *ICAO Aviation Security Manual*.
- **Secure Freight** is an air cargo security solution that aims to promote harmonized best practices associated with Annex 17 of ICAO's guidance material and standards for the global air cargo supply chain. Following the completion of two Secure Freight pilot projects in Malaysia and Kenya, seven further Secure Freight pilot projects have begun, in Mexico, Chile, Egypt, UAE, Jordan, Brazil, and Bahrain. Another five are expected to start in 2014.
- **Air Cargo Advance Screening (ACAS)** is a US government program to ensure the greater security of cargo entering the United States. In 2013, IATA encouraged the participation of 39 airlines in ACAS pilot projects. The experience will help the industry to shape the drafting of upcoming US legislation on ACAS.

## Applying quality management and benchmarking

Cargo 2000 (C2K) is a quality management system that was developed to assist airlines and forwarders monitor and benchmark delivery performance against their service promise, define common processes and procedures, and promote best practices. The C2K Master Operating Plan (MOP) is an open resource free for airlines to adopt.

C2K delivers value by covering airport-to-airport cargo processes. But work is under way to extend the C2K approach from the time a cargo consignment is accepted through its delivery. By introducing neutral quality standards to the end-to-end process, the industry will be able to track progress against the common goal of reducing shipping time by 48 hours.

## Developing a facilities matrix

The quality of cargo handling facilities at airports varies considerably globally. This is a concern to shippers and freight forwarders, particularly to those that rely on a 100% cool chain to maintain the freshness of their produce. To benchmark air cargo handling facilities around the world, IATA has begun developing an assessment process designed to record and measure facilities against industry standards and best practices.

The resulting matrix will raise quality by, for example, assuring freight forwarders that a package can be 100% temperature controlled throughout its journey; by simplifying the handling process; and by encouraging the adoption of new technology. The matrix is designed to work alongside existing facility audits and to support airline demands for solutions and investment that will be aligned with customer needs.

## Ensuring global standards for air cargo safety

The safety of passengers and air crew is the top priority for the industry, and extensive regulations exist to ensure that freight is carried in a safe and secure manner. *The Dangerous Goods Regulations* (*DGR*) manual governs the carriage of potentially hazardous items. IATA publishes the *DGR* and sits on the ICAO Dangerous Goods Panel, which continually monitors and updates the specifications and regulations. Of particular concern are the following:

- **Lithium batteries.** The safe carriage of lithium batteries remains of vital concern to the industry. Incident data indicates that there is still a lack of understanding of the regulations governing the transport of lithium batteries. Civil aviation authorities need to focus efforts on oversight of the shipper community, and where systemic noncompliance is identified the authorities must take appropriate enforcement action.
- **Unit Load Device Regulations.** ICAO is focused on updating its regulations for the safe carriage of heavy and out-of-gauge cargo in unit load devices (ULD) in the aftermath of such tragic incidents as the UPS cargo fire accident in 2010 and the National Airlines crash in 2013 that occurred when cargo broke its restraints in the hold. ICAO in particular has proposed recommendations on fire containment and restraining special cargo. Airlines are being encouraged to adopt the recommendations and to train staff accordingly. ULD assets represent over $1 billion in replacement value, so in addition to enhancing safety proper ULD handling will protect airline assets by preventing unnecessary damage not only to the ULD but also to aircraft.

## Emphasizing the value of partnership

The air cargo industry has many players, each with challenges and priorities. There is nonetheless mutual value in collective action to improve industry processes.

The Global Air Cargo Advisory Group (GACAG) was founded in 2011 to focus on industry-wide issues and to enhance cooperation among industry players. GACAG's principal focus is on e-commerce, trade facilitation, security, and sustainability. In 2013, GACAG focused on supply chain security, publishing policy papers on air cargo supply chain security regimes and on standards for cargo screening technology.

IATA, meanwhile, is engaging with the International Federation of Freight Forwarders Associations (FIATA) to strengthen formal arrangements among airlines and freight forwarders. IATA members recognize that the agency program that governs the relationship between airlines and freight forwarders is no longer suitable. Consequently, they support the Cargo Agency Modernization Process (CAMP) joint project between IATA and FIATA.

CAMP is intended to develop a model that recognizes that freight forwarders are no longer mere agents of airlines and that this changes the dynamics of how airlines must accredit and work with these partners. It is expected that the results of CAMP will be presented at the end of 2014.

# Tailor-made, the journey of the future

## Offering a vision of the passenger experience

A passenger's journey should be simple, smooth, and hassle free. A number of industry initiatives are transforming the passenger experience into just that by 2020. Those initiatives span planning and buying tickets to arriving at the final destination.

The New Distribution Capability (NDC) will address the travel industry's distribution limitations. Those limitations restrict the ability of airlines and other air travel related bodies to provide all the information and options available to enable travelers to make informed purchases.

## Bettering the airport environment

Understanding what travelers want is the key to meeting their expectations. IATA's 2013 Global Passenger Survey shows that two-thirds of travelers prefer to check in online or automatically with a text message or e-mail from the airline, while just 11% prefer to receive their boarding passes from an agent at an airport check-in counter.

Travelers also express a desire to control other airport processes. More than half (53%) want a permanent luggage tag that is unique to them and reusable every time they travel. And 80% of travelers express interest in tracking their luggage throughout their journeys in the same way that courier companies allow customers to track parcels.

IATA's Fast Travel responds to passenger demands for a seamless travel experience and for control over their journey through time-saving self-service options. The industry's vision is to by 2020 offer at least 80% of global passengers a suite of self-service options based on industry standards. That suite will cover self or automatic check-in, bag check, document check, flight rebooking, boarding, and bag recovery and lead to significant industry savings.

In 2013, 15.77% of travelers had access to at least three Fast Travel initiatives. This was behind the target of 20%. For year-end 2014, the target is Fast Travel access for 27% of passengers, which will require a significant acceleration in Fast Travel implementation from the current 16.5%.

Under the Fast Travel banner, the industry is also investigating the potential benefits of near field communication (NFC). IATA and the NFC Forum released the *NFC Reference Guide for Air Travel in 2013*.

## Simplifying the Business

Fast Travel is a part of the Simplifying the Business (StB) initiative launched in 2004. In a decade, such essential StB projects as e-tickets, kiosks, and bar-coded boarding passes have revolutionized air travel. Passengers value the simplicity and reliability of e-tickets and e-boarding passes, and airlines rely on the savings both offer in time and money.

StB's original goal of "improving the customer experience and reducing industry costs" is broadening to emphasize "making the industry easier to do business with for customers and partners." This will be achieved through a focus on four elements of air transport:

**1. E-services and airline products**

Shopping for air travel is changing. Airlines are offering more products and services than ever before, including access to airport lounges, priority boarding, and enlarged meal menus.

The New Distribution Capability is focused on upgrading the ability to display and sell air travel products and services through travel agents. But the IATA e-Services project is modernizing the back-office functions associated with airline offerings. This includes fulfillment, tracking, and accounting for participants in the travel value chain. IATA e-Services does this by replacing all paper miscellaneous documents and excess baggage tickets with the global IATA Electronic Miscellaneous Document (EMD) standard. An EMD is an electronic record of the sale and use of lounge access, preferred seat, excess baggage, or other such products or services.

The strategy to adopt EMDs is in full force. By the end of 2014, IATA's Billing and Settlements plan will only support EMDs. ▸

**2. Expedited passenger data**
Many governments require international air travelers to provide personal and travel plan information before entering their countries. Incorrect or incomplete information can result in air travelers facing delays and even being turned away by border controls. It can also lead to punitive fines for airlines.

The vision for 2020 is that international passengers will arrive at the airport knowing that they are ready to fly because governments will have confirmed this through direct electronic communication with travelers. At the airport, it will be necessary for passengers to confirm only their identity through a biometric match.

Efforts to date to align airlines and governments in achieving this vision have highlighted the complexity of the task and made clear that further work is needed. A subgroup of airlines, governments, and industry suppliers is developing a new approach toward passenger data and is identifying the benefits of that approach in terms of security, efficiency, and cost savings.

**3. Real-time interaction**
Travelers want, and should be able to, interact with their travel providers anytime and anywhere during their trips. This is essential for the industry to best serve customers, especially amid irregular operations.

This degree of interaction, however, is impossible as of yet because passenger contact information is not always accessible to service providers. The solution is to develop standards and recommended practices for proactively notifying passengers of cancellations, delays, and other operational information while engaging with industry partners to support this initiative. IATA made significant progress in this regard in 2013, and the target for 2014 is for global distribution systems to implement IATA's Customer Contact Information initiative.

The growing availability of airport Wi-Fi alongside the Customer Contact Information initiative will give passengers a number of valuable options. They will be able to receive real-time flight information, to rebook, to receive push notifications, and to access airline websites. In 2013, IATA handed over the Airport Wi-Fi project to increase the availability of Wi-Fi to Airports Council International.

**4. Hassle-free travel**
It is no secret that many passengers are unhappy with their airport security experience. Queuing times and removing shoes and belts were listed most frequently as the biggest irritants in the IATA Global Passenger Survey. Smart Security aims to offer a fast and hassle-free passenger screening experience at airports while strengthening security and improving operational efficiency with a risk-based system.

Another annoyance that passengers face is delayed baggage. Nearly one in three travelers have had baggage mishandled, according to the IATA Global Passenger Survey. InBag is the IATA program replacing IATA's Baggage Improvement Program. By 2020, InBag aims to reduce the percentage of mishandled bags worldwide from 1% to 0.5% and to elevate efficiency to 20% in five key baggage areas: check-in, security, manual handling, arrivals, transfers. InBag will also enable innovation in making such products as a baggage delivery service widespread and in introducing modern standards for communications and systems design. In 2013, IATA began implementing 13 InBag projects.

## Improving security access and egress

The IATA-ACI Security Access and Egress (SAE) project aims to improve passenger flow at security checkpoints with existing technology and infrastructure. The goal is to reduce queues and waiting times to facilitate a more efficient use of space and a possible deferment of infrastructure requirements and costs.

In 2013, 14 airports were visited to analyze the causes of bottlenecks and to recommend improvements in passenger flow. This brings to 20 the number of airports visited since the project was launched in 2012. Given the program's growing success, and the high number of airports requesting an SAE visit, IATA decided to accelerate its efforts and is targeting 250 airport visits by 2016.

**Automated border control**
The aim of automated border control (ABC) is to expedite the flow of low-risk passengers. ABC is meant to balance the integrity of borders with the identification of travelers as low risk to facilitate their movement amid anticipated growth in international aviation traffic. In 2013, 21 airports implemented ABC, exceeding the target of 15. The target for 2014 is 25 airports.

## Furthering the seamless journey

Ensuring a seamless passenger journey requires many systems to communicate information that are not always available. Some passengers, for example, experience occasions when their aircraft lands at an airport and stops upon leaving the runway rather than going directly to its gate. This occurs where air traffic and airline IT systems use different standards to share flight data, causing information gaps. When that happens, the arrival is managed manually, slowing down everything.

Information gaps can even occur among an airline's systems if those systems use different standards. If all in the industry used a common standard or at least mapped their respective definitions without gaps, problematic incidents could be avoided, passengers would have a smoother experience, and the industry would see lessened costs.

IATA's Industry Data Model will provide the technology to eliminate information gaps. The model will be an electronic repository of structure information, including industry-agreed vocabulary, data definitions and their relationships, business requirements, and the like, and will be viewable by industry people and usable by developers of airline communication systems. It offers the capability and methodology to move away from the manual XML schema development.

The standard expected from the Industry Data Model will be easy for IATA members to implement. And because the model will be available in its various individual "parts" as well as a whole, industry members can add the parts to their systems as required or desired. The model, moreover, can be thought of as a repository of standardized parts. From time to time, a custom part may be required, but in most cases the model facilitates the use of the parts that it has readily at hand.

- Target and achievements in 2013: Proof of concept was delivered, and requirements for data architecture approved
- Targets in 2014: All new projects in need of messaging standards are to use the Industry Data Model and its associated methodology by September 2014

A number of other projects were explored in 2013 and will be moved into development in 2014. They include the following:

- The order to cash project explored the need for industry standards to bring the airline industry's order to cash process to the level of that of best in class retailers.
- The universal customer data exchange project explored industry requirements for a transparent, industry-wide customer travel data exchange that benefits all stakeholders in the travel value chain. This will contribute to driving cross-industry capabilities in customer service.

## Instituting the NDC

**Transforming the air travel shopping experience**

IATA's New Distribution Capability (NDC) will transform the air travel shopping experience. Specifically, the NDC will address the travel industry's distribution limitations. Those limitations restrict the ability of airlines and others to provide all the information and options available to enable travelers to make informed purchase decisions.

The airline industry has entered an era of varied service options designed to let travelers choose how they want to fly. Airlines are able to offer their customers bundled and unbundled products and services on their websites and to recognize and reward brand loyalty. Most travel agents, however, generally have access only to limited and commoditized airline product and service information. The NDC grants travel agents access to the entirety of an airline's offerings.

The NDC is an IATA-initiated, industry-supported program for the development and market adoption of a new XML-based data transmission standard for electronic communications between airlines and travel agents. It was formally launched in October 2012, when the IATA Passenger Service Conference approved Resolution 787, the foundational document for the NDC.

With the valuable input of our partners in the travel value chain, the NDC standard will help to close the gap between the rich content that is available to travelers when they visit an airline website and the limited information available when they shop through a travel agent, either online or in a brick-and-mortar office. The NDC is a voluntary standard that is open and available for use by any third party, intermediary, IT provider, or non-IATA member.

Global Distribution Systems (GDS's), meanwhile, support the delivery of full, rich content to travel agents. But each GDS employs closed, proprietary standards, rather than the open and global standard of the NDC. Technical standards, however, assure interoperability between the NDC and the GDS's and enable competing producers of technology to find common ground. In the end, consumers reap the benefits of efficiencies, innovation, and lower product costs. ▸

**Moving from drawing board to pilot projects**
The year 2013 brought major progress for the NDC, including the following:

- As required under a US Department of Transportation (DOT) rule, IATA filed for DOT approval of Resolution 787, the foundational document of the NDC.
- A strong outreach to air travel value chain stakeholders was launched through participation in more than 60 industry events; the creation of the NDC Blog, NDC video, and NDC Demonstrator; and the launch of an advisory forum with representatives of travel management companies, online travel agencies, corporations, and GDS's.
- Five NDC pilot programs were launched.

The NDC left the drawing board with the launch of those five NDC pilot projects, which involved airlines and their travel partners in North America, Europe, China, and New Zealand. The projects tested airlines' abilities to construct product and service offers and to merchandize their baggage, seat map, and ancillary services with rich content in either an anonymous or a personalized manner using the NDC Shopping schema. The pilot projects involved the following:

- Endeavor by American Airlines, together with JR Technologies and a consolidator
- Skycouch by Air New Zealand, together with JR Technologies and a consolidator
- SkyDreamer by Hainan Airlines, together with TravelSky and the CTBA
- Sunshine by China Southern, together with TravelSky and Ctrip
- Alpine by Swiss International Airlines, together with HP, PROS, and Datalex

History was made on 29 November 2013 when the Chinese online travel agency CTBA issued the first e-ticket resulting from an NDC-based shopping transaction through the TravelSky system. The booking was a one-way trip between Beijing and Hainan Island on flight HU7782 on Hainan Airlines. It demonstrated the interoperability of the NDC Shopping schema with existing airline processes and that the NDC can support China's domestic air travel. In the next phase of Hainan Airlines' pilot project, the focus will be on the specific ancillary services of domestic and international travel.

Other pilot projects in 2014 will cover all of the critical aspects of the NDC. Feedback from these projects will be provided to the Distribution Data Exchange Working Group (DDXWG) to fine-tune all aspects of the NDC.

**Building partnerships**
Strong progress in developing the NDC standard has been accompanied by a growing outreach to our travel and technology partners to explain the benefits of the NDC standard and to boost buy-in to and participation in the development process. IATA has been engaged through the DDXWG, where the technical standards are being developed, and through the Airline Agents Forum and the Passenger Distribution Group Advisory Forum. Additionally, in 2014 we established the Airline Distribution Stakeholder Forum with the purpose of driving a common industry perspective on major topics through the inclusion of airlines, agents, and technology providers.

An important outcome of IATA's outreach to industry partners was the filing of a joint motion with Open Allies for Airfare Transparency (Open Allies) to the US Department of Transportation concerning Resolution 787. The motion offered conditions that IATA and Open Allies, which is a coalition of nearly 400 corporate travel departments, travel trade associations, consumer organizations, and independent distributors and sellers of air travel, recommended be included in DOT's approval of Resolution 787.

The conditions clarified our industry's commitment to the core principles of Resolution 787 regarding anonymous shopping, the compatibility of existing data standards with the NDC standard, and the voluntary nature of the standard. In return for DOT's acceptance of these conditions, Open Allies agreed to withdraw its opposition to Resolution 787.

NDC pilot projects and schema development will continue in 2014, paving the way for the adoption of the standard in 2015. Beyond that, the implementation of the NDC standard is slated to begin in 2016.

**Following the implementation of the NDC**
Airlines, regardless of business model, will be able to differentiate their products and services and to present them in an attractive manner using rich format. This includes photos and videos and the ability to offer value-added products and services in all sales channels.

Content aggregators and travel agents will gain access to an airline's entire portfolio of offerings, including ancillaries and promotional fares. They also will be able to provide personalized services based on customers' travel and preference history with airlines, if customers chose to be recognized.

Corporate buyers and travelers will enjoy a transparent shopping experience and the ability to compare the full value of airline offerings, not just the base fare, and to receive personalized offers. In the NDC environment, corporate buyers will have access to all airline product and service information, reducing the need for out-of-policy bookings.

# Settlement systems, **the backbone of the industry**

## Depending on settlement systems

Commercial aviation is a highly integrated, global network of thousands of companies and organizations. That network depends on reliable, efficient, and secure systems to report, collect, and remit funds between the different parts of the value chain.

IATA Settlement Systems (ISS) are the backbone of the global air transport system. The ISS enable the swift, reliable, and cost-efficient movement of funds among airlines and their travel supply partners. In 2013, the ISS settled $387.2 billion.

## Reducing unrecovered debt

The ISS seeks in 2014 to reduce its unrecovered debt to 0.025%, compared with 0.056% at the end of 2013. The reliability of the ISS, meanwhile, was strengthened in 2013 when all in-scope migrations were completed by year's end. ISS processes from 60 local offices representing 318 operations were migrated into five regional service centers, in Amman, Beijing, Madrid, Miami, and Singapore. The completion of those migrations represents an important milestone in a process that began several years ago.

Strengthening ISS is a program that seeks to improve ISS operations based on one organization, one process, and one set of tools. The aim, of course, is protecting IATA members' money and establishing a renewed field office role for the ISS as the eyes and ears of IATA in the marketplace.

In November 2013, the second release of the global banking tool for standardization—the IATA Remittance & Settlement Integrated System (IRIS)—was delivered. It covered 96.7% of net cash sales settlements migrated to it. In 2014, IRIS will cover the remaining percentage of net cash sales settlements and will implement direct debit for ISS operations.

### New Gen ISS

IATA's vision for the ISS hinges on the New Gen ISS. The New Gen ISS will grow and protect the relevance of the ISS and increase from 46.0% the share of airline funds settled through the BSP. As such, the New Gen ISS will ensure continued relevance for the BSP and CASS.

## IATA Settlement Systems

**$259.1 billion**

The Billing and Settlement Plan (BSP) facilitates and simplifies the selling, reporting, and remitting procedures of IATA-accredited passenger sales agents and improves financial control and cash flow for its roughly 400 participating airlines. At the close of 2013, there were 88 BSPs covering 179 countries and territories, with BSP Rwanda added during the year. The on-time settlement rate was 99.96%.

**$31.2 billion**

The Cargo Account Settlement System (CASS) is designed to simplify the billing and settling of accounts between airlines and freight forwarders. It operates through CASSlink, an advanced, global, web-enabled e-billing solution. At the end of 2013, CASS was processing 83 export operations, 11 import operations, and two domestic operations and serving over 500 airlines, general sales and service agents (GSSAs), and ground handling companies. CASS's on-time settlement rate was 99.98%

**$57.1 billion**

The IATA Clearing House (ICH) provides an efficient, on-time settling of interline accounts between the world's airlines, airline-associated companies, and airline travel partners. In 2013, the ICH achieved two records. It increased its throughput 10% versus the previous year, and it had a 100% on-time settlement rate. All ICH transactions flow through the Simplified Interline Settlement (SIS) electronic invoicing platform that has gathered some 500 participants, including 370 airlines and 130 suppliers. The target for 2014 is to attract 41 new members.

**$36.4 billion**

IATA Currency Clearance Services (ICCS) is the global cash management service that enables airline treasurers to centrally control and repatriate their worldwide sales funds. It is used by more than 290 airlines.

**$3.3 billion**

Enhancement & Financing (E&F) helps air navigation service providers (ANSPs) and airport authorities improve the efficiency and quality of their invoicing and collection processes.

# Supporting success, **solutions in all areas**

## Emphasizing business intelligence

Business intelligence is critical in a fiercely competitive market. Constant pressure to reduce costs while enhancing customer services necessitates ever-greater operational efficiency.

IATA products support the strategies of players across the aviation value chain and help them to improve their business. And the commercial returns on these products are reinvested to support industry-wide programs in such critical areas as safety, security, and the passenger experience.

Direct Data Solutions is an evolution of the tried-and-trusted PaxIS product. It delivers crucial market insight using ticketed passenger data. This helps airlines to understand customer needs and supports many critical decision-making processes, including network planning. Such knowledge leads to business decisions that ultimately focus on providing airline passengers with the destinations and flight frequencies they desire.

Direct Data Solutions covers 88% of worldwide agency sales and complements this with direct sales from 18 airlines. Only airlines that contribute to Direct Data Solutions are able to utilize its data. Direct Data Solutions is already the most comprehensive travel database in the world, and its continuous improvement through greater data inclusion will enable airlines to make the best-possible service decisions.

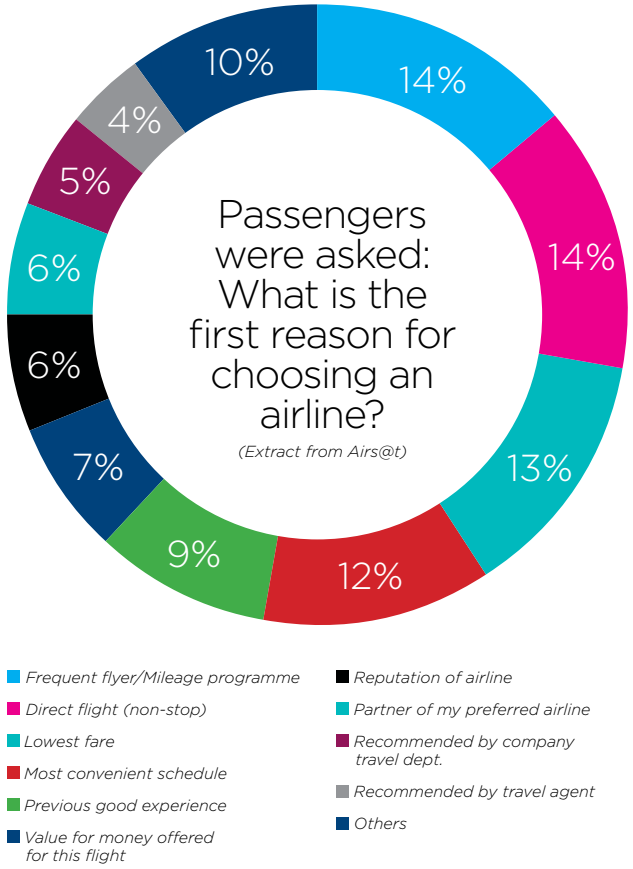
## Ensuring airport solutions

AirportIS provides airports and consulting firms with comprehensive traffic data in support of marketing and air service development. New clients continue to bolster this industry-leading offering.

The Airport and Civil Aviation Consulting group also had a positive year. It delivered some 30 projects on all continents, tackling topics such as airport capacity enhancement solutions, traffic forecasts, business planning, and safety oversight related initiatives.

## Underpinning passenger solutions

**Airs@t** covers another aspect of the passenger experience by surveying and scoring airlines across more than 70 customer touch points. Airs@t measures what customers most value during their travel. Cabin crew behavior, for example, is emphasized in the most recent survey results. A single unpleasant experience with cabin crew can lead to overall passenger dissatisfaction even if an airline provides excellent service at other customer touch points.




Every year, Airs@t speaks with more than 50,000 passengers traveling on the world's top airlines and routes. In 2013, the product was enhanced to include even more routes, including intra-Americas routes, and Airs@t will be further updated to reflect developments in distribution and communication channels.

The Frequent Flyer Program Benchmark Survey has been added to IATA's survey portfolio in 2014. This will allow airlines to compare the performance of their frequent flyer program with that of competitors' programs.

**Weblink**, meanwhile, continues to support agency sales through IATA's BSP. Weblink processed around $4 billion in 2013.

**Timatic** is IATA's offering of an industry standard for compliance with border regulations.

**Timatic Autocheck** automates the document verification process through its integration with booking and departure control systems. This helps to reduce immigration fines, increase passenger processing efficiencies, and improve the customer experience. Emirates, JetBlue, and Jetstar are among the airlines to have become Timatic Autocheck clients in the past 12 months. IATA continues to work with industry solution providers, such as Amadeus and Sabre, to offer Timatic Autocheck as a standard component of their systems.

IATA's Consulting group complements these products. The Consulting group provides ongoing assistance to airlines across all facets of the aviation business.

## Working for cargo solutions

The *Dangerous Goods Regulations* (*DGR*) manual is a key product given the high profile of dangerous goods and of lithium batteries in particular. The *DGR* is the industry standard reference manual for the carriage of dangerous goods and is vital to proper safety assessments.

CargoIS uses data from the Cargo Accounts Settlement System (CASS) to provide business intelligence on the cargo sector. A new IT platform implemented in 2013 has enhanced CargoIS's usability.

The Air Cargo Tariff (TACT) continues to remove paper from the air cargo chain.

TACT Online has been launched, and work is under way to distribute TACT rules in new and innovative ways. A new rates database, for example, will increase the efficiency of rates management and distribution, and new TACT data rates products will be rolled out throughout 2014.

## Highlighting the IATA Training and Development Institute

Equipping aviation professionals with the skills and knowledge to function at high levels in an ever-more sophisticated environment is vital. And the IATA Training and Development Institute (ITDI) meets the requirements of the dynamic air transport industry.

The ITDI, in fact, offers more than 300 courses in 140 countries in which nearly 100,000 students are enrolled every year. More than 40 courses lead to diplomas, most of which offer professional certification. Two courses can be applied toward an MBA in aviation management. All ITDI courses are internationally recognized and provide a clear path of advancement for the individuals who complete them.

IATA plays a leading role in setting aviation standards and processes, so it is uniquely positioned to offer insight and instruction in all aspects of aviation. But to extend its global educational outreach and to ensure all available expertise is utilized, IATA partners with more than 430 global organizations, including ICAO, established industry players, and leading educational establishments.

A partnership with language-learning expert Rosetta Stone, for example, provides online training in 23 languages. And in 2013, IATA's collaboration with Florida State on Quick Response Training delivered a very successful program. It was oversubscribed and resulted in an increase of nearly 36% in trainees' wages on average a year after trainees completed their training. More than 60 such partnerships were formed in 2013 alone.

Ensuring that people worldwide are able to benefit from IATA's and its partners' wide-ranging educational opportunities is the role of the International Airline Training Fund (IATF). This nonprofit foundation is funded by donations from IATA members and other organizations involved in the air transport industry and helps fund training where it is most needed.

The IATF offers educational opportunities in most areas of the airline business but gives priority to instruction in airline operational safety. In 2013, the IATF trained 2,728 people, and fully 74% trained in operational safety.

## Holding events

IATA's core conferences cover topics as diverse as law, cargo, ground handling, passenger travel, airport slots, and fuel. As such, IATA continues to respond to demand from the aviation supply chain to meet and discuss critical air transport issues.

In 2014, a major new event, the World Financial Symposium, will add to IATA's event offerings. The World Financial Symposium will help shape important policy decisions regarding the industry's finances and financial systems. Its ultimate aim, and the aim of all IATA events, is to continue creating value for the industry by bringing decision makers together to promote best practice.

- World Cargo Symposium
- Legal Symposium
- Aviation Fuel Forum
- World Passenger Symposium
- Ground Handling Conference
- Slot Conference
- World People Symposium

## ITDI statistics

**New programs in 2013:**
ITDI developed and delivered

44 new courses

13 new diplomas

**1st year anniversary on Facebook:**
ITDI has now reached

21,760 followers

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