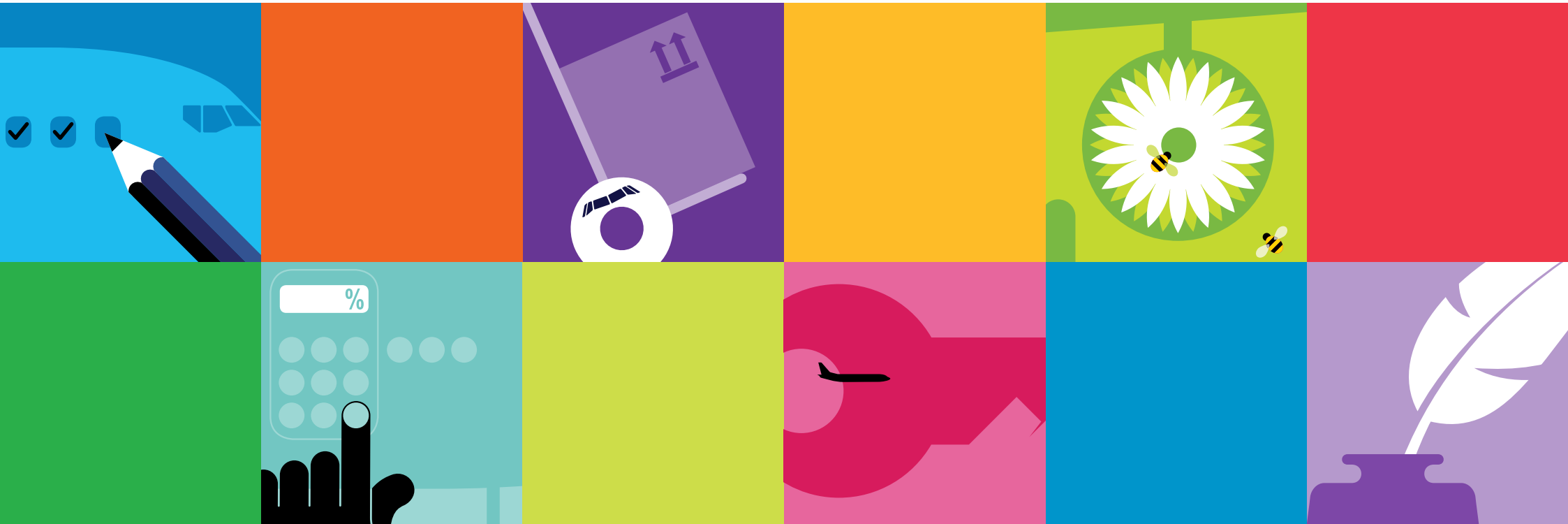
Annual Review 2015



Tony Tyler
Director General & CEO
International Air Transport Association
Annual Review 2015
71st Annual General Meeting
Miami, June 2015

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

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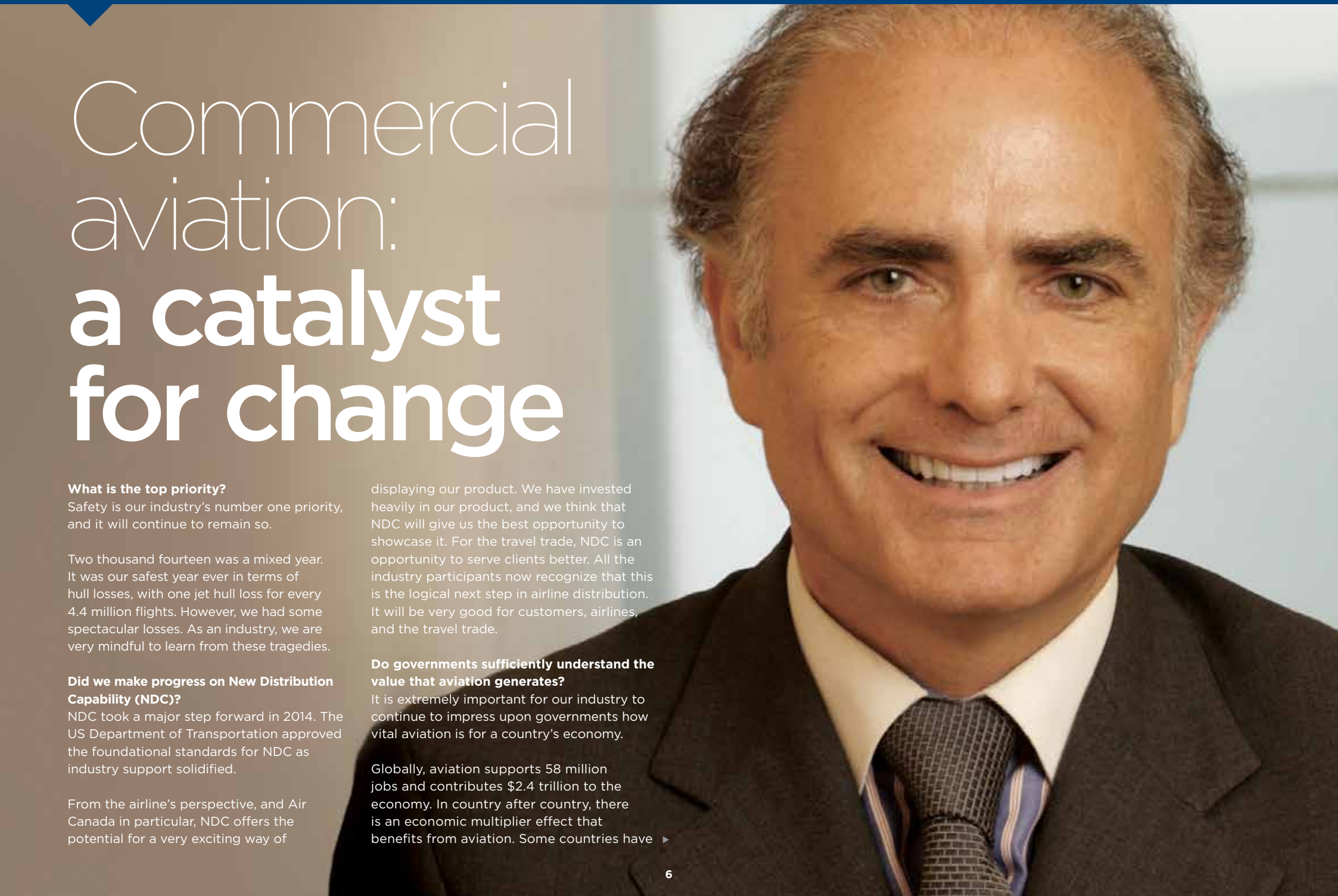
Commercial aviation: a catalyst for change



What is the top priority?
Safety is our industry's number one priority, and it will continue to remain so.

Two thousand fourteen was a mixed year. It was our safest year ever in terms of hull losses, with one jet hull loss for every 4.4 million flights. However, we had some spectacular losses. As an industry, we are very mindful to learn from these tragedies.

Did we make progress on New Distribution Capability (NDC)?
NDC took a major step forward in 2014. The US Department of Transportation approved the foundational standards for NDC as industry support solidified.

From the airline's perspective, and Air Canada in particular, NDC offers the potential for a very exciting way of displaying our product. We have invested heavily in our product, and we think that NDC will give us the best opportunity to showcase it. For the travel trade, NDC is an opportunity to serve clients better. All the industry participants now recognize that this is the logical next step in airline distribution. It will be very good for customers, airlines, and the travel trade.

Do governments sufficiently understand the value that aviation generates?
It is extremely important for our industry to continue to impress upon governments how vital aviation is for a country's economy.

Globally, aviation supports 58 million jobs and contributes $2.4 trillion to the economy. In country after country, there is an economic multiplier effect that benefits from aviation. Some countries have ▸

understood this better than others. Some have formed great partnerships with their aviation industries. Generally, when we look at industries that will stimulate economies, aviation needs to be seen by governments as a leader.

How do you see IATA's role in the industry?
IATA provides fundamental support and leadership for the industry. All of the airlines count on IATA to provide the foundational support for safety and security. IOSA and ISSA are great examples. Airlines count on IATA to provide that leadership. Likewise, the financial intermediation—through which IATA is basically providing the support of one of the largest banking institutions on the planet—is critical to the functioning of the airline sector.

Initiatives like Smart Security are drivers for where the future of aviation will go. And finally on the advocacy side airlines count on IATA not only to deal with macro issues, such as ensuring that governments understand the benefits of aviation, but also to deal with more timely issues like the Venezuelan crisis.

Can you describe your experience as Chairman of the IATA Board of Governors?
The last year has been an extremely interesting one. First of all, on the governance side we are an entity now that has a much more transparent and clear leadership—both in the boardroom and in management. We think that this will stand the organization well for many years to come.

Secondly, it has been very pleasing for me to see the diverse expressions around the Board of Governors' table on some of the difficult issues that we have had to face over the past year. We heard from all corners of the globe on what it is that we can do to make aviation safer, how it is that we can better communicate information that comes out of conflict zones, what issues are of relevance in terms of advocacy, how we can improve technology and distribution, and so on.

When I look at the progress that has been made, I am very pleased with the outcome despite the fact that, like in any good boardroom, there are some diverse opinions being expressed around the table.

What should IATA be aiming for in the future?
I would like to see IATA continue to develop a stronger advocacy presence. We can do a better job anticipating issues rather than responding to them. A good example is the work that IATA has done on climate change, where airlines knew through IATA that they were going to face significant challenges at the ICAO level. IATA put the industry's views forward, which was extremely beneficial. I would like to see a continuation of that kind of anticipatory advocacy.

Secondly, I would like to see an even broader membership in IATA. I think that we can encourage some of the new entrants—the so-called LCCs or lower-cost carriers—to join. They have a role to play as well. The industry has changed, and the IATA membership needs to recognize that.

IATA Board of Governors 2014–2015

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AIR CANADA

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QATAR AIRWAYS

Saleh N. Al Jasser
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Richard Anderson
Chief Executive Officer
DELTA AIR LINES

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FEDERAL EXPRESS

Yang Ho Cho
Chairman and Chief Executive Officer
KOREAN AIR

Chu Kwok Leung (Ivan)
Chief Executive
CATHAY PACIFIC

Andrés Conesa
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AEROMEXICO

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AIR FRANCE-KLM
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German Efromovich
President of the Board of Directors
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Sameh Ahmed Zaky El Hefny
Chairman and Chief Executive Officer
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Tewolde GebreMariam
Chief Executive Officer
ETHIOPIAN AIRLINES

Goh Choon Phong
Chief Executive Officer
SINGAPORE AIRLINES

Naresh Goyal
Chairman
JET AIRWAYS (INDIA) LTD

Rickard Gustafson
President and Chief Executive Officer
SAS

Peter Hartman
Vice Chairman of the Board
AIR FRANCE-KLM
(representing KLM)

James Hogan
President and Chief Executive Officer
ETIHAD AIRWAYS

Harry Hohmeister
Chief Executive Officer
SWISS

Alan Joyce
Chief Executive Officer
QANTAS

Temel Kotil
President and Chief Executive Officer
TURKISH AIRLINES

Liu Shaoyong
Chairman
CHINA EASTERN AIRLINES

Pham Ngoc Minh
President and Chief Executive Officer
VIETNAM AIRLINES

Mbuvi Ngunze
Group Managing Director and CEO
KENYA AIRWAYS

Masaru Onishi
Chairman
JAPAN AIRLINES

Douglas Parker
Chief Executive Officer
AMERICAN AIRLINES

Vitaly G. Saveliev
Chairman
AEROFLOT

Si Xian Min
President and Chairman
CHINA SOUTHERN AIRLINES

Jeffery Smisek
Chairman, President and CEO
UNITED AIRLINES

Carsten Spohr
Chairman and Chief Executive Officer
LUFTHANSA

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

ALSO SERVED
(TO FEBRUARY 2015)
David Barger
President and Chief Executive Officer
JETBLUE

(TO NOVEMBER 2014)
Titus Naikuni
Group Managing Director and CEO
KENYA AIRWAYS

2014: a year of contrasts **for the global air transport industry**

DIRECTOR GENERAL TONY TYLER

Safety
The year of contrasts was most clearly demonstrated in aviation's safety performance. Safety is the industry's top priority. By many measures, the numbers tell us that 2014 was the safest year ever. There was only one major jet accident for every 4.4 million flights. Over the course of the year, there were no jet hull losses in either Africa or North Asia.

Despite these good results, aviation safety was in the headlines throughout 2014 and into this year. The extraordinary circumstances in which MH 370, MH 17, and U4 9525 were lost have raised questions on aircraft tracking, overflight of conflict zones, and pilot psychological fitness. These are being progressively addressed. It also became clear that instant communication through social media has exposed our industry to a new level of scrutiny.

Looking to the future, the industry continues its efforts to improve safety. Some 400 airlines are now on the registry of the IATA Operational Safety Audit (IOSA). To bring global operational safety standards to carriers not eligible for IOSA, the IATA Standard Safety Audit (ISSA) was developed and launched. Alongside this, the Global Aviation Data Management initiative continues to gather momentum. Its objective is to guide future safety initiatives with cutting-edge analysis of the world's most comprehensive safety information collection.

Sustainability
As a business, the aviation industry's profitability is strengthening. Efficiency gains through process improvements, consolidation, and the careful balancing of capacity with demand are paying off for consumers and for the industry. A fall in the oil price during the latter part of 2014 and sustained into 2015 is also contributing to improved financial sustainability.

Travelers are benefiting from massive investments in new aircraft, network expansion, and product innovations. And the industry is moving closer than ever to earning its cost of capital and delivering competitive returns to its investors.

At the regional level, however, the industry's fortunes are anything but uniform. Over half the industry's profit is being generated by airlines in North America, which represent less than a third of global capacity. They retained over $14 per passenger as profit. That was more than double the industry average.

Working together
From safety to all the elements of sustainability, IATA is where the global airline industry unites to create value and drive innovation through global standards, programs, and best practices. A few examples from 2014 deserve special mention.

- Some $388.1 billion was settled through the IATA Settlement Systems (ISS). On-time settlement was 99.98% or better. The top performer was the IATA Clearing House, which settled a record $57.8 billion on time and in full—down to the last cent.
- Two pioneering airlines achieved Stage 2 of the IATA Environmental Assessment (IEnvA). This voluntary standard is a strong signal of the industry's leadership on environmental stewardship. In parallel, airlines remain united in looking to the 39th ICAO Assembly in 2016 and asking governments to agree on a framework for a global market-based mechanism to help manage the industry's emissions. A successful outcome is critical to aviation's carbon-neutral growth commitment from 2020.
- Airlines rallied around "smarter regulation" principles for transparent, consultative, objective-driven policy making. Governments are being asked to use these principles across all policy issues—from the challenges of unruly passengers and consumer rights to managing slots and regulating monopoly suppliers.
- A revolution in airline distribution took a major step forward. The foundational standard for New Distribution Capability (NDC) was approved by the United States Department of Transportation. And the major global distribution systems committed to support NDC customer requirements.

In this annual review, you will discover many more examples of the value that is created when airlines address common challenges through IATA. It's a tradition with seven decades of history.

On 19 April 1945, a group of 57 airlines met in Havana, Cuba, to create IATA. The goals of the Association were clear. IATA was to benefit the peoples of the world and foster commerce by promoting safe, efficient, and economical air transport. To this end, IATA would be a forum for collaboration and a vehicle for partnership.

Today's aviation industry is very different to what existed in 1945. Our membership is now nearly 260 airlines. And the scale of the industry has grown exponentially. In 2015, we expect that airlines will safely transport 3.5 billion passengers and some 50 million tonnes of cargo.

This Association has stood the test of time and continues to deliver value. That's a reason to celebrate—70 years of IATA airlines flying better, together.

Tony Tyler
Director General and CEO

Continuing recovery: **challenges remain**

Another strong year for aviation

The airline industry had another strong year in 2014, solidifying a positive trend in profitability after huge losses during the 2008—2009 global economic recession.

Net posttax profit for 2014 was $16.4 billion, a 2.2% margin on revenues. This was the fifth successive year of profitability, and it builds on the $10.6 billion profit and 1.5% profit margin in 2013.

The air transport industry's profitability in 2014 is owed primarily to improving global economic conditions, which underpinned robust growth in passenger and air cargo demand. Lower fuel costs also helped, but because of hedging some airlines have yet to experience the benefits of the decline in fuel prices.

Jet fuel averaged $116.6 a barrel in 2014, down 6% on the 2013 average price of $124.5 a barrel. And consumers benefited from cheaper travel, with the average return fare (before surcharges and tax) declining 3% in 2014 compared with 2013, after adjusting for inflation.

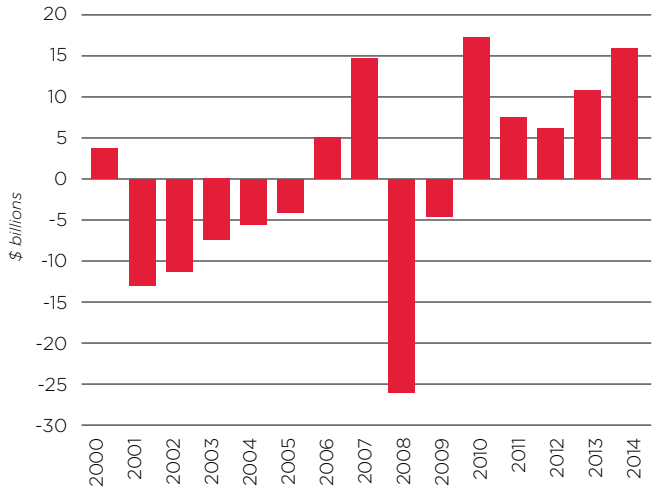
Looking ahead, the financial performance of non-US carriers could be hampered by the strong appreciation of the US dollar. A strengthened dollar can adversely affect costs denominated in US dollars.

Demand for cargo and passenger services, measured in freight tonne kilometers (FTKs) and in revenue passenger kilometers (RPKs), respectively, accelerated in 2014. This reflected an upturn in the global economy and an increase in world trade. Business confidence strengthened to its highest level since 2011.

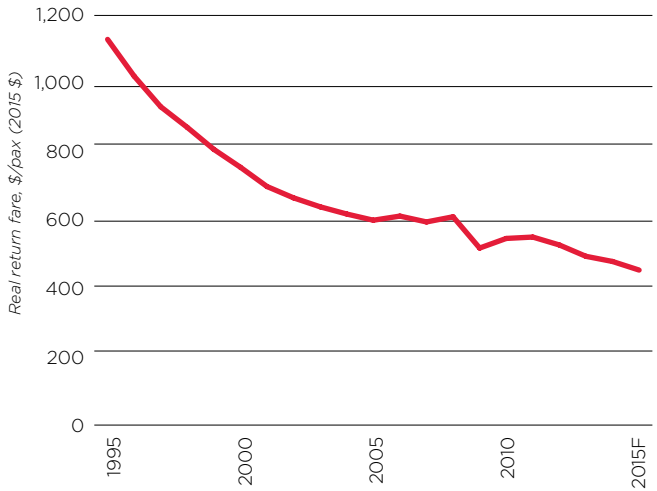
Aviation's economic performance showed notable variation among regions. It recorded the greatest improvement in mature economies, such as those of the United States and the United Kingdom. But it grew at a faster rate in some emerging countries, including China and India. In emerging economies, GDP growth has a bigger impact on air transport demand, as each unit of GDP generates more air travel in emerging economies than in mature markets. In 2014, this trend in demand was bolstered by significantly lower airline fares in markets outside the United States because of falling fuel prices.

There was also an increase in aircraft deliveries in 2014, to 1,627 new aircraft. The in-service fleet rose to 26,051 aircraft, from 25,187 in 2013. Replacements for older aircraft were generally larger in size than their predecessors, adding yet more seats to the global market. Overall, the number of seats available in the fleet rose to 3.5 million, adding 5% capacity to the market globally.

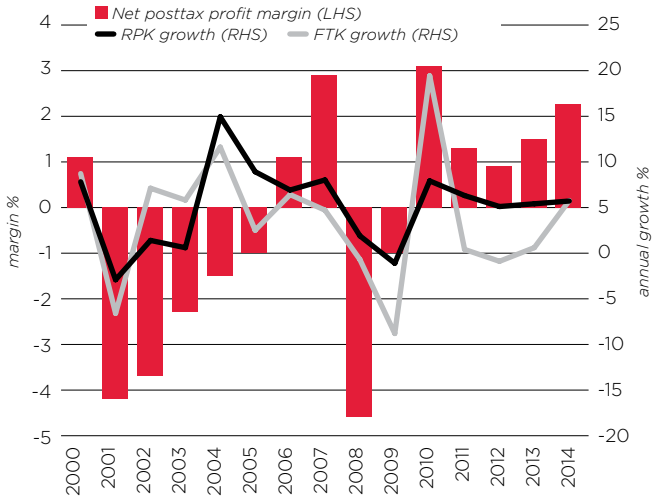
Industry net profits (*Sources:* IATA, ICAO)



Global average return fare (*Source:* IATA)



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



Traffic by route area

RPKs between regions of the world grew at an accelerated rate in 2014, expanding 6.1%, compared with 5.4% in 2013. This growth trend reflected the increase in demand that resulted from improvements in the global economy. Even so, airlines continued their disciplined capacity management, and growth in available seat kilometers (ASK), at 6.3% in 2014, was only slightly stronger than growth in RPKs.

There were several exceptions to the trend in RPK growth; notably, RPKs between Central and South America and within Asia. In South America, this was partly a result of regional carriers significantly reducing capacity to Venezuela because of the challenges in repatriating their funds held by that country's government.

The Asian market witnessed a slowdown primarily because of notable declines in international travel to Thailand and Malaysia. The Thai economy suffered a significant drop in tourism and exports following a military coup in that country. And Malaysia experienced a decline in tourism following the MH 370 and MH 17 tragedies.

By contrast, RPKs between the Middle East and North America accelerated strongly. This reflected improving economic conditions in the United States, including gains in employment and business confidence. More, it reflected expanded capacity by Middle Eastern carriers.

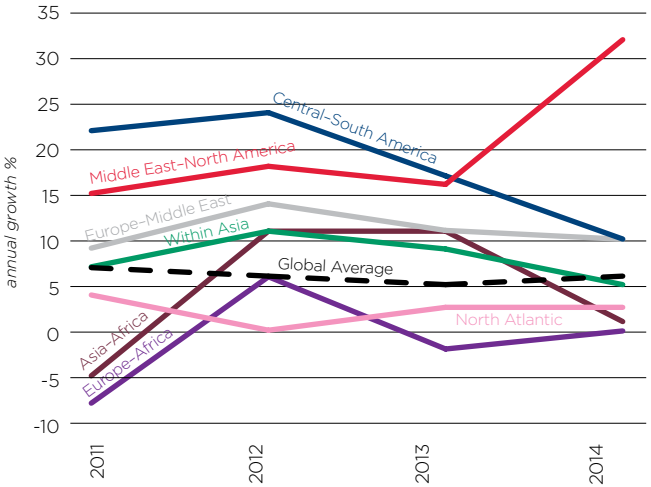
Fuel

Jet fuel prices fell substantially during 2014—starting the year at $130 per barrel and finishing it at $75 per barrel. The average for the year was $116.6 a barrel, and although this is still within the high range for the past three years it is some 6% lower than the previous year's average of $124.5 a barrel. For airlines, however, the benefit of falling fuel prices was partly offset by hedging practices and the appreciation of the US dollar.

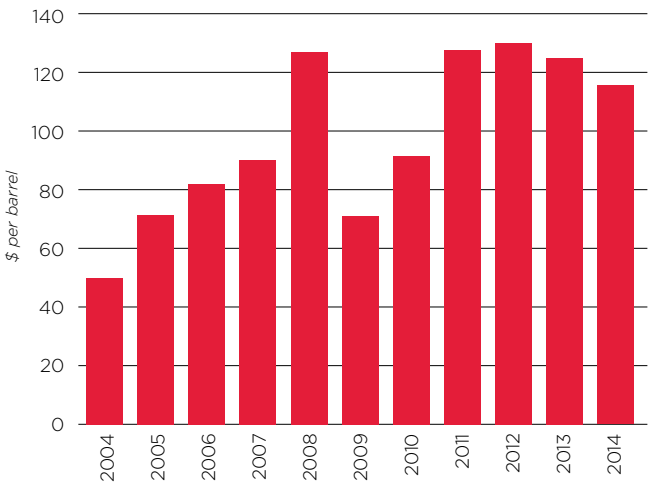
Growth in the US energy supply was one of the main reasons for the declines in crude oil and jet fuel prices in 2014. Energy supply from the US is expected to continue increasing in 2015. At the same time, demand for crude oil remains moderately weak, due mostly to economic sluggishness in the Eurozone and, to a lesser degree, in China. As a result, prices in the futures market for Brent crude oil are averaging around $65 a barrel for 2015.

Fuel continues to be the largest number in the airline debit column, accounting, on average, for 29% of an airline's costs in 2014. But this average annual share does not reflect the end-of-year fall in jet fuel prices.

RPK growth by route area (*Source:* IATA)



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



Yields and load factors

At 80%, the passenger load factor in 2014 stayed close to the record high levels of 2013. This was the result of increased passenger volumes and consolidation and disciplined capacity management, particularly in mature markets, such as the US and North Atlantic markets.

The cargo load factor, though, remained weak, at around 45%. An increasing number of passenger aircraft with bellyhold capacity is exacerbating a situation of capacity growing irrespective of demand.

The breakeven load factor came down even further in 2014 because of lower fuel prices and the positive affect of higher ancillary revenues on yields. The breakeven load factor dipped to 64.1% in 2014, from 64.5% the previous year.

The average passenger yield in 2014 slipped 4.2%, compared with the average passenger yield in 2013. Fierce competition provided downward pressure, as did the fall in fuel costs, but increased ancillary sales and a more robust industry structure helped prevent additional weakness. Fuel costs, however, are expected to fall further in 2015. An even lower passenger yield is predicted in the year ahead.

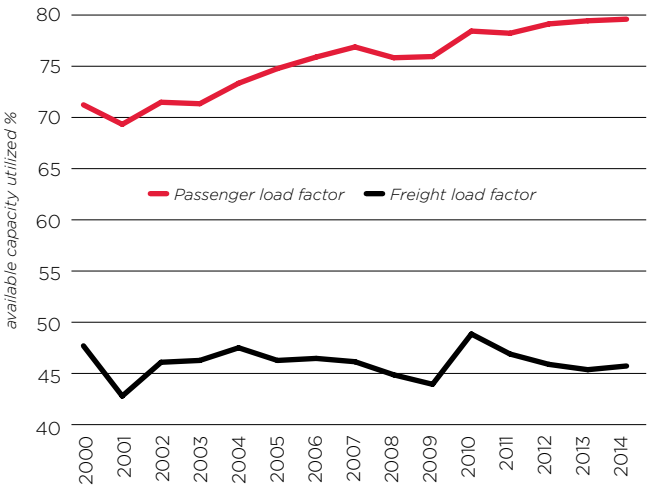
The cargo yield weakened further in 2014. Although the long-term trend of slow deterioration continued, the decline was gentler than in previous years. As with the passenger yield, a decrease in the cargo yield was notable in Asia-Pacific, where deliveries of new aircraft kept the cargo load factor from benefiting from improvements in demand.

Other challenges for cargo included excess capacity because of the increased number of passenger aircraft with bellyhold capacity. A growing tendency toward protectionist, nontariff measures as governments attempt to preserve jobs and domestic economic recoveries has also negatively affected cargo operations.

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

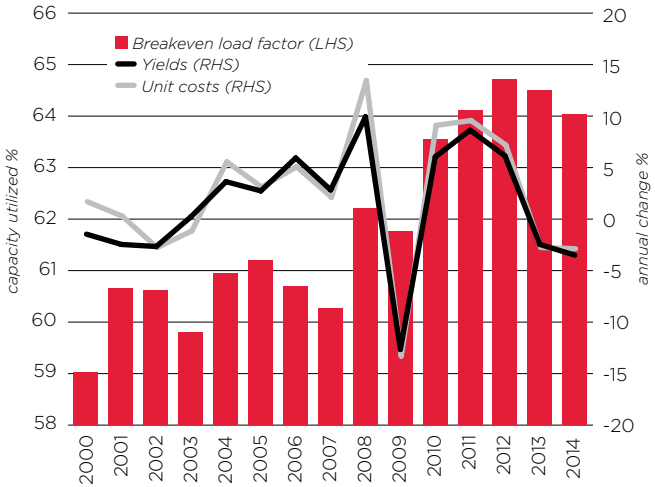
Passenger and freight load factors

(*Source:* IATA)



Unit costs, yields, and breakeven load factor

(*Sources:* IATA, ICAO)



Ancillary revenues and cost of capital

Passenger ancillary revenues are playing an increasing role in the industry. According to *The CarTrawler Yearbook of Ancillary Revenue*, revenues from added-value services improved from $42.6 billion in 2013 to $49.9 billion in 2014—or more than $15 a passenger—and form an increasing share of passenger yield. Airlines managed to keep as net profit an average of $6.02 from each passenger served, which is an improvement on the $3.39 average profit per passenger in 2013.

Overall, the return on invested capital in the industry rose from 4.9% in 2013 to 6.1% in 2014. This is still well short of the 7%–8% expected by investors based on returns from investments in other industry sectors. It is, nevertheless, a marked improvement on the previous year and the highest it has been since 2010.

Cargo

Cargo markets showed solid improvement in 2014. The upturn in the global economic cycle helped bolster confidence and international trade and therefore heightened demand for air freight. This led to a 5.8% expansion in FTKs in 2014, but the freight load factor remained low, at 45.7%. Capacity, meanwhile, increased 3.7% for the year, mostly among airlines in Asia-Pacific.

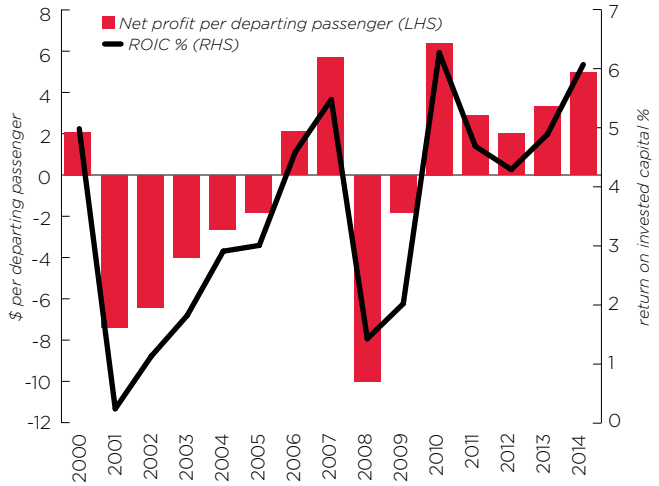
International trade is expected to continue growing at the same pace in 2015 as in 2014 on the back of a slightly healthier global economy. And that should support further expansion in FTKs.

The relationship between world trade and air cargo is looser than previously because of the loss of air cargo business to alternative transport modes and the move toward onshoring. At the top end of the air cargo market, integrators are taking an increasing share of the business. At the bottom end, there is a modal shift to less-expensive sea transport. There has also been overall weakness in world trade growth, with onshoring and increasingly protectionist measures putting a brake on cross-border economic activity.

That said, the upturn in the global economic cycle boosted trade 4% in 2014. That, in turn, resulted in positive growth in air cargo demand.

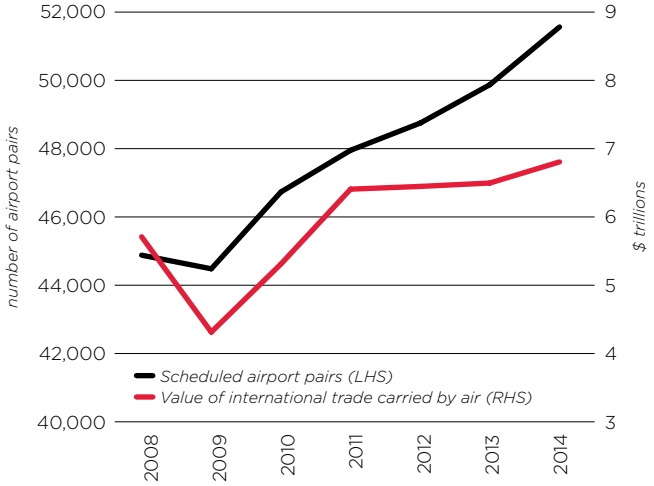
The value of connectivity is clear, and airport connections continue to rise. There are almost 52,000 scheduled airport pairs, and that connectivity resulted in goods worth $6.8 trillion being carried by air in 2014. Total air freight tonnage for the year exceeded 51 million metric tons.

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



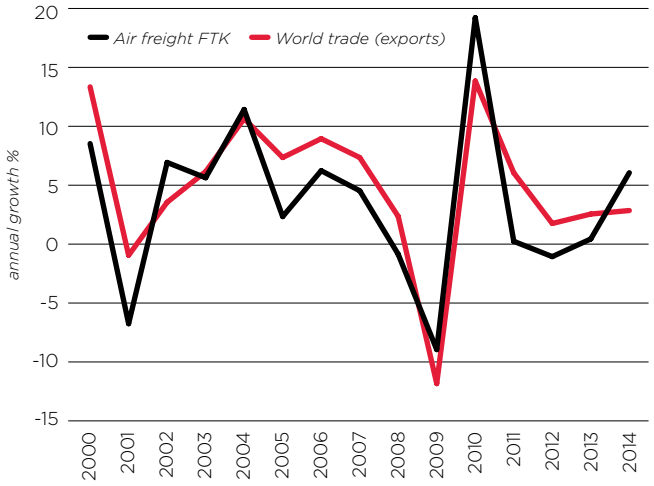
Airport connections and value of international air freight

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



Air freight and world trade growth

(*Sources:* IATA, WTO)



Flying safely: **the number one priority**

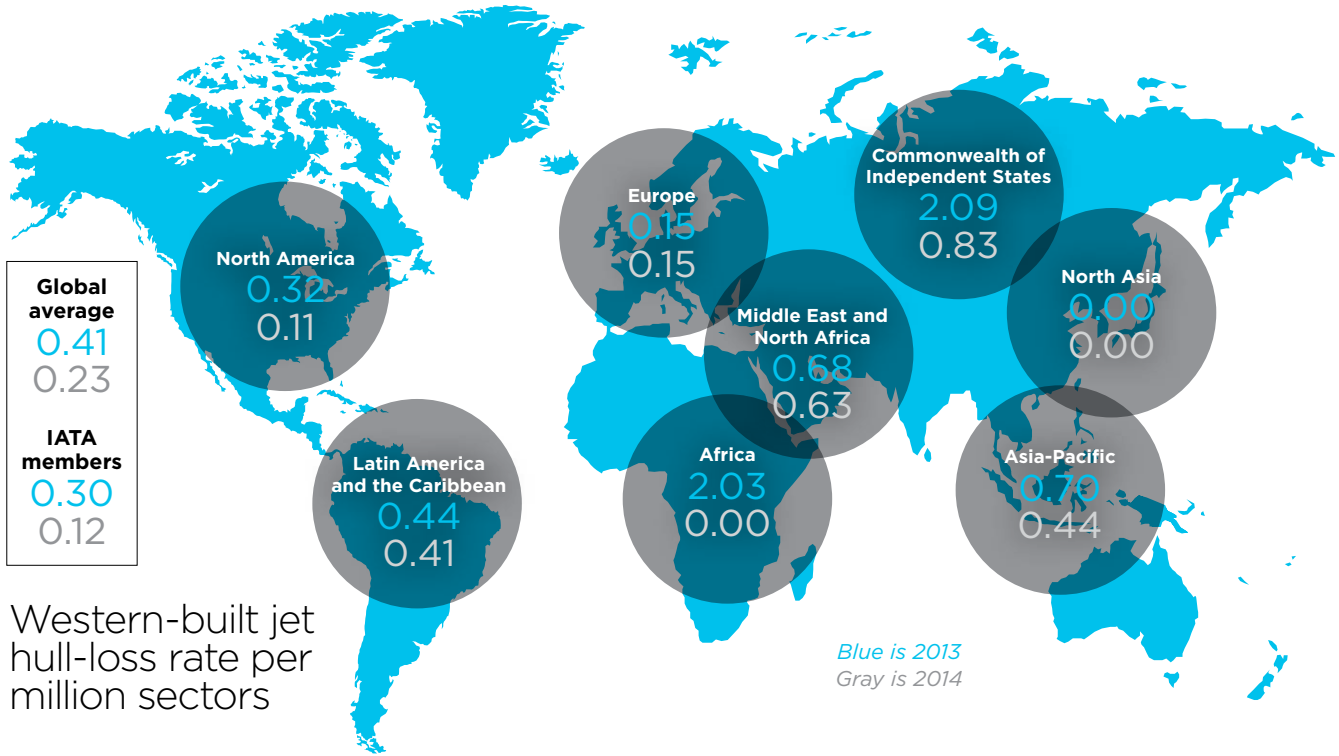
Aviation's number one priority

It was a year of contrasts for aviation safety in 2014. The global jet accident rate, measured in hull losses per 1 million flights, was 0.23—the equivalent of one major accident for every 4.4 million flights. That is the lowest rate in the history of aviation. Of 38 million flights, 12 resulted in fatal accidents, only 3 of which involved jet aircraft.

But 2014 will be remembered for the high number of passenger fatalities—641 versus a five-year average of 571—and for two extraordinary and tragic events involving MH 370 and MH 17. Although the reasons for the disappearance of MH 370 are unknown, it is classified as a fatal accident. Globally recognized criteria, however, do not classify the shooting down of MH 17, with the loss of 298 lives, as an accident. The four aircraft involved in the events of 9-11 were treated in the same way.

In early 2015, another high-profile tragedy occurred when Germanwings 9525 crashed in the French Alps with 150 lives lost. The early conclusion of a French criminal investigation is that it was the willful act of the copilot. The Germanwings tragedy, however, is an extraordinary situation that should not become a precedent for how investigations are to be conducted. The prosecutor has made some preliminary decisions on criminal actions, but there still may be many things to learn from this tragedy that could have long-term implications.

Some safety regulators, for example, have implemented rules requiring two people to be in the cockpit at all times. These rules are well intentioned; however, there has been too little time for analysis of how such rules might affect safety procedures.



Western-built jet hull-loss rate per million sectors

The safety record achieved by aviation in 2014 is the result of decades of painstakingly thorough accident and incident investigation and analysis, and it is vital that this approach and process be maintained.

MH 370

The industry focus on aircraft tracking in 2014 following the disappearance of MH 370 resulted in a report and recommendations that include performance criteria for tracking aircraft. This information was incorporated by ICAO in its Global Aeronautical Distress Safety System (GADSS) document and endorsed at ICAO's Second High-Level Safety Conference (HLSC 2) in February 2015.

Many airlines already track their aircraft. But IATA welcomes the recommendation of the HLSC to adopt a performance-based global standard for tracking commercial aircraft that draws on industry expertise and is underpinned by multinational implementation. Established technologies, services, and procedures can enhance aircraft tracking in the near term. Longer term, space-based ADS-B offers the potential to track aircraft globally beginning, estimates suggest, in 2018. Industry stakeholders look forward to working with ICAO in pursuing effective and sustainable tracking solutions that cause neither redundancy nor unintended consequences for safety.

MH 17

The shooting down of MH 17 was an act of aggression that is by any measure unacceptable. Governments and industry have partnered to find ways to reduce the risk of overflying conflict zones. This includes better sharing by countries of critical information about security risks to civil aviation, and ICAO is establishing an information portal to facilitate the sharing of such risk information. IATA, in turn, is calling on governments to find an international mechanism to regulate the design, manufacture, and deployment of weapons with antiaircraft capabilities.

The big picture

The tragedies in 2014 of MH 370 and MH 17 and in 2015 of Germanwings 9525 are anomalies. Stakeholders are correct in working to prevent similar events. But it is important to identify and implement strategies that offer the most opportunity to improve safety globally.

In 2014, safety efforts to reduce operational risks focused on runway excursion and loss of control in-flight (LOC-I) accidents. Runway excursions, where an aircraft departs a runway during landing or takeoff, are the most common aviation accident, accounting for 22% of accidents over the five years from 2010 to 2014. The survivability of such accidents, though, is high. Runway excursions represent less than 7% of fatalities in that same five-year span.

LOC-I accidents are rare but almost always catastrophic. Fully 97% of LOC-I in the past five years involved fatalities to passengers and crew. All six LOC-I in 2014 involved fatalities, and from 2010 to 2014 LOC-I accounted for just 9% of all accidents yet resulted in 1,242 of the period's 2,541 fatalities.

In 2014, IATA developed and enhanced its training materials guarding against LOC-I and runway excursion accidents. It also worked with ICAO to heighten the awareness of these risks.

IATA also continued its efforts to reduce controlled flight into terrain (CFIT) accidents, of which five occurred in 2014. Most CFIT accidents happen in the approach and landing phase and are associated with imprecise approaches.

In the past five years, 48% of CFIT accidents involved faulty approaches. There is a strong correlation between CFIT accidents and the lack of instrument landing systems or other state-of-the-art approach procedures, such as performance-based navigation (PBN).

IATA's efforts to reduce CFIT include developing a comprehensive strategy in 2015 in coordination with airlines, regulators, manufacturers, and training centers.

New safety threats

Emerging safety issues, such as the carriage of lithium batteries, are a continuing focus at IATA. So much so that IATA published *Lithium Batteries Risk Mitigation Guidance for Operators*, which can be downloaded and distributed freely without fear of copyright infringement. Another area of emphasis at IATA is cabin safety. And in May 2015, IATA held its second Cabin Operations Safety Conference. IATA has also published its *Cabin Operations Safety Best Practices Guide*.

Safety audits

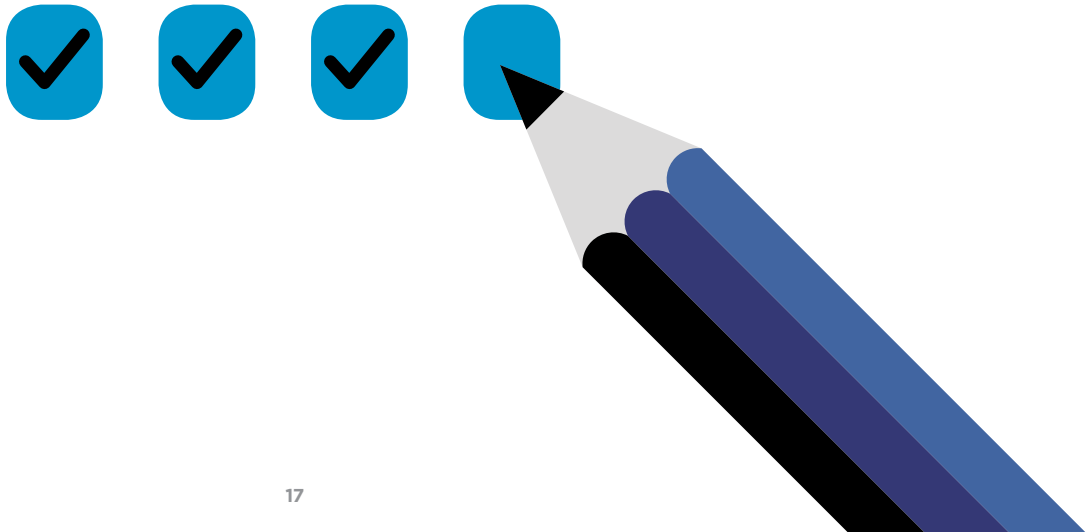
In 2014, the total accident rate for all aircraft types among carriers on the IATA Operational Safety Audit (IOSA) registry was more than three times better than the rate for non-IOSA carriers, at 1.09 versus 3.32. As of 13 April 2015, 392 airlines were on the IOSA registry. That includes all 255 IATA member airlines, for whom IOSA certification is a membership requirement. That some 137 nonmember airlines are also on the registry is further evidence that IOSA is the global standard for airline operational safety management.

Beginning in September 2015, IOSA will transition to Enhanced IOSA. Enhanced IOSA facilitates compliance monitoring throughout the two-year audit cycle and moves IOSA from a once-every-two-year snapshot to continuous management.

Some operators, of course, remain ineligible for IOSA, either because they operate aircraft below 5,700 kg (12,566 lbs) maximum takeoff weight (MTOW) or because their business models do not conform with other IOSA requirements.

To address this segment of the industry, IATA has developed the IATA Standard Safety Assessment (ISSA), which is not linked to IATA membership. Operators with aircraft above 5,700 kg MTOW are eligible for an initial ISSA and then must pursue IOSA registration to stay on an IATA audit registry.

The IATA Safety Audit for Ground Operations (ISAGO) helps improve safety and reduce costs related to ground damage. As of 13 April 2015, over 1,006 ISAGO audits had been performed worldwide since 2008, and the ISAGO registry had 175 registered providers with 322 registered stations at 206 airports. The ISAGO audit pool includes 44 member airlines with 172 ISAGO-qualified auditors. Globally, 28 regulatory authorities and 37 airports support ISAGO.



Safety management system

A safety management system (SMS) includes organizational structures, accountabilities, and procedures. And ICAO mandates that each airline and other service provider is responsible for establishing an SMS. During 2014, IATA continued to focus on SMS consistency globally. In particular, IATA worked with its member airlines and stakeholders to bring SMS implementation into line with IOSA findings into the need for elevated SMS standards and recommended practices (SARPS).

Data analysis to drive improvements

As aviation becomes ever safer, the few accidents that do occur cannot yield the trend data so necessary for a systemic, risk-based approach to improving safety. There were just 73 accidents in 38 million flights in 2014. Future safety gains, therefore, must come increasingly from analyzing data from all flights, not just the 0.0002% of flights where something goes wrong.

IATA has established the Global Aviation Data Management (GADM) program as a comprehensive safety data warehouse. The GADM includes analysis reports covering accidents, incidents, ground damage, maintenance and audits, and data from nearly 2 million flights and over a million air safety reports. More than 470 organizations, including more than 90% of IATA member airlines, are participating in at least one GADM database.

Six-point strategy

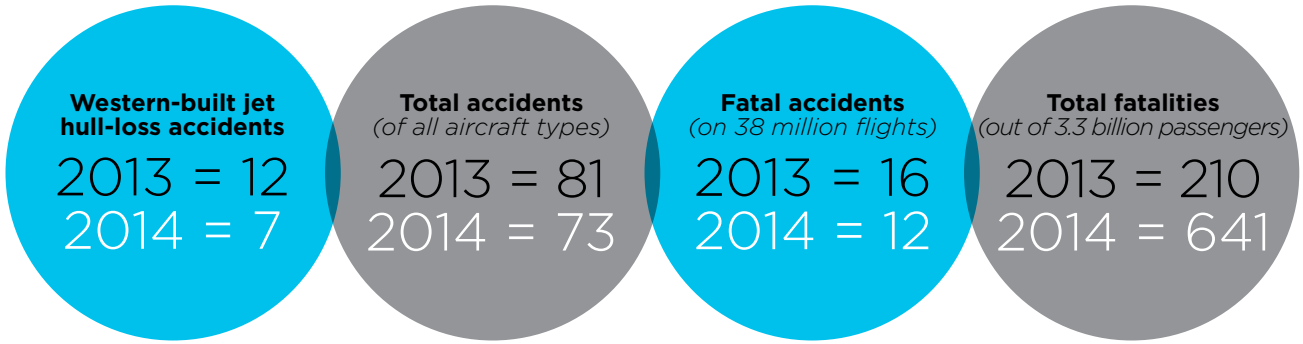
IATA will continue to promote global safety initiatives during 2015 through its Six-Point Safety Strategy and by upgrading its GADM platform to better assist airlines to manage risks. IATA's operational emphasis will again be on measures to improve safety and efficiency. Operational audit initiatives will strive to enhance safety for airlines and ground operations, and infrastructure initiatives will target further enhancements to global air traffic management.

IATA's commitment to quality extends to promoting compliance with standards and to developing tools to manage and monitor quality improvements. Global aviation issues, such as tracking aircraft and managing risk to commercial aviation in and near conflict zones, drive other IATA emphases.

IATA regularly monitors and revises its Six-Point Safety Strategy to ensure that it is relevant and comprehensive in its 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 PBN approaches;
- supporting the consistent implementation of safety management systems;
- encouraging recruitment and training to enhance quality and compliance through such programs 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.

Key safety figures at a glance



Examples of regional aviation safety developments in 2014

1 LATIN AMERICA AND CARIBBEAN

The Latin American and Caribbean region is on track to meet its 2020 goal of reducing aviation fatalities 50% compared with 2010. All Pan-American countries signed the Port-of-Spain Declaration in 2014, which addresses the runway excursion, LOC-I, CFIT, and traffic collision avoidance system events that are the main contributors to fatalities in the region.

The Regional Aviation Safety Group—Pan American (RASG-PA) is spearheading a partnership of industry and government stakeholders whose work encompasses data-sharing memorandums of understanding (MOUs) signed by IATA and the US Federal Aviation Administration (FAA) Commercial Aviation Safety Team. These MOUs provide the RASG-PA with industry-leading access to flight data from IATA's Flight Data eXchange (FDX) and from the FAA's Aviation Safety Information Analysis and Sharing System.

Information from IATA's FDX is also being used within the region to improve operating efficiency. Airspace redesigns carried out in preparation for the 2014 World Cup in Brazil are an example.

2 SUB-SAHARAN AFRICA

Sub-Saharan airlines had zero jet hull loss accidents in 2014, indicating real progress in line with the objectives of the Abuja Declaration. The region, however, experienced a significant increase in turboprop accidents, at 14.13 hull losses per million flights in 2014, versus the five-year rate of 9.62. This demonstrates that significant challenges remain.

Governments in the region need to accelerate their implementation of those ICAO Standards and Recommended Practices (SARPs) that accord with the Universal Safety Oversight Audit Program (USOAP). As of the end of 2014, only 14 sub-Saharan African countries had achieved just 60% implementation of those SARPs. Making IOSA a part of the certification process certainly will help. The 27 sub-Saharan airlines on the IOSA registry are performing more than 10 times better than non-IOSA operators in terms of accidents, at only 1.95 per million flights versus 19.62.

3 EUROPE AND COMMONWEALTH OF INDEPENDENT STATES

The value of IOSA was recognized by European safety regulators in their framework for the European Union's assessment and authorization requirements of third-country operators. They also recognized IOSA registration as an acceptable third-party audit program in the scope of codeshare operations between European carriers and non-European airlines.

Commonwealth of Independent States (CIS) airlines on the IOSA registry, meanwhile, experienced zero accidents in 2014 for a second consecutive year. For all airlines in the CIS, the jet hull loss rate in 2014 of 0.83 was a significant improvement over the five-year rate of 2.74. IATA continued nevertheless to implement a safety enhancement strategy for Russia and the CIS in 2014.

Supported by IATA and other stakeholders, Kazakhstan was able to demonstrate improvements in the oversight capability of its national safety regulator. Kazakhstan also commenced evidence-based training aimed at improving pilot recurrent training at its national carrier Air Astana.

With a second wave of workshops on safety risk assessment and safety assurance techniques, the country likewise continued implementing the IOSA-SMS strategy, which seeks to help carriers improve their systems.

Security processes: **effective, efficient**

Secure, efficient air travel

Aviation stakeholders are committed to ensuring a secure and efficient air travel experience. In 2014, aviation stakeholders faced challenges in sharing information about conflict zones, border control and facilitation, cyber security, and passenger and cargo security screening. Addressing these challenges calls for a threat-based, risk managed, outcome-focused approach to all aspects of aviation security and facilitation.

Information about conflict zones

The shooting down of MH 17 exposed gaps in how nations' information about conflict zones was being shared with the industry. To identify and close these gaps, ICAO created the Task Force on Risks to Civil Aviation Arising from Conflict Zones (TFRCZ), which reported its findings to ICAO's Second High-Level Safety Conference, held in February 2015.

ICAO will build a web-based information platform where nations, airlines, and the public can access the latest, most relevant information related to conflict zones. IATA, meanwhile, continues to monitor and advocate with nations that have expressed an interest in regulating the information to be shared with passengers, notably the Netherlands.

Passenger data management

Border control is the responsibility of individual countries. The disappearance of MH 370 demonstrated that border control can be improved. Two passengers were able to board that flight with passports that had been reported as stolen. There is no evidence that those passengers had any involvement in the loss of the aircraft. That they could board an aircraft with stolen passports is, however, an issue of concern to all involved with civil aviation.

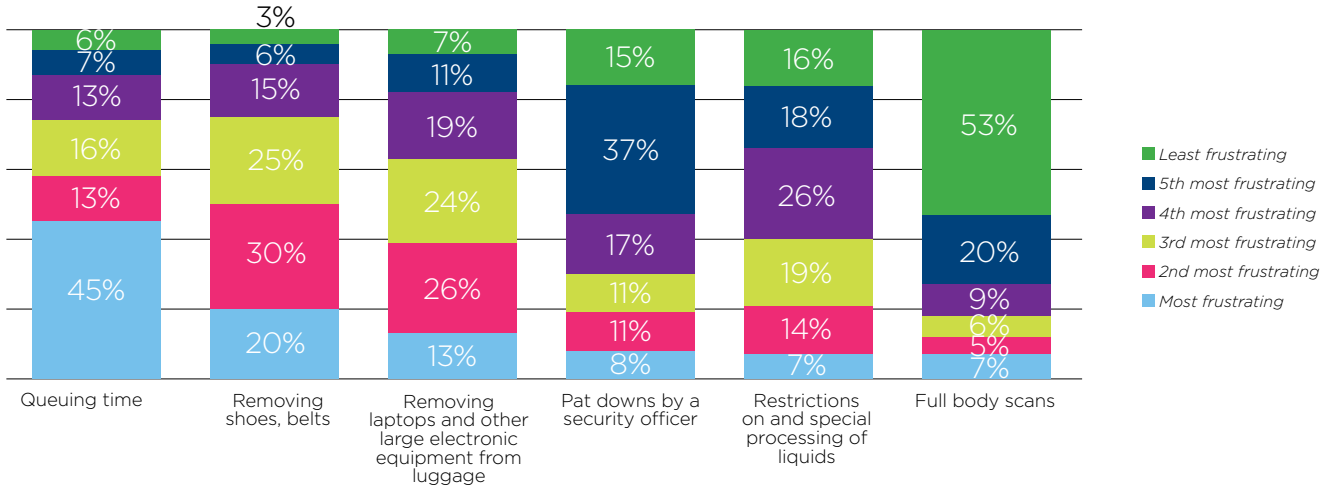
The industry goes to great effort and expense to ensure that governments requiring Advance Passenger Information (API) for flights to or from their territories receive reliable data. It is vital that governments use the information to heighten security. Governments are also encouraged to use the information to improve the passenger experience at border control facilities with faster, more efficient processing.

Currently, 55 nations require API from airlines. A growing number of countries also require carriers to provide them with passenger name record (PNR) information contained in reservation systems. The number of nations requiring such information is, in fact, expected to increase significantly in the coming years. Although internationally agreed standards have been adopted to align and standardize API and PNR requirements, the industry continues to confront nonaligned, nonstandardized implementation by the authorities in various nations.

An industry priority for 2014 was the development and delivery of an online Passenger Data Toolkit in collaboration with ICAO and the World Customs Organization. This serves as the definitive resource for global standards and guidance on API and PNR, including interactive API and PNR. Significant effort was made to promote countries' use of the Passenger Data Toolkit and to increase awareness of API and PNR standards through API-PNR Days and targeted workshops delivered in partnership with ICAO to more than 800 government and industry participants in six separate events.

The adoption in September 2014 of UN Security Council Resolution 2178, which requires that all countries obtain API from airlines to prevent the movement of would-be terrorists via international air transport, represents an additional challenge for the industry. Airlines will focus on continuing to deliver awareness workshops, including API-PNR Days, targeting individual countries as warranted. More specifically, airlines will proactively approach nations that feel obligated by the UN resolution to implement passenger data exchange requirements to ensure that any systems imposed align with global standards and internationally adopted best practice.

Most frustrating elements of the security screening process



Cyber security

The industry significantly advanced its five-year strategy for bolstering cyber security with IATA's launch in 2014 of the Cyber Security Toolkit of guidance material for airlines and other industry stakeholders. Additionally, IATA partnered with ICAO, Airports Council International (ACI), the Civil Air Navigation Services Organisation (CANSO), and the International Coordinating Council of Aerospace Industry Associations (ICCAIA) on a common roadmap to align actions on cyber threats. The resultant Civil Aviation Cyber Security Action Plan will ignite short-, medium-, and long-term approaches to cybersecurity.

In 2015, IATA will continue assisting member airlines in developing, implementing, and enhancing cyber security through testing and introducing version two of the Cyber Security Toolkit by year-end in addition to delivering awareness workshops, including Cyber Days. It will also seek to obtain support from governments globally for a common strategy to strengthen the aviation system's resilience to cyber attacks. This effort will be facilitated by Industry High-Level Group (IHLG) engagement.

Smart Security

Smart Security is the product of IATA's partnership with ACI World. It envisions a continuous journey from curb to airside. Passengers will proceed through security with minimal inconvenience, with security resources allocated based on risk, and with airport facilities optimized.

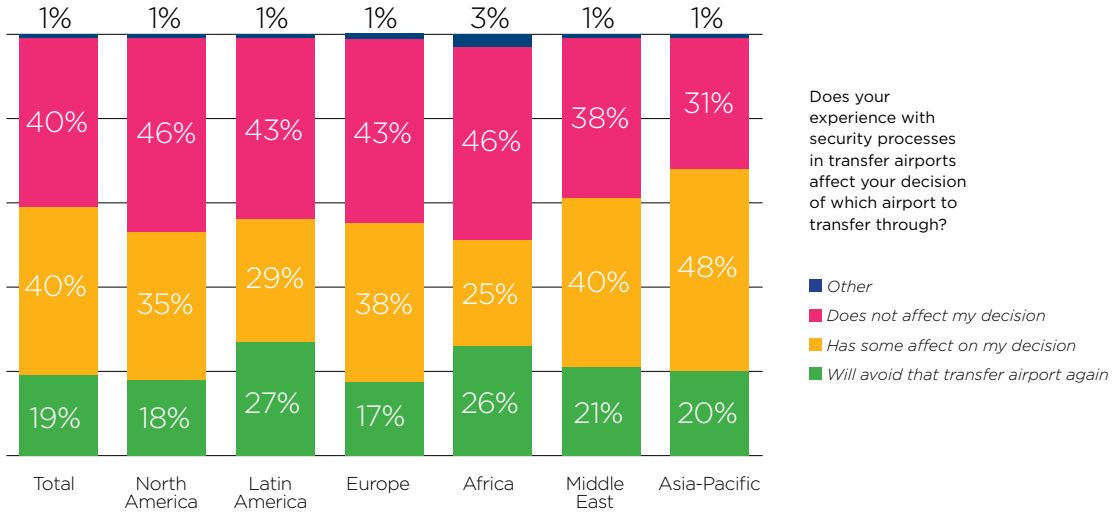
Trials at Amsterdam Schiphol Airport and London Heathrow Airport demonstrate that several Smart Security components are potential short-term game changers individually and, combined, capable of delivering important improvements in overall security effectiveness, operational efficiency, and passenger experience. These components include the use of passenger security scanners, state-of-the-art cabin baggage screening solutions, innovative lane design and automation, centralized image processing, and inaugural risk-based differentiated screening concepts.

Smart Security proof-of-concept trials will continue in 2015 at Schiphol and Heathrow and at new partner airports in Doha, Melbourne, and Dublin. The knowledge gained will be documented in comprehensive guidance materials that will facilitate the widespread adoption of Smart Security.

To drive industry-wide change, a Smart Security diagnosis methodology will be tested in 2015. That methodology builds on the success of the Security Access and Egress (SAE) Improvement Project, and SAE will be fully integrated into Smart Security. The diagnosis methodology is expected to enable the implementation of Smart Security at many more airports around the globe in 2016 and beyond.

Work on Smart Security, meanwhile, continues to include fundamental research on, and the testing of, the next-generation processes and technologies that will define what passenger and cabin baggage screening will look like in the future.

Transfer experience vs. transfer airport selection



Global PNR status

13 nations have implemented mandatory PNR transmission regimes for all or some markets

8 nations have legislation in place authorizing PNR data exchange but have not yet implemented that legislation

26 nations have indicated interest in developing PNR exchange programs but have yet to announce detailed timeframes or adopt the necessary legislation

Smarter regulation: **the fair way forward**

The correct regulatory balance

Aviation is a highly regulated industry. Regulation plays a critical role in the safety and security of the aviation system and is a necessary aspect of business operations in a functioning market economy. The aviation industry recognizes that regulation benefits consumers and the industry alike by providing clarity and certainty for all.

Regulation can, however, add significantly to the cost of doing business. Where regulation is poorly designed or enforced, it can induce confusion rather than clarity and add expense without creating value. Overly complex regulatory frameworks can limit the choice, competition, and value that the airline industry delivers to consumers. Yet, regulatory authorities are enacting increasingly burdensome regulation on aviation, jeopardizing the ability of the industry to grow sustainably.

The industry is asking governments to adopt smarter regulation principles that support a transparent, consultative, objective-driven approach to policy making. Smarter regulation delivers clearly defined, measurable policy objectives in the least burdensome, most balanced way. An example of progress in this area was the establishment of the new Shanghai International Aviation Court of Arbitration. IATA joined with Shanghai International Arbitration Center and the China Air Transport Association (CATA) to bring the new arbitration court into being.

Smarter regulation

Smarter regulation has two elements: the design principles, which focus on what smarter regulation should consist of, and the process principles, which describe how smarter regulation should be formulated.

The design principles of smarter regulation include the following:

- *Consistency and coherence.* New regulations should be consistent with established and proposed rules and global standards so that there is no overlap or contradiction nationally and internationally. They should also be predictable and applied with clear oversight and responsibility and no hint of discrimination against those they regulate.
- *Proportionality.* Regulations should be applied only when their necessity is demonstrated. They should, moreover, be proportionate to the problems identified so that the costs of compliance are minimized.
- *Targeting.* Any regulation should be specifically focused on the problem governments are trying to solve and targeted at the firms or organizations that are best placed to solve that problem.
- *Fairness without distortion.* Regulations should be applied fairly and without distortion to avoid even the perception of creating discriminatory burdens.
- *Clarity and certainty.* Regulations should be designed so that those subject to regulatory compliance can know with certainty which regulations apply to them, what is expected of them, and how much time is available to them for compliance.

Chief among smarter regulation's process principles is the necessity of establishing a clearly defined objective based on sound evidence. All feasible alternatives should be examined through a rigorous impact assessment, and consultation should be transparent and inclusive of all opinions. In formulating regulation, it is essential that the compliance burden be minimal, a systematic review mechanism be included, and a provision for appeals and modifications be put in place.

In 2014, the industry promoted smarter regulation design and process methodology. And it pushed for a smarter regulation approach to airport operations, taxation, commercial freedoms, flights over conflict zones, and pandemic responses.

Looking to 2015 and beyond, the industry's focus will widen. IATA will emphasize commercial or operational licensing facilitation, air traffic management efficiency, global market based measures for emissions control, remotely piloted aircraft systems, noise, environmental health issues, government requests for information, and border crossing and facilitation.

Examples of passenger rights legislation

1 EUROPEAN UNION

The European Union is still engaged in a revision of EU Regulation 261/2004 on passenger rights. The major outstanding issues are compensation payments in cases of delay and missed connections and the definition of extraordinary circumstances that would relieve airlines from the financial burden of compensation payments in cases that are beyond the carriers' control. The current regulation creates an estimated $4 billion in potential liability for airlines every year.

An important development occurred in October 2014, when IATA member airlines flying to and from the EU agreed on a policy of voluntary repatriation assistance to passengers stranded as a result of financial failure by another airline. This proactive effort will be critical to industry efforts to press for reasonable approaches to consumer protection in Europe.

2 UNITED STATES

In August 2014, the US Department of Transportation (DOT) approved Resolution 787, the foundational standard for NDC. This cleared the way for broad market adoption of the NDC standard.

IATA filed its opposition with the DOT to provisions in Consumer Rule III that require airlines to make certain ancillary services available through a travel agent. The DOT is expected to issue a final ruling on the matter in December 2015. A similarly critical brief was filed in response to the DOT's advance proposal to prohibit the use of mobile phones in flight.

3 BRAZIL

Brazil's National Civil Aviation Agency (ANAC) is revising regulations pertaining to the general conditions of carriage and passenger rights in Brazil. The industry has expressed several concerns, including about the incorporation of a "right of repentance," which gives passengers the option to cancel their booking very near their departure date; about the need to define extraordinary circumstances; and about attempts to standardize changes made by passengers. ANAC expects the new resolution to enter into force at the end of 2015 or in early 2016.

4 MIDDLE EAST

Airlines are working with the Arab Civil Aviation Commission (ACAC) to align its proposed consumer protection guidelines with global standards and best practices. Areas of concern include mandating compensation in the case of delays, which contravenes MC99; penalizing irregular operations that might result from safety concerns; and interfering in commercial operations through the approval of contracts of carriage and reporting requirements.

5 CHINA

The Chinese Civil Aviation Administration (CAAC) has proposed draft consumer protection regulations in which items of concern include tarmac delay rules and differing provisions for care and assistance for transfer versus point-to-point passengers. IATA and industry stakeholders are working with the CAAC to learn from the successes and shortcomings of similar regulations in Australia, the European Union, Singapore, and the United States. A final version of the regulations is expected in fall 2015.

Greater convergence on global passenger rights principles

More than 60 countries have instituted independent passenger rights regimes. The result is that passengers often start a journey in one jurisdiction and end in another. Such inharmonious global regulation hurts connectivity. The absence of coordination among the various regimes causes confusion for passengers and difficulties for airlines. And the proliferation of independent passenger rights regimes could cost airlines up to $12 billion by 2017. Many of these regimes even have unintended consequences for consumers, including, in extreme cases, incentives for airlines to cancel flights, reduce services, or limit convenient interline offerings.

In 2013, IATA member airlines unanimously endorsed core principles on consumer protection. Those principles are based on lessons learned from various passenger rights regimes and strike a balance between protecting passengers and preserving industry competitiveness. Key provisions include ensuring access to information for passengers, aligning rights with such international conventions as Montreal Convention 1999 (MC99), underlining the role of the marketplace in allowing customers to choose an air travel experience that meets their price and service expectations, and offering rights comparable to those of other modes of transport. Based on these core principles, IATA is seeking greater coordination among governments in the area of consumer protection.

ICAO, too, recognizes the threat a patchwork approach poses for consumer protection. So it is also engaged in constructing policy guidance aimed at a greater convergence of passenger rights regimes.

A single airline liability regime globally through MC99

MC99 governs airline liability for passengers, baggage, and cargo during international carriage by air. It was designed to replace a number of earlier liability regimes with a modern, fair, and global approach.

MC99 is also a prerequisite for airlines' use of the electronic air waybill (e-AWB) in place of paper. It is therefore essential for the local implementation of cargo transformation projects, such as e-freight. IATA is promoting the ratification of this convention for this and the wide range of additional benefits it delivers for airlines, passengers, and shippers.

The consequence of a lack of harmony among airline liability regimes was highlighted by the tragedy of Air Asia 8051 in December 2014. That sad event demonstrated the complexity and unfairness that occurs when the origin and destination countries are not parties to MC99. Families of the victims faced further, needless distress and uncertainty over compensation for their lost loved ones because Indonesia is not a signatory to any international agreement on airline liability.

By year-end 2014, 110 countries had ratified MC99. The rate of ratification in 2014 was higher than in several previous years combined, and Ethiopia's ratification was a particularly notable success. Fully 81 countries, however, have yet to ratify MC99, including such nations as Bangladesh, Indonesia, the Philippines, Russia, Sri Lanka, Thailand, and Vietnam. And until they do so, their patchwork of regimes will continue to render airlines, passengers, and shippers unable to avail themselves of MC99's benefits.

Ratification campaigns are in place in the top 20 markets, selected by volume of cargo shipments, where MC99 is not yet in force. They involve coalitions of industry-leading stakeholders: airlines, shipper and forwarder associations, chambers of commerce, and tourism authorities.

Significant progress toward ratification is expected in 2015. In the wake of the Air Asia 8051 tragedy, Indonesia has announced that it will expedite the ratification of MC99. In May 2015, Thailand will enact into law its International Carriage by Air Act and is expected immediately thereafter to ratify MC99. It is hoped, too, that the Philippines Senate Committee on Foreign Relations will endorse a report signaling that country's final step to MC99 ratification. In Russia, MC99-related legislation is before the Duma.

International deterrents to unruly passenger behavior

Thousands of incidents of unruly passenger behavior on aircraft are reported annually. The impact of such behavior on passengers and crew can be significant, especially if an aircraft is forced to divert.

The 1963 Tokyo Convention continues to provide the international legal framework for dealing with unruly passengers. In its original form, however, it suffered from gaps in defining unruly behavior and jurisdictional parameters. A diplomatic conference in Montreal, Canada, in March 2014 closed these gaps with what has become known as the Montreal Protocol 2014 (MP14) of the Tokyo Convention.

IATA is urging countries to ratify MP14 as soon as possible and is working with stakeholders to that effect.

MP14 bears signatures from 28 countries. But for it to enter into force, at least 22 nations must ratify it. This often requires that nations pass national implementing legislation. IATA has identified 36 nations as potential early adopters. These countries are known to either strongly support MP14 or to have legislative systems that would facilitate its rapid ratification. In February 2015, the Republic of Congo became the first to ratify MP14, only 11 months after MP14 was agreed to. It is expected that a significant number of nations will ratify MP14 in the short term.

Promoting the ratification of MP14 is part of a wider strategy to tackle unruly behavior that contains a set of core principles. Unanimously agreed on by airline members at the 2014 IATA AGM in Doha, these principles set out a comprehensive approach that encompasses prevention, management, and deterrence. Airlines and airports are working together to identify potential unruly passengers before they board aircraft and to prevent them from boarding.

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. Despite this, airlines and their customers continue to face a multitude of counterproductive taxes. IATA and its industry partners regularly engage governments on various taxation issues to advocate for a more appropriate tax burden.

1 AMERICAS

United States: The 2013 US Budget Act covering the 2014 budget more than doubled the air passenger tax from $2.50 per segment to $5.60, ostensibly to cover the additional costs of aviation security. The maximum a passenger could be taxed, however, was capped at $11.20. The US Transportation Security Administration (TSA) calculated that over 10 years the fees collected from passengers would increase from $19.6 billion to $36.4 billion, with these proceeds split between the TSA and the US Treasury.

In 2014, the TSA issued rules for the application of the US passenger tax that included the insertion of two changes. Passengers on all air carriers would be taxed for all originating segments outside the United States and the $11.20 cap on taxation would be lifted, allowing unlimited taxation on all segments flown. IATA and Airlines for America (A4A) filed a lawsuit against the TSA, prompting the US Congress to pass a law reinstating the cap. The law, though, did not address the issue of segments outside the United States, and this is being challenged in the courts by IATA and A4A.

Ecuador: The Ecuadorean government increased its tourism tax on each international ticket sold in Ecuador from $5 to $20. It also announced a new tax of $10 per international ticket sold outside Ecuador for passengers flying into the country.

2 EUROPE

Portugal: A July 2014 proposal by Portugal's Governmental Commission for Green Taxation for a CO_2 tax of between €3 and €15 on air transport was abandoned in response to industry analysis of its potentially detrimental economic impact.

United Kingdom: Two of the four UK Air Passenger Duty (APD) distance bands were removed and children made exempt from the APD as of 1 April 2015. The APD remains, however, the highest tax of its kind in the world. Recently, the UK government delegated administration of the APD at Scottish airports to the Scottish government, which has, in turn, announced its intention to reduce the tax. Efforts continue to encourage the UK and Scottish governments to abandon the tax altogether.

Sweden: The newly elected Swedish government announced in its budget presentation in October 2014 that it will launch a study to "investigate how a 'green' tax on travel can be designed."

3 AFRICA

Senegal: Senegal reduced its Fiscal Stamp Tax in February 2015, from $11.80 per departure to $3.37 for each departure and arrival. Efforts to further reduce taxes in Senegal continue.

Uganda: In response to strong, industry-wide objections, Uganda's Ministry of Tourism abandoned a proposal to introduce a mandatory $25 emergency medical insurance charge for all inbound air travelers.

4 ASIA-PACIFIC

There are several long-standing passenger taxes in the Asia-Pacific region that limit aviation's positive impact on economic and social development there. The Australian Passenger Movement Charge, at A$55 per passenger for international flights, is a drag on the Australian economy. In India, there is a service tax on all domestic and international tickets with a point of departure in India. In Pakistan, the federal excise duty on international tickets is $49, and double that for premium travelers.

Slots

Airport capacity in the most congested markets is a major concern for the industry. Constraints on capacity are best alleviated by constructing runways and terminals. It is necessary in the meantime to manage scarce capacity through globally coordinated processes, 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 and deviations from the *WSG* can cause disruption to passenger journeys.

Examples of deviations continue to crop up and must be resolved.

- The rapid growth in the Latin American aviation market has resulted in infrastructure capacity lagging demand. Brazil has enacted but not implemented a regulation that differs significantly from the *WSG*, and the industry continues to advocate for amendments. Other countries in the region, including Colombia and Mexico, were considering a slot regulation that likewise differed significantly from the *WSG*. But strong advocacy in 2014 has ensured significant progress in limiting their divergence from international standards.
- IATA also was engaged in China, Dubai, Greece, Hong Kong, Indonesia, Saudi Arabia, and Thailand in 2014 to help reduce their divergence from the *WSG*. In 2015, IATA has been asked to engage with Egypt, Kenya, Malaysia, Morocco, South Africa, Tunisia, and the United States regarding slots concerns in those nations.

Appropriate taxation

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

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.

Airline monies and Venezuela

There are a number of nations that restrict or block airlines from repatriating funds from ticket sales. Five countries account for over 99% of blocked funds: Angola, Bangladesh, Egypt, Libya, and Venezuela. The most serious of these situations involves Venezuela, where the government continues to apply strict foreign currency controls. This has resulted in 24 airlines being denied access to monies raised from their ticket sales in Venezuela. As of April 2015, the blocked funds for these 24 carriers totaled $3.6 billion.

The blocked funds situation in Venezuela is exacerbated by other charges and taxes in that country that are not aligned with ICAO policy. The consequences for aviation connectivity have been significant. In 2014, 16 of the 24 airlines operating in Venezuela reduced operations between 15% and 78%, while one carrier, Air Canada, stopped flying to the country altogether.

Airlines continue to limit ticket inventories for sale in Venezuelan currency, making it difficult for Venezuelans to plan and book travel. At the same time, airlines affected by the currency controls are working with IATA to lobby Venezuela's Ministry of Air Transportation and other authorities and to raise awareness of the situation through the media.

Meeting needs: **the right way to build**

Business-focused collaboration between airlines and their aviation infrastructure partners

Air transport requires access to high-quality infrastructure at competitive cost if it is to fulfill the demand for air travel, which, according to IATA's 20-year forecast, is set to more than double by 2034. Collaboration with infrastructure partners—especially with airports, air navigation service providers (ANSPs), and fuel suppliers—is crucial.

Fair and cost-efficient airport and ANSP charges are essential to maximize customer service and boost connectivity. Clear guidelines, developed by ICAO, exist to direct the determination of airport charges imposed on airlines and passengers. The guidelines follow principles of transparency, consultation, efficiency, and productivity in establishing the need for an equitable charges structure. They also help airports and ANSPs align their development plans and capital expenditures with airline needs and expected passenger demand.

There are, however, numerous examples of these guidelines not being effectively applied. More effort is required of airports, ANSPs, airlines, and governments to ensure that the guidelines are observed. And any local and regional legislation should be aligned with global standards and best practice.

The European Commission (EC)'s EU Airport Charges Directive provides an example of a poorly applied policy. The directive is well-aligned with ICAO principles. But in the three years since its inauguration it has not been sufficiently applied during airport charges consultations in EU countries. The EC should aim to strengthen the regulation and ensure that global standards are transposed into enforceable national law.

A strong partnership with airports begins with the alignment of the business strategies of airport owners and operators and the airline community so that all parties work for mutual benefit. Where this does not occur, regulators should mandate that airports work with airlines to ensure that airport expenditures are necessary, functional, and a fair return on investment Although airports still need to better understand airlines' perspectives on airport operations, the two certainly possess a greater knowledge of each other's business models and drivers than ever before.

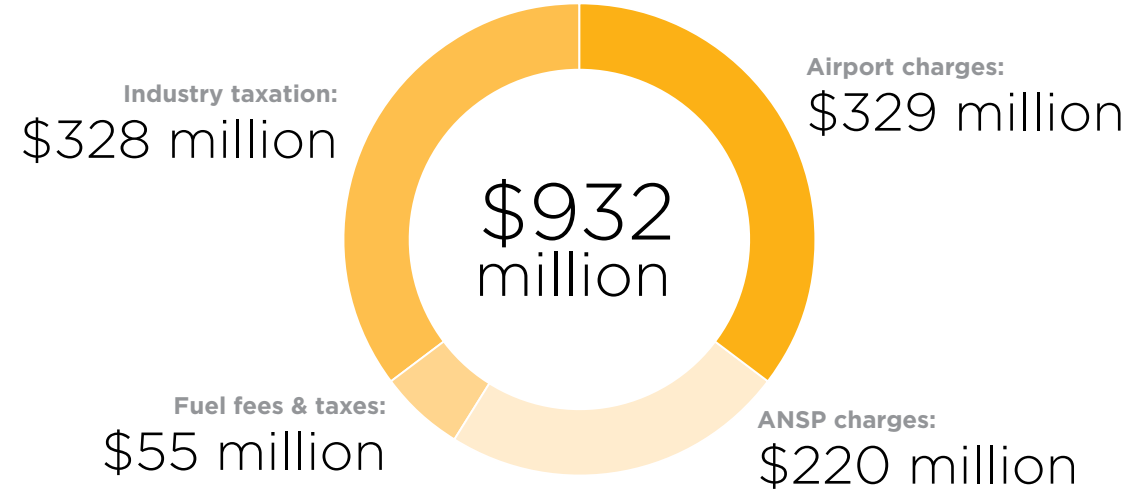
A growing concern, of course, is inadequate capacity at airports to meet demand. This is partly the fault of the haphazard way airport authorities and governments work with airlines. Early engagement between governments and airports where capacity bottlenecks are foreseen would help alleviate this issue. But constant and open dialogue among local airport communities is also vital to make the case for sustainable expansion and to agree on a balance between local needs and national economic requirements.

Airport service levels

Airlines and airports should strive to work together for more efficient operations, better contingency planning, and improved handling. Two particular tools for enhancing this work are airport collaborative decision making and service-level agreements.

- Airport Collaborative Decision Making (A-CDM), if well implemented, can increase the number of traffic movements an airport can handle and enable the effective use of resources during aircraft turnaround. IATA is developing an industry baseline for A-CDM and identifying airports that might benefit from A-CDM implementation according to airline-approved criteria.
- Service-level agreements offer common performance benchmarks, so work is under way to ensure direct comparisons across operations and airports. The service aspects of the new, 10th edition of the *Airport Development Reference Manual* have been revised to encourage airports to consult more effectively with airlines regarding service levels.

Total cost reductions achieved in 2014–15



Agreeing to fair airport charges and appropriate development

Airport development requirements should be agreed on by all parties based on a robust, transparent cost-benefit model that is in line with expected demand. Where airport privatization is being considered, early consultation, including decisions on investment, cost allocation, and charge setting, is needed among all parties and unwarranted or excessive concession fees should be avoided.

The alignment, furthermore, of airport capital expenditures and the business strategies of airport owners and members of the airline community is crucial to ensuring the industry has access to affordable infrastructure while sustaining traffic growth.

1 AMERICAS

A declaration by the ICAO Regional Air Transport Conference included text committing countries to applying ICAO policies on airport and ATC charges.

Mexico: Plans for the new Mexico City airport were influenced by the industry, resulting in plans for an affordable, fit-for-purpose hub for airlines. It is critical that this good start is followed through in the construction phase.

Brazil: The opening of new Terminal 3 at São Paulo Guarulhos failed to address long-standing operational bottlenecks, such as outbound immigration and transfer queues, and has not improved the transfer process or time. This is an example of how insufficient user consultation can limit the return on major infrastructure investments.

2 EUROPE

UK Airports Commision: IATA's submission to the UK Airports Commission emphasized that plans for additional UK capacity must be commercially viable, follow ICAO's balanced approach on aircraft noise mitigation, and spell out the government's role in funding surface access requirements and any mitigation costs.

Ireland: The price cap at Dublin airport was reduced to 4.2% below inflation, saving $109 million up to 2018.

Netherlands: Amsterdam's charges were reduced 6.8% in 2015, resulting from increased transparency and collaboration with airlines on the design, operation, and resulting cost base for the airport.

Italy and Turkey: Discriminatory charging practices at Turkish airports and at Rome's airport, which put international operations at a disadvantage and for which there was no cost justification, were finally ended.

3 INDIA

Airlines welcomed India's Airports Economic Regulatory Authority's proposal for a 78% reduction in charges for the next regulatory control period, in contrast to the airport's 43% proposed increase. However, the Delhi High Court has ruled that a continuing dispute relating to pricing in the first control period needs to be resolved before any new pricing agreement can take effect.

4 SOUTH AFRICA

The final version of South Africa's economic regulatory framework for airport charges incorporated many airline suggestions on avoiding pre-funding, ensuring the claw back of unspent investment, and applying the real cost of capital on revalued assets.

Fuel supply reliability and price transparency

On average, fuel constitutes 29% of an airline's operating costs. Securing a reliable supply of jet fuel is therefore vital for airlines. IATA works with jet fuel providers to ensure quality and consistency of supply. In addition, airlines seek from refineries, suppliers, and governments the introduction of internationally recognized benchmarks for base fuel prices and a breakdown of costs that make up the final price.

It is a tenet of the Chicago Convention, of ICAO policies, and of bilateral air service agreements that jet fuel for international flights not be taxed. Where a jet fuel tax exists, IATA negotiates on behalf of its member airlines for the tax's withdrawal. The overall global pattern on fuel reliability and taxation reveals some improvement, but issues continue to emerge.

Ground operation safety, quality, and efficiency

Ground damage costs airlines an estimated $4 billion per year. IATA, therefore, is working to standardize procedures and thereby improve the operational practices and cost-efficiencies of the outsourced ground service providers (GSPs) that airlines increasingly rely on for ground handling.

The *IATA Ground Operations Manual* (*IGOM*) consolidates international best practice on ground operations procedures. IATA is promoting the adoption of *IGOM* by airlines and GSPs worldwide as a minimum standard for ground operations and is supported in doing so by organizations such as the Airport Services Association (ASA) and the European Civil Aviation Conference (ECAC). Several larger GSPs, including Swissport and ASE, have already adopted *IGOM*.

In 2015, IATA intends to increase *IGOM* adoption to 35% of IATA members. IATA also will work with ICAO, the European Aviation Safety Agency (EASA), and Airports Council International (ACI) to gain recognition for *IGOM* as a means of complying with regulations.

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 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 or cost efficiency is not part of the business model of the ANSP.

IATA facilitates interaction between airlines and ANSPs and standards-setting bodies to achieve holistic, harmonized, and cost-effective ATM solutions, including the following:

- *Air traffic flow management.* As the skies become more congested, innovative solutions to increase airspace and airport capacity are required. IATA is partnering with ICAO and other major stakeholders to produce guidance and educational materials to tackle the root causes of insufficient capacity, such as military restrictions and inefficient route structures.
- *Air traffic management service priority.* IATA is working with industry stakeholders to develop a vision and roadmap for the accelerated application of service-priority concepts in ATM modernization programs. This includes applying service-priority concepts in overall ATM operations and providing education and best practice information to involved parties.

Securing reliable jet fuel supply at transparent prices

ICAO policies and bilateral air service agreements prohibit the taxation of jet fuel for international operations. Pricing formulas, moreover, must be transparent to prevent unjustifiably high fuel fees. The greatest efficiency is achieved in markets where jet fuel pricing and supply is liberalized and open to competition.

Jet fuel supply reliability, however, is a continuing concern, as disruptions can incur significant extra costs for airlines, particularly if the disruption results in delays or the need to tanker fuel from other destinations or to make technical, en route refueling stops. IATA is working with airports, suppliers, and local authorities to address supply reliability issues in Argentina, the Caribbean, and South Africa. And campaigns to address fuel concession fees, which have no cost basis, are progressing in Brazil, Colombia, and Saudi Arabia.

1 CANADA
The industry was unable to prevent the government of Ontario from increasing the provincial fuel tax, which will increase airline costs an estimated $24 million annually.

2 AFRICA
There were some successes in removing taxes imposed on jet fuel in Africa. The industry, however, continues to oppose many levies on jet fuel on the continent. Aviation fuel remains around 20% more expensive in Africa than in other parts of the world. In South Africa, a proposal to increase jet fuel pipeline fees was reduced 46%.

3 KAZAHKSTAN
IATA is working with the Kazahk government to liberalize the country's jet fuel market and thereby reduce fuel prices 3%–5%.

Reviewing ATM developments regionally

1 UNITED STATES: NEXTGEN

The US Federal Aviation Administration (FAA) published a master plan in October 2014 identifying steps that it intends to take over the next three years. An FAA focus on NextGen is among the master plan's important steps, but executing that step and holding all parties accountable to deliver capabilities and realize NextGen's benefits fully could be challenging.

IATA continues to engage with the FAA and with the SESAR Joint Undertaking, the technology deployment program of the Single European Sky (SES), to ensure alignment and harmonization. Diverging opinions persist, however, and are a concern for airline operators.

2 EUROPE: SINGLE EUROPEAN SKY

In 2014, the Council of the European Union heavily diluted the position on the SES II+ legislation adopted by the European Parliament (EP) and drafted by the European Commission. IATA contests several aspects of SES II+ are not strong enough. Through normal legislative process, the EP and the council will seek to produce a mutually acceptable package. Given that broader issues, such as the status of Gibraltar, remain impediments, real progress is not expected until early 2016.

3 MIDDLE EAST AND NORTH AFRICA

Political and economic challenges in areas of the Middle East and North Africa have prevented significant improvements for airspace users. Conflicts in Libya, Syria, and Iraq are having a substantial economic impact on the airline community. Nevertheless, regional air transport industry operatives are positively and actively promoting coordinated and harmonized solutions to the region's difficulties based on airline needs and requirements.

The industry volunteered a set of projects that address immediate airline needs in the region. The first project, which addresses call sign confusion and the acceptance of alphanumeric call signs, is being managed by Etihad Airways with IATA's backing. A second project that is under consideration is a Middle East airspace study stemming from the decision of the Gulf Cooperation Council (GCC), which comprises Saudi Arabia, Kuwait, Bahrain, Qatar, Oman, and the UAE, to create a virtual flight information region to harmonize operations.

4 ASIA-PACIFIC: SEAMLESS ASIAN SKY

In Asia-Pacific, country-by-country solutions to ATM challenges are insufficient to meet forecasted demand as air traffic increases. There needs to be a multistate solution to managing rising regional air traffic, and the Seamless Asian Sky is that solution.

In 2013, the Asia-Pacific Seamless Air Traffic Management Plan was accepted by ICAO's Regional Planning and Implementation Group on behalf of all affected ICAO countries. IATA contributed an economic study to the development of the plan, which is based on aviation system block upgrade (ASBU) elements, including available technology and processes.

Subsequently, IATA funded a project to encourage the implementation of cross-border Air Traffic Flow Management (ATFM)—a critical element of the seamless plan and ASBU block zero. IATA is working directly with ICAO, the Civil Air Navigation Services Organisation, individual countries and such organizations as the Association of Southeast Asian Nations and Asia-Pacific Economic Cooperation forum to drive the plan's implementation.

Environmental commitments: **reducing impact**

Environmental impact management

The aviation industry is united in its commitment to manage and reduce its environmental impact. Its highest-profile environmental issue is carbon (CO_2) emissions. But the industry also addresses more general issues, such as waste management, environmental management systems, and noise.

Carbon emission reductions

Air transport is responsible for only 2% of man-made carbon emissions annually. But the industry recognizes that it must work even harder on behalf of the environment to achieve long-term sustainability. Its license to grow depends on it.

The aviation industry comprises airlines and such other aviation-related businesses as airports, airplane manufacturers, and air navigation service providers. And in 2009, those businesses committed to a united approach in reducing emissions that encompasses three 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

Such ambitious goals place aviation in the forefront of industries globally in managing its impact on climate change. Through ICAO, moreover, governments worldwide are aligned with especially the industry's CNG2020 vision.

To achieve its three carbon-emission goals, the industry has adopted a four-pillar strategy comprising improvements in technology, operations and infrastructure, and market-based economic measures. Continued investment in new aircraft and innovative efficiency improvements is helping the industry meet its yearly 1.5% fuel-efficiency goal. The challenges of achieving the second and third goals, however, are so significant that they cannot be overcome by the industry alone. The support of governments is required, particularly in agreeing on and deploying a global market based measure (GMBM) for addressing carbon emissions.

ICAO negotiations for global agreement on climate change

Airlines are urging governments around the world to continue addressing aviation's impact on climate in a fair and balanced manner through constructive dialogue with ICAO. At the same time, IATA is calling on its members to preserve industry unity to support the ICAO negotiations.

The nations represented at the 38th ICAO Assembly in 2013 agreed to develop a GMBM by the time of the 39th Assembly in 2016. That GMBM, intended for implementation in 2020, is regarded as a cornerstone of aviation's broader strategy to stabilize its net CO_2 emissions from 2020 onward through carbon-neutral growth. Negotiating the details of that GMBM began at ICAO in 2014.

Designing a GMBM of this nature is challenging, technically and politically. IATA is working with governments and other stakeholders to build consensus on key elements of a GMBM that must be transparent, nondiscriminatory, and cost-effective. Critical questions include how emission-reduction obligations will be distributed between countries and operators and what adjustments and exemptions might apply. Other important issues relate to what the monitoring, reporting, and verification requirements will be for participants; what types of carbon market instruments can be used for compliance purposes; and how the GMBM will interact with other measures.

A groundbreaking step in aviation's efforts to address its impact on climate will be the adoption of proposals for an ICAO standard for aircraft CO_2 emissions. In this respect, 2014 was a crucial year, as experts from governments, industry, and nongovernmental organizations jointly undertook an analysis of the technological feasibility and cost-effectiveness of different stringency levels for a standard. In 2015, governments and ICAO will aim for agreement on the standard's levels and on the types of aircraft to which the standard will apply.

Affordable and sustainable biofuel deployment

Beyond the development of a GMBM, the industry continues to work under the four-pillar strategy on technological, operational, and infrastructure solutions to reduce emissions. The use of sustainable aviation fuels (SAF), especially biofuels, is crucial to the industry's approach. SAF emit CO_2 but have the potential over their life cycle to save up to 80% in carbon emissions.

Aviation's fuel distribution system, meanwhile, enjoys advantages over other transport sectors' fuel distribution methods. That system's delivery of biofuels to just 190 airports worldwide would cover potentially 80% of all flights.

Aviation stakeholders in a growing number of countries are engaging in national and regional aviation biofuel initiatives. The initiatives bring together airlines; biofuel suppliers; transport, energy, agriculture, and other government agencies; feedstock growers; and research institutions. At the same time, IATA works with governments on political and legislative frameworks to encourage SAF production and use. Examples include work with policy makers in Finland, Australia, Israel, and Indonesia.

A number of important, industry-wide milestones in deploying aviation biofuels were reached in 2014:

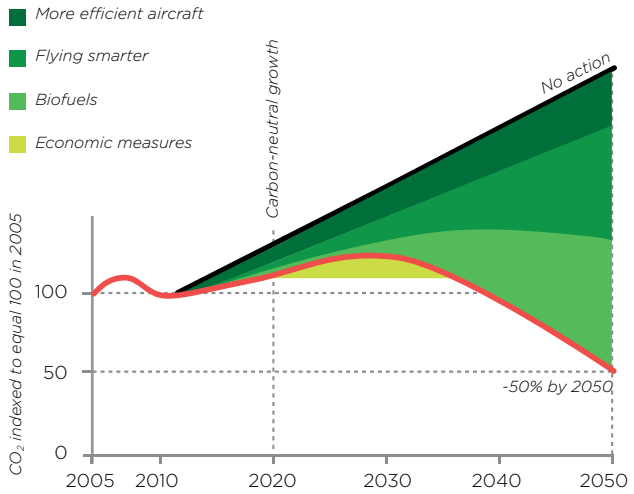
- Direct sugar-to-hydrocarbon fuel production was approved by technical standards organization ASTM International. This is the third alternative jet fuel production pathway approved for commercial flights. Three more are expected in 2015–16.
- Two airports, in Karlstad, Sweden, and Oslo, Norway, began supplying biofuel in their common fuel distribution systems for all operators. More and larger airports are expected to provide common biofuel supply in 2015, Amsterdam and Brisbane being the most advanced.
- Cathay Pacific concluded the largest SAF offtake agreement to date with alternative fuel producer Fulcrum, for 100,000 metric tons per year of fuel produced from municipal waste. More such agreements are needed to reduce the risk to suppliers of potentially insufficient demand and, in turn, drive down SAF prices, which are still mostly uncompetitive with jet fuel.
- ICAO's work on a GMBM involved the future recognition of SAF emissions benefits. Two working groups in ICAO's Committee on Environmental Protection (CAEP) are working with IATA and with airlines on the modalities of assessing and accounting for the life cycle emissions of alternative fuels under the GMBM.

Biojet Fuel Ambassadors Program

IATA is developing a Biojet Fuel Ambassadors Program to raise awareness of work on SAF and of the challenges facing increased SAF production. The program focuses on environmentally conscious individuals and corporate and noncorporate organizations willing to pay more for environmentally friendly initiatives, such as, specifically, ensuring that their travel uses biofuels.

In 2014, IATA's development of the Biojet Fuel Ambassadors Program involved engaging with biofuel brokers and producers, such as SkyNRG and Total, and assessing fuel availability and pricing. Throughout 2015, IATA will hold discussions with major shippers who could be potential sponsors of the program. The aim longer term is to agree on a proof of concept with one major shipper willing to invest in a biofuel fund. Eventually, the program will look to tailor biofuel packages with biofuel blend rates and cost proposals to attract a broader audience to invest in biofuel and thereby drive increased aviation biofuel production.

Emissions reduction roadmap



Airline fuel reporting

The airline industry must be able to monitor and track progress to demonstrate to governments and other stakeholders that it is achieving its target of 1.5% improvement per annum in fuel efficiency. To this end, in December 2009 the IATA Board of Governors agreed that the reporting of CO_2 emissions to IATA by member airlines would be mandatory. IATA subsequently developed its online Fuel Reporting and Emissions Database (FRED).

FRED's consistently accurate and reliable data can be used to demonstrate the benefits of fuel-efficiency techniques, many of which represent modest improvements individually but significant gains collectively. In 2015, FRED is expected to undergo substantial enhancement as part of its rolling improvement that includes adding belly cargo and nitrogen oxide (NO_x) emission data.

Tension concerning the EU Emissions Trading Scheme prompted the governments of China, India, and Russia to instruct their national airlines not to report emissions or fuel data outside their countries. This challenges IATA's mandatory requirement for member airlines to submit fuel consumption data. IATA continues to stress to national civil aviation authorities (CAAs) that fuel consumption data is strictly confidential.

A balanced approach to noise

The development in 2013 of a new and more stringent ICAO noise certification standard for aircraft marked another stage in the continuing process that has reduced aircraft noise some 70% in recent decades. Concerns about aircraft noise are nevertheless prominent worldwide, notably in the European Union and the United States.

In April 2014, the European Union adopted a regulation to improve the management of noise at European airports. That regulation enters into force in 2016 and requires authorities to implement ICAO's Balanced Approach to Aircraft Noise Management, including such procedural steps as consulting with stakeholders and assessing noise-mitigation measures.

IATA supports ICAO's Balanced Approach to Aircraft Noise Management, as it provides a solid methodology for identifying cost-effective ways to mitigate aircraft noise. A key requirement is to consider all measures before introducing operating restrictions, including land-use planning and management.

Sound land-use planning, notably, prevents the construction of housing where there is aircraft noise. Unfortunately, many authorities fail to realize the importance of land-use planning. In the United Kingdom, for example, in the past three years the construction of almost 6,000 homes has been approved in areas where residents will experience annoyance from aircraft noise. Land-use planning in Brisbane, Australia, in 2014, conversely, consisted of ensuring a large buffer between the airport and residential areas that enabled the city to avoid a night-flight curfew. Brisbane City Council estimated that a curfew would cost the city up to $1.03 billion by 2029.

Another important development in 2014 was the decision of the US FAA to deny the application by Los Angeles International Airport for restrictions on easterly departures at night. A voluntary agreement limits such departures, but occasionally pilots request to depart to the east for operational reasons. The restriction would have prohibited these occasional departures, requiring airlines to offload passengers and cargo. This was the first time a major international airport in the United States had filed an application for restrictions on night flights.

At the end of 2014, India's Directorate General for Civil Aviation issued requirements for noise management at that country's airports. The requirements stipulate that airports must carry out a noise mapping study and develop a noise management action plan to reduce noise from aircraft operations. They also call for operating restrictions and other measures to be considered in the development of the action plan.

Environmental improvements in the aviation industry

A significant milestone was reached in the IATA Environmental Assessment (IEnvA) program in 2014. Finnair and South African Airways became the first two airlines to complete the IEnvA Stage 2 assessment. This, the highest-level IEnvA assessment, ensures that an airline has implemented all IEnvA standards, identified and mitigated its significant environmental impacts, and set performance targets.

Also in 2014, Air Transat, Icelandair, Qatar Airways, and SriLankan Airlines completed their IEnvA Stage 1 assessment, which ensures that an airline has established a foundation and framework for environmental management. Stage 1 also certifies an airline as having identified and complied with its environmental legal requirements. These airlines join a growing number of carriers that likewise have completed the IEnvA Stage 1 assessment, namely Kenya Airways, LATAM, LATAM Cargo, and Malaysia Airlines.

Cabin waste

Airlines want to recycle more, but regulations to restrict the spread of animal disease are hampering their efforts. Authorities worldwide are concerned that waste from airline cabins may spread disease among animals.

Guidance is being developed that will satisfy global regulators and promote recycling and waste minimization. Two cabin waste projects were completed in 2014: a cabin waste audit of international flights at London Heathrow Airport and a risk assessment for international catering waste. The project results have highlighted that large amounts of unconsumed food and beverages and low-risk recyclables are being either incinerated or landfilled. IATA will continue to liaise with international regulators in 2015 to harmonize waste recycling regulations and to assess alternative waste-treatment technologies.

Faster processes: **faster delivery**

Addressing cargo competitiveness

Air cargo is a crucial enabler of the global economy. In 2014, airlines transported 51.3 million metric tons of goods valued at $6.8 trillion.

To improve its competitiveness, the air cargo industry is undergoing a comprehensive transformation from point of manufacture to point of consumption. The aim is a 48-hour reduction in average shipping times by 2020. This can be achieved through innovation in technology and processes, investment in new facilities, and a renewed commitment to enhancing quality and value for the customer. To assist the industry in this period of change, IATA has launched a forensic study of supply chain bottlenecks that will be completed within 2015. This will help target actions to achieve the 48-hour reduction in end to end transit times.

Achieving industry change is a collaborative process requiring that all partners in the air cargo value chain work together. During 2014, the Global Air Cargo Advisory Group (GACAG), which comprises the principal global representative organizations of airlines, freight forwarders, and shippers, continued its work emphasizing security, e-commerce, facilitation, and sustainability. These priorities are shared across the industry and are a focus of activities.

Progress in 2014

Throughout 2014, key industry programs continued evolving. In partnership with shippers, freight forwarders, and the entire air cargo value chain, IATA's work focused on the following:

- Replacing paper and analog processes with digital data transfer through the implementation of e-freight
- Ensuring a secure supply chain to minimize security-related delays
- Measuring the performance of the end-to-end air cargo chain through quality management and benchmarking
- Developing a global facilities matrix and validation certification program to benchmark air cargo infrastructure and raise standards with cold chain shipments
- Raising air cargo safety through the application of global standards and by working closely with global and national postal authorities to address issues arising from e-commerce expansion
- Modernizing the Cargo Agency program governs the airline-freight forwarder relationship

E-freight implementation

The e-freight program will modernize air cargo processes by updating to digitized standard documents adapted for electronic commerce. Implementing e-freight will promote efficiencies, eliminating the need for multiple data entry, reducing errors, and enhancing security by enabling advance data transmission to the authorities.

The air cargo industry has focused on replacing the paper air waybill with an electronic air waybill (e-AWB) as a first step toward digitizing the entire pouch of up to 30 documents. And significant progress was made in implementing the e-AWB in 2014. Overall penetration more than doubled, from 12.3% to 24.9%, and the adoption rate of e-AWB was three times faster in 2014 than in 2013. Leading cargo hubs, such as Hong Kong, Dubai, and Singapore, achieved over 50% e-AWB penetration.

The success in 2014 was achieved through industry collaboration. Airlines, freight forwarders, and ground handling partners implemented common e-AWB procedures in key airports. Even independent forwarders got more engaged thanks to new IT solutions and the availability of an easy e-AWB agreement signature process. In addition, a number of important trade lanes, such as Guangzhou and Shanghai in China, and several airports in India and Brazil became available for e-AWB thanks to the industry's collaboration with local authorities.

Supply chain security

In recent years, governments have increased their cargo security oversight, including requiring 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 transporting goods into Europe is the European Union's ACC3 regulation, which came into force on 1 July 2014. This regulation applies to EU-bound air cargo from third countries. It requires that carriers be independently validated for the effectiveness of the security arrangements at their stations.

To help raise carriers' awareness of the ACC3 regulation, and to ensure that sufficient numbers of independent validators are available to audit stations, IATA established a Center of Excellence for Independent Validators (CEIV). The CEIV ensures that IATA members are 100% aware of their obligations under ACC3 and has to date trained nearly 100 validators to carry out the required checks.

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

- The Secure Freight program is a partnership between IATA and regulators to develop secure air cargo supply chains to meet the requirements of ICAO Annex 17 and other regulatory regimes and thereby facilitate the secure and efficient transportation of air cargo. Following successful Secure Freight trials in 2014, the program has been transitioned in 2015 to operational capacity development. This means that Secure Freight is no longer limited to selected test countries; it is available to any country through either a direct funding arrangement or as a capacity development activity financed by a third-party donor country or agency.
- Advance Cargo Information is increasingly being sought by governments. IATA is supporting an ICAO and World Customs Organization (WCO) joint working group that is looking at the global alignment and harmonization of preload advance cargo information.
- The Cargo Targeting System (CTS) initiated by IATA and the WCO is aimed at customs administrations in least-developed and developing countries. The system's objective is to shift from the systematic control of all cargo entering a country to the risk-based identification of only high-risk consignments. Studies confirm that this approach results in increased revenue compliance and fewer border delays. In 2015, the CTS will be tested in two locations. It will then be rolled out in 2016 to WCO member countries requesting it.

Quality management and benchmarking

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

C2K expanded its membership in 2014 at a faster rate than in any of the five prior years and remains a key tool to address perceived issues in air cargo quality. As of March 2015, C2K had 78 participating organizations, including 33 airlines representing 57% of the total volume of all international air waybills. In 2015 and beyond, C2K's quality management system will be expanded to facilitate the improved transportation and monitoring of cargo in sensitive supply chains, such as perishables and pharmaceuticals.

Facilities matrix development

Cargo handling is a critically important component of the air cargo supply chain and is performed at thousands of airports all over the world. That ubiquity presents a high risk for deviations in the quality and consistency of handling cargo.

The Cargo Operations Advisory Group (COAG), comprising airlines and ground handlers, has developed a Facility Capabilities Matrix that shows the capabilities against which a cargo handling facility can be measured. These capabilities include complying with safety and security regulations, ensuring the correct handling of such special cargo as pharmaceuticals and unit load devices, and recognizing the value of transparent data.

In 2014, nine trials of the Facility Capabilities Matrix were performed by COAG members at Frankfurt, Amsterdam, Helsinki, Istanbul, Chicago, Abu Dhabi, and Cape Town. The results of these trials will be assessed by airline, airport, and ground handling stakeholders in 2015 with views to developing a validation model against existing standards and to increasing the capabilities in the industry through the adoption of best practices.

Pharmaceutical logistics

The pharmaceutical sector transports temperature-sensitive goods, and a single mistake along the cargo supply chain can destroy an entire batch of medicines or vaccines. To reduce mishandling, a growing number of countries are issuing their own cold chain regulations and guidance. The industry welcomes the focus on higher standards, but the increasing number of disparate regulations around the world is becoming difficult to manage. Particularly problematic is the absence of a universal certification for handling and transporting pharmaceutical products.

In 2014, IATA launched the Center of Excellence for Independent Validators in Pharmaceutical Logistics (CEIV Pharma) to address these issues. CEIV Pharma offers a standardized, global certification program that trains people to conduct consistent, on-site assessments. At the same time, it provides the expertise needed to transport pharmaceutical products through a reliable cold chain worldwide.

CEIV Pharma is conducted in partnership with industry stakeholders and, in addition to delivering a single, internationally recognized standard, harmonizes and simplifies the number of audits. It improves compliance with standards and regulations by assessing operations against a standard checklist and trains independent validators in applying those standards and regulations.

The program also identifies and recognizes the best pharmaceutical shippers by certifying and then registering them on a public website. Several companies achieved CEIV Pharma certification in 2014, and the number of organizations seeking certification is expected to accelerate in 2015 and beyond.

Global standards for air cargo safety

The safety of passengers and air crews 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 is the safe carriage of lithium batteries. Incident data indicates that shippers still do not understand the regulations governing the transport of lithium batteries. Civil aviation authorities need to improve their oversight of shippers and must act when systemic noncompliance is identified.

The doubling in e-commerce website air shipments in recent years is notable. To help airlines and postal operators meet the challenges, in 2014 IATA and the Universal Postal Union (UPU) partnered to prioritize issues of safety, security, and training. The collaboration will continue in 2015 but with a focus on capacity building, tracking and tracing, and consumer education.

Air cargo emissions

In March 2014, the IATA Cargo Services Conference adopted a "CO_2 Emissions Measurement Methodology." The methodology was developed by the IATA Air Cargo Carbon Footprint (ACCF) working group and measures the CO_2 emissions generated by air cargo shipments.

The impetus for a common international emissions calculation methodology for air cargo came from airlines, freight forwarders, shippers, and regulators. This methodology will help industry players speak the same language and is in line with measurement methodology developed in 2008 by ICAO for passenger air travel. The next steps involve global recognition, adoption, and alignment through engagement with ICAO and other industry regulators and groups.

The airline-freight forwarder relationship

IATA worked with FIATA, the global body representing national associations of freight forwarders, to develop a program that recognizes the modern business relationship that exists between airlines and their freight forwarding customers.

The program will be run jointly by the freight forwarders and airlines and will establish professional standards and promote the enhanced use of technology and the continued use of the Cargo Accounts Settlement System (CASS). Country-based pilot test launches of the program will begin before the end of 2015.

Tailor-made: the journey of the future

Toward improved air travel

Air travel should be simple, smooth, and hassle free. Industry collaboration, under the umbrella of IATA's Simplifying the Business (StB) initiative, aims to transform the passenger experience through the implementation of global standards and innovative solutions.

The airport environment

Understanding what travelers want is the key to meeting their expectations. IATA's Fast Travel initiative 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 offer at least 80% of passengers Fast Travel–compliant solutions based on industry standards by 2020. The suite of solutions will cover self or automatic check-in, bag check, document check, flight rebooking, boarding, and bag recovery.

In 2014, 21% of travelers had access to a Fast Travel experience. For year-end 2015, the industry is targeting Fast Travel access for 35% of passengers, which will require a significant acceleration in Fast Travel implementation from the pace in previous years.

Mishandled baggage is another challenge. InBag is the successor to IATA's Baggage Improvement Program and by 2020 is expected to have reduced the percentage of mishandled bags worldwide from 1% to 0.5% and to have improved efficiency 20% in five key baggage areas: check-in, security, manual handling, arrivals, and transfers. IATA began implementing InBag in 2014 at 13 airports. To complement InBag, in due course IATA will introduce Baggage XML, which will simplify industry-wide messaging and promote innovation throughout the value chain.

E-services and airline products

Shopping for air travel is changing. Airlines offer a greater range of products and services and more opportunities for passengers to personalize their travel experience than ever before. The New Distribution Capability (NDC) is a global standard to enable air travel products and services to be displayed and sold through travel agents, while the IATA e-Services project, which was completed at the end of 2014, modernizes the back-office functions associated with airline offerings.

IATA's objective with e-Services is to replace all paper miscellaneous charges documents and excess baggage tickets with the Electronic Miscellaneous Document (EMD) standard. An EMD is an electronic record of the sale and use of lounge access, preferred seating, excess baggage, and other such products and services.

What Passengers are saying

IATA's 2014 Global Passenger Survey shows that

75%
of travelers prefer to check in online or automatically with a text message or e-mail from the airline. The remainder prefer to receive their boarding passes at the airport at check-in counters or kiosks.

75%
of travelers want a luggage tag that they can attach to their bag at home so that they can simply drop the bag at the airport.

49%
want the bag drop process to be quick and efficient, at about one minute.

New Distribution Capability

NDC will transform the way air travel products are retailed through travel agents by addressing distribution limitations in that channel. For airlines, NDC will facilitate product differentiation and shorten the time to market. For passengers, it will provide access to a transparent shopping experience and the wealth of airline content.

According to research by IdeaWorks Company and CarTrawler, air travelers in 2014 spent an estimated $28.5 billion on ancillary products and services, such as onboard food and beverages, checked baggage, premium seat assignments, and early boarding. The majority of this revenue came from airline websites, where customers are able to view detailed product information that may not always be readily accessible on systems used by travel agents.

NDC will provide travel agents with the same detailed information available on airline websites. It is a vital initiative given that an estimated 60% of airline tickets by value are sold through agents—online and at brick-and-mortar storefronts.

NDC is not a system. It is an XML-based data transmission standard for communications between airlines and travel agents. As such, it replaces the pre-Internet standard common today. Furthermore, it is an open, voluntary standard, available to any third party, intermediary, IT provider, or non-IATA member to implement and use.

A few global distribution systems (GDS's) have already begun to use some XML-based communication protocols. But they continue to employ proprietary standards rather than the open, global standard offered by NDC.

In 2014, exciting progress was made in all three facets of the NDC program: regulations, technical standards, and market adoption.

The US Department of Transportation (DOT) approved Resolution 787, the foundational regulatory document for NDC. The DOT noted that "Comparison shopping under the current system is generally limited strictly to comparing fares, and it is difficult to make price quality comparisons of different carriers' product offerings.... The modernized communication standards and protocols and the marketing innovations that [Resolution 787] could facilitate would be procompetitive and in the public interest."

The first set of end-to-end NDC technical schemas was released, allowing any travel technology supplier to start building its roadmap for the next generation of NDC-based airline, agency, or corporate booking solutions. At the same time, the number of airlines participating in NDC development grew, with more than 14 test projects under way or announced.

Meanwhile, market adoption progressed as all three major GDS's endorsed NDC and said that they would use the NDC standard if their airline partners required it. Amadeus deployed the industry's first NDC 1.0–enabled connectivity for travel agency distribution in North America to support the sale of United Airlines' Economy Plus product. And IATA reached agreement with a coalition of national travel agent associations to carry out a study on NDC benefits.

More NDC test projects are expected to be initiated in 2015 by airlines around the globe in partnership with travel technology and agency partners. But it is clear that there will be challenges as the industry transitions from test projects to widespread implementation.

- Airlines will need tools to manage and market the products and services that they distribute through the agent channel.
- Agents will need tools to manage the content they receive from airlines.
- Travel start-ups will need lasting technical standards to build their businesses and to bring new solutions to market.

IATA has every confidence in the ability of established distribution services providers to develop NDC-related solutions. But it has also looked for alternatives to spark and sustain innovation. It has, for example, partnered in launching the NDC Innovation Fund as a stand-alone source of venture capital. The fund will bolster innovation in the NDC-enabled distribution of airline products and services through investments in small and medium-sized companies seeking to develop solutions employing the NDC standard. IATA has partnered in this effort with Travel Capitalist Ventures, an international private equity and venture capital firm specializing in travel investments.

Airlines, meanwhile, must develop application programming interfaces to enable the dynamic distribution of their content. To facilitate and speed development, in 2015 the priorities are to

- monitor and improve the performance of NDC schemas to ensure that they meet expectations in scalability, security, and implementation, the objective being to release a major version of the schemas in 2015;
- establish and manage a certification process to ensure that there is transparency and visibility for those who implement the NDC standard; and
- produce guidance and instructional materials to help airlines implement NDC and complement those materials with such additional tools as a business case simulator and a project roadmap to assist airlines and their partners with their NDC activities.

Customer Order Transformation

Customer Order Transformation (COT) is a new initiative that connects airlines' core reservation and ticketing systems with NDC capabilities. There is a need to transform airline processes for the order and delivery of ancillary products and services, as NDC uses a modern, Internet-based language, while many airline reservation and ticketing systems are proprietary.

Real-time interaction

Travelers want to interact with their travel providers anytime and anywhere. This is especially so when they experience a disruption to their journey. But this degree of interaction is not possible because passenger contact information is not always accessible to service providers.

In 2014, however, standards and recommended practices for notifying passengers of cancellations, delays, and other operational information were adopted by the industry. The resulting Customer Contact Information initiative is expected to facilitate interaction with passengers.

The growing availability of airport Wi-Fi is a boon for the Customer Contact Information initiative. It will give passengers a number of valuable options. Passengers will be able to receive real-time flight information, to rebook, to receive push notifications, and to access airline websites.

The security experience

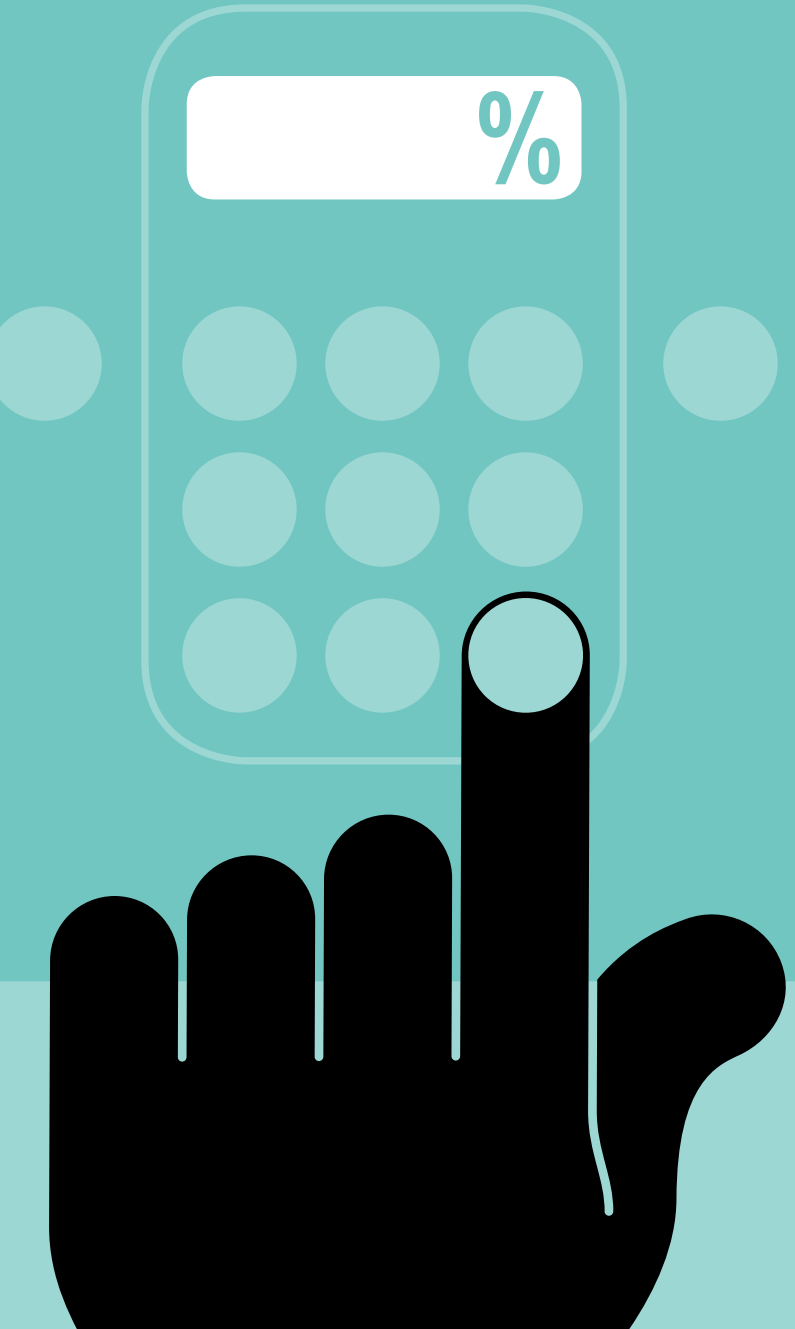
It is no secret that many passengers are unhappy with the airport security experience. Queuing times and removing shoes and belts were listed most frequently as the biggest irritants in the IATA Global Passenger Survey. Smart Security (see security chapter for more details) is a risk-based system that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

Pending the rollout of the full range of Smart Security procedures at airports worldwide, IATA has developed the Security Access and Egress (SAE) Improvement Project. The SAE aims to deliver short-term passenger security improvements by reducing queues and wait times at security checkpoints and by using space more efficiently.

In 2014, SAE teams visited 80 airports to analyze the causes of bottlenecks and to recommend improvements in passenger flow. SAE teams will visit a further 75 airports in 2015 to lay the foundations for Smart Security.

Automated border control

Automated border control (ABC) expedites the flow of low-risk passengers while maintaining stringent border security. In 2014, 47 airports worldwide implemented ABC, exceeding the target of 25. ABC is becoming commonplace, and in 2015 IATA will work with industry partners and governments to further its implementation using globally recommended practices.



Settlement systems: the financial backbone of the industry

An integrated global system

Commercial aviation is built on global standards that make an integrated international air transport system possible. Passengers take for granted their ability to travel practically anywhere in the world on a single e-ticket paid for in a single currency and issued at a single location regardless of the different airlines needed to get them from A to B.

The seamlessness of contemporary air travel depends on reliable, efficient, and secure systems to report, collect, and remit funds between the various parts of the value chain. IATA Settlement Systems (ISS) are the back office of the global air transport system. In 2014, the ISS settled $388.1 billion.

IATA seeks to improve the ISS's reliability and efficiency in 2015. It will do so by keeping the ISS's net default rate on gross sales at or below 0.025%, by maintaining the ISS's on-time settlement rate at 99.97% or better, and by reducing the ISS's overall unit costs.

Credit risk

The rules for the ISS were established decades ago using a one-size-fits-all approach that does not address the diverse and complex needs and risks of airlines and agents today. Some of the ISS's management rules in particular are a hindrance to protecting Billing and Settlement Plan (BSP) funds. ISS rules, for example, partially mitigate the financial consequences of agency defaults but have no provision to prevent this risk in the first place.

Addressing the ISS's shortcomings is vital. So for this purpose IATA has formulated a six-year plan, beginning in 2015 and ending in 2020. Among the plan's broad objectives are to speed up settlement periods, lower unit costs, reduce risk, and improve reliability.

Working with its airline partners, IATA already has in place a number of short-term initiatives to tackle agent-unrecovered BSP debt. These include the circulation of weekly management information reports on agent sales activity to BSP-participant airlines. To maximize the use of these reports, IATA has asked airlines to appoint an agent credit risk officer as a point of contact to receive the reports and to coordinate any agent risk management activity across the airline's commercial and financial functions. Weekly risk management reporting and other of IATA's initiatives will contribute to building momentum toward a new-generation ISS (New Gen ISS).

IATA's six-year plan (2015–2020)

IATA's six-year plan to improve further the ISS has, compared with a 2013 baseline, these targets:

TIMELY SETTLEMENT
99.98% of funds settled on time

SAFER FUNDS
80% reduction in annual unrecovered debt for BSP

FASTER CASH
50% reduction in number of days from ticket issuance to airline settlement in BSP

LOWER UNIT FEES
20% reduction in operating unit fees for BSP- and CASS-participant airlines

INCREASED RELEVANCE
30% cumulative increase in BSP volumes and a 19% increase in CASS volumes

CUSTOMER CENTRICITY
86% "high customer commitment" satisfaction scores based on an eight-point increase for BSP and seven-point increase for CASS

IATA Settlement Systems

$255.7 billion

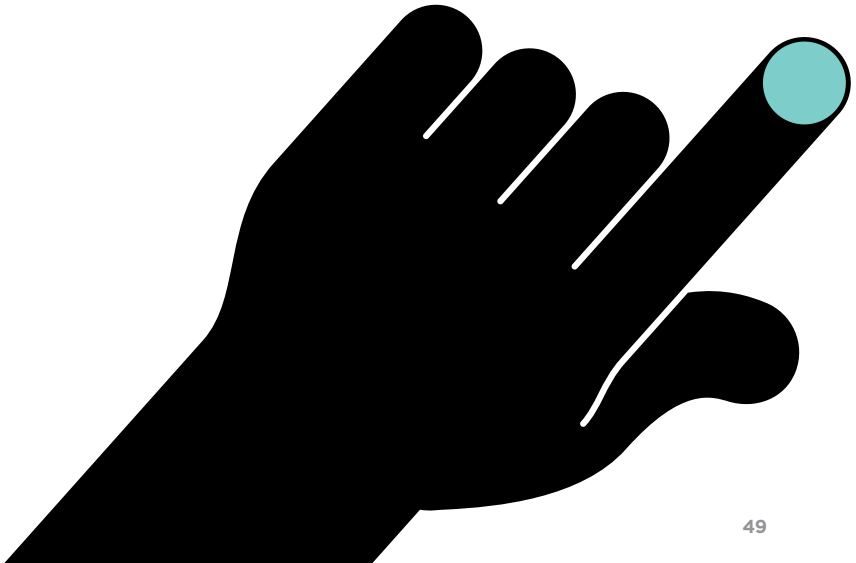
IATA's BSP facilitates and simplifies the selling, reporting, and remitting procedures of IATA-accredited passenger sales agents and improves financial control and cash flow for its roughly 400 participating airlines. At the close of 2014, there were BSPs in 181 countries and territories. Their overall on-time settlement rate was 99.98%.

$57.8 billion

The IATA Clearing House (ICH) provides fast, secure, and cost-effective settlement services to its more than 400 airline, airline-associated company, and airline travel partner participants. All ICH transactions flow through IATA's Simplified Interline Settlement (SIS) electronic invoicing platform. In 2014, that platform helped the ICH process a record $57.8 billion and enjoy settlement success and on-time settlement rates of 100%.

$3.5 billion

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



$33.4 billion

IATA's Cargo Account Settlement System (CASS) is designed to simplify the billing and settling of accounts between airlines and freight forwarders. It operates through CASS link, an advanced, global, web-enabled e-billing solution. At the end of 2014, CASS was processing 96 operations serving over 500 airlines, general sales and service agents (GSSAs), and ground handling companies. The on-time settlement rate for CASS was 99.99%.

$37.7 billion

IATA Currency Clearance Services (ICCS) offers global cash management that enables airline treasurers to control and repatriate centrally their worldwide sales funds. The ICCS is used by more than 320 airlines.

$71 billion

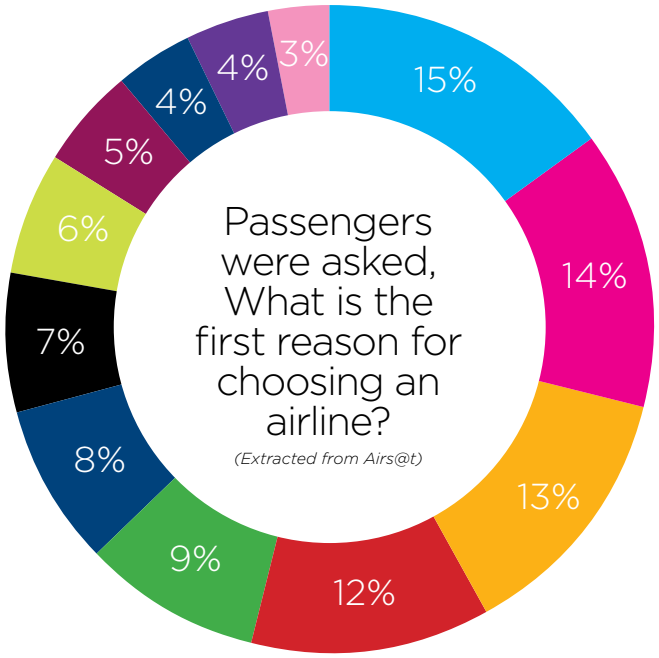
IATA's SIS is the industry's electronic invoicing platform. SIS simplifies and streamlines transactions by enabling the exchange of electronic data between airlines and direct operating cost suppliers, including airports; ground handlers; ground service providers; catering companies; ANSPs; and maintenance, repair, and overhaul (MRO) operators. Estimates are that companies that adopt SIS type of automation and cost control can save up to 2% of their operating expenses. Suppliers that utilize SIS e-invoicing will be able to reach out to their airline customers through a single platform.

In 2014, SIS had more than 590 participants and processed $71 billion, a 7.5% increase over the amount processed by SIS in 2013.

Supporting success: **solutions in all areas**

Seeking a source of value?

IATA's unrivaled global expertise and innovative products and services are a force for generating value in the aviation industry. The commercial returns on IATA products and services are reinvested to support industry-wide programs in such critical areas as safety, security, and the passenger experience.



Need to understand more about your passengers, where they are going and what they are thinking?

Direct Data Solutions is an evolution of the trusted PaxIS business intelligence product. It delivers crucial market insight using ticketed passenger data. This helps airlines 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 frequencies they need.

Direct Data Solutions covers 90% of worldwide agency sales and complements this vast coverage with direct sales from 23 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 enables airlines to make the best-possible service decisions.

CargoIS, meanwhile, provides an overview of air cargo market dynamics and offers strategic decision-making support for sales and marketing, revenue management, network planning, and performance assessment. It includes a full range of tools to help airlines, freight forwarders, and other air cargo stakeholders make the right business decisions. CargoIS is the only air cargo intelligence solution based on actual transaction data. It is informed by millions of air waybills, which represent the activities of airlines and freight forwarders on thousands of trade lanes.

Airs@t is a passenger satisfaction benchmarking survey designed for airlines. It helps airlines track and compare their customer satisfaction ratings based on annual surveys of more than 60,000 passengers flying on 30 airlines through more than 39 airports worldwide. Airs@t's in-depth research covers more than 75 attributes of the travel experience, including preflight, in-flight, and postflight information.

Weblink facilitates agency sales through IATA's BSP. It continues to gain traction, processing around $6 billion in 2014, up from $4 billion in 2013.

Timatic is an industry standard for ensuring airlines' compliance with border regulations. **Timatic AutoCheck** automatically verifies that passengers have the correct travel documents for their international journeys. It can be integrated into kiosk, web, mobile, and agent check-in applications. It can also help airlines benefit fully from self-boarding gates and automated flight rebooking, which reduce immigration fines, increase passenger processing efficiencies, and improve the customer experience.

Over the past 12 months, Qantas, Qatar Airways, and JetBlue have signed up to use Timatic AutoCheck. IATA is working with these and other airlines to help them realize the full benefits of this solution and has invested in multisite, cloud-based hosting to ensure that Timatic AutoCheck provides airlines with reliable, uninterrupted service.

IATA also continues to work with such industry solution providers as Amadeus, Sabre, and Damarel to convince them to make Timatic AutoCheck standard within their systems.

IATA Consulting assists airlines across all facets of the aviation business. In 2014, notably, IATA Consulting delivered in-depth assessments of a large Gulf carrier and of a European carrier to optimize their revenue and pricing management. IATA Consulting presented them with recommendations to help them grow their revenues and make better-informed business decisions.

Another successful 2014 project saw IATA Consulting provide a South Pacific carrier with a comprehensive study for its fleet renewal plan. IATA Consulting offered rigorously researched analyses to help the carrier's management make sound fleet renewal decisions. The analyses took into account all commercial, financial, and operational aspects in developing recommendations that are transparent, thorough, and based on industry-leading market data.

Want to ensure your cargo operations are in line with the latest rules, rates, and regulations?

The ***Dangerous Goods Regulations*** (*DGR*) manual is the industry standard reference for the carriage of dangerous goods and remains vital to proper safety assessments.

Lithium batteries are an important category of dangerous goods. For their safe transport by air, IATA has developed the ***Lithium Battery Shipping Guidelines*** specifically to guide shippers through the process of efficiently preparing shipments containing lithium batteries. The guidelines are available in Chinese, increasing their relevance in the largest market for lithium battery manufacture.

IATA's **Center of Excellence for Independent Validators in Pharmaceutical Logistics** (CEIV Pharma) aims to improve the handling of pharmaceutical cargo by upgrading, aligning, and standardizing pharma handling processes at airports globally. In 2014, Brussels Airport was the first to be awarded IATA's CEIV Pharma certificate.

IATA continues to innovate its **TACT** suite of air cargo rates and rules publications. The manuals, CD, data products, and next-generation online product are the industry reference for air cargo rates and rules. These dynamic sources of information are being taken to the next level with the introduction of the first global net rates distribution system for the industry.

Require the best data and analysis for your airport?

AirportIS provides the most comprehensive passenger and cargo traffic data available and is used by more than 70 airports globally for marketing and air service development activities. It continues to be a preferred source of data among airports and consulting companies. AirportIS also gives organizations outside the aviation industry a strategic window into global passenger streams and travel patterns. Those organizations use AirportIS's data to understand the competitive environment and identify trends and market dynamics to strengthen their market positions.

IATA Consulting utilizes IATA's industry-leading data tools to deliver robust traffic forecast reports to major airports. Notably, in 2009 and again in 2014 IATA Consulting assisted the Airport Authority of Hong Kong (AAHK) with the development of its long-term master plan. It also played a key role in helping AAHK obtain an environmental permit for a third runway.

Need training and development?

In 2014, the aviation industry directly supported around 9 million jobs. This number is likely to grow 50% in the next two decades, putting even more pressure on the industry to ensure that its workforce is well trained.

To this end, the IATA Training and Development Institute (ITDI) expanded its services in 2014 to help aviation businesses develop and retain talent. The ITDI introduced over 40 new programs to address the latest training requirements in fatigue risk management, unruly passenger response, and other areas.

Air transport is an industry where standards are the foundation for safe, efficient operations. So the ITDI continues to work with ICAO and other industry leaders to set training and competency standards for essential but nonaccredited professions. The IATA Professional Designation program has accredited nearly 400 airline managers, cargo professionals, and travel agents to date. The ITDI will announce additional designation programs in 2015 thanks to strong support from organizations throughout the industry.

ITDI training centers, meanwhile, were opened in the Middle East, South America, and Asia-Pacific in 2014. Partnerships, too, are helping to extend the ITDI's reach. The ITDI boasts 400 partners worldwide, including leading universities, specialized training institutions, and some of the aviation industry's most respected organizations. In 2014, the ITDI strengthened its relationships with ACI, Eurocontrol, and France's L'École nationale de l'aviation civile to further training initiatives of benefit to the respective sectors of those entities.

The I-TRAIN program launched jointly by the ITDI and ICAO in 2014 is meant to help the industry respond to the global shortages in skilled air transport personnel expected between now and 2030. In 2015, the ITDI expects more than 100,000 students and professionals to enroll in that and other of its diverse courses.

ITDI 2014 by numbers:

- Over 95,000 people from 1,000 organizations in over 90 countries trained
- 300 courses presented
- 40 diploma programs offered
- 400 resellers and partner institutions involved

Want events for personal enhancement?

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

In 2014, IATA launched two major events: the World Financial Symposium and the Cabin Safety Conference. IATA will add another major event, the World Maintenance Symposium, to its event offerings in 2015. The World Maintenance Symposium will cover such vital areas as dispatch reliability and human factors in aircraft maintenance. Its aim, and the aim of all IATA events, is to continue generating value for the industry by bringing decision makers together to promote best practice.

- World Cargo Symposium
- Legal Symposium
- Ops Conference
- Cabin Safety Conference
- Ground Handling Conference
- CNS Partnership Conference
- World Financial Symposium
- World Passenger Symposium
- AvSec World
- World Maintenance Symposium
- Slot Conference

Strategic partnerships

Network, Connect, Succeed
Twenty-five years ago, airlines entered an era of cooperation with industry suppliers that laid the foundation for IATA Strategic Partnerships.

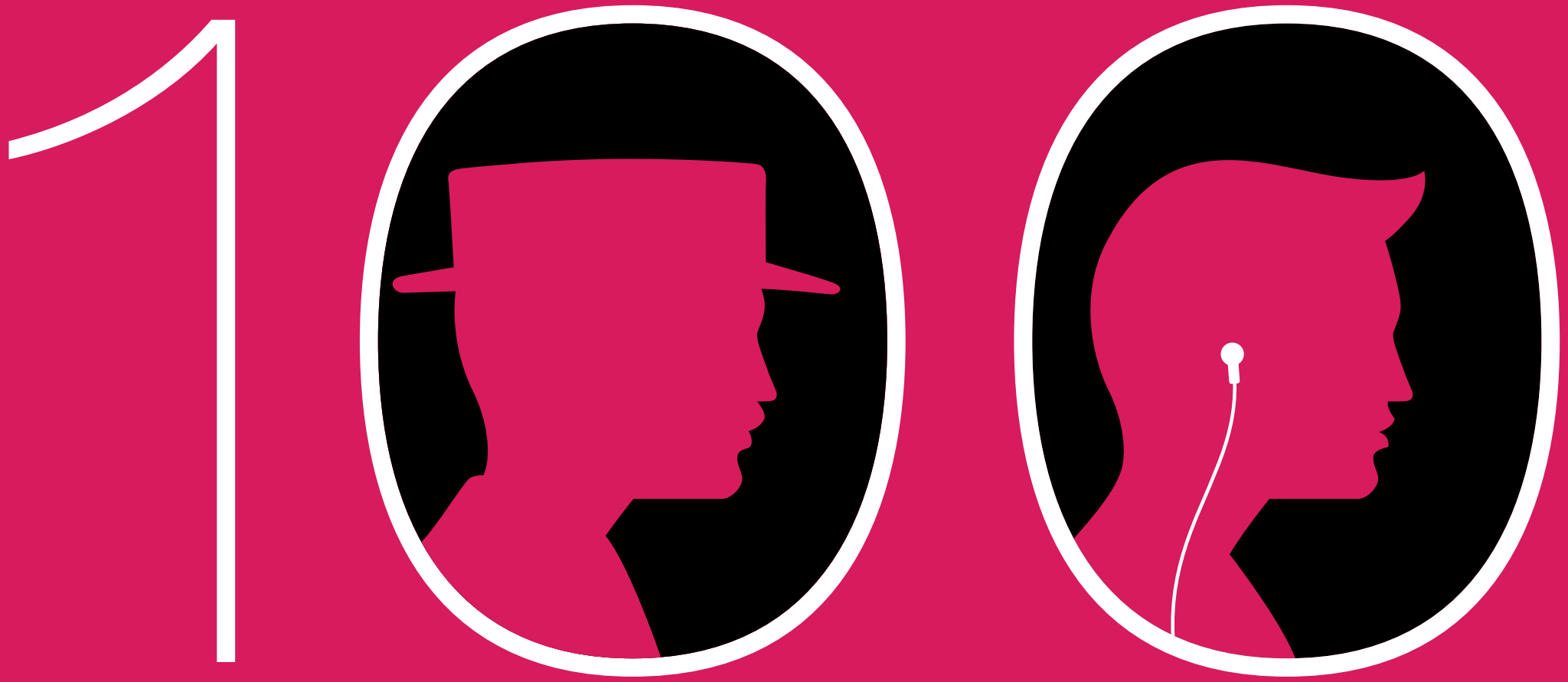
The IATA Strategic Partnerships program has grown into a community of more than 400 partners worldwide who share ideas and collaborate to improve aviation practices and technologies. This forward-thinking program focuses on more than 40 areas of involvement and thus covers a comprehensive range of industry activities. Members contribute to the efforts of more than 100 work groups and task forces.

Such a collaborative effort has greatly enhanced the quality of IATA standards. Initiatives developed in conjunction with IATA Strategic Partners have delivered countless operational efficiencies and safety enhancements for airlines. Strategic Partners, too, have benefited by being among the first to receive information on crucial opportunities through their participation in work group and task force discussions.

Establishing a forum for cooperation has been a win-win situation for all stakeholders. And IATA Strategic Partners will continue to forge a stronger future for the air transport industry.

100 YEARS OF COMMERCIAL FLIGHT

Small world: **big future**



A 23-minute flight over Tampa Bay, Florida, on 1 January 1914 changed the world. It marked the beginning of commercial aviation, the brainchild of three visionaries:

- Percival Fansler, an entrepreneur who saw commercial opportunity in the technology of flight
- Thomas Benoist, who built the aircraft
- Tony Jannus, who piloted the plane to its destination

But it was a fourth person who made their vision a reality—by purchasing a ticket. Abram Pheil paid $400, the equivalent of $9,500 today, in an auction for the privilege of being the sole passenger on the first commercial flight.

Not long after, however, one-way tickets regularly went on sale for $5. It took only slightly longer for the St. Petersburg-Tampa Airboat Line to cease operations, highlighting a challenge that the aviation business continues to face to the present day.

There was, however, no turning back. Air travel was off and flying as a business and from a single aircraft, a solitary route, and a lone passenger has grown into an industry that transports 3.5 billion passengers every year on more than 50,000 routes; boasts a global economic footprint of $2.4 trillion annually; ships $6.8 trillion worth of air cargo yearly; and supports 58 million jobs worldwide.

In the past 100 years, more than 65 billion passengers have traveled by air. And the world has benefited from the advent and advance of commercial aviation. Economies have thrived, cultures have been experienced and exchanged, families and friends have been reunited—all thanks to air connectivity.

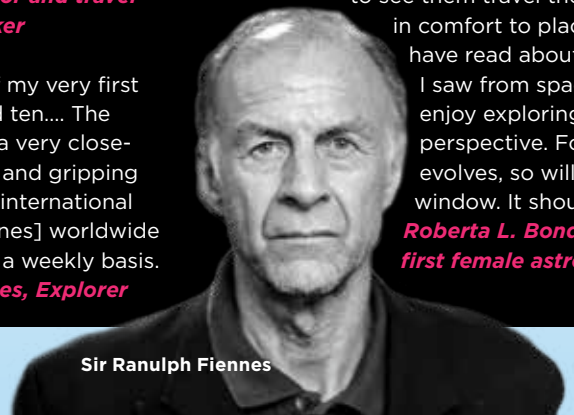
That, really, is what the story of commercial aviation's first century is all about: the opportunities that flying has made possible for people.

Accordingly, IATA marked the centenary by engaging people, directly and through the media, in conversations about the impact that aviation has had on their lives. Their comments testify to a century during which the barriers of geography and time were diminished by an industry that has made our once big world small and that has a yet bigger role to play in the world's future.

Leadership comments

I see airlines as a force for unity and co-operation among nations. Extending our horizons physically and intellectually, whilst always aware of their responsibilities to our environment. They will surely shape the future as they've shaped my working life.
Michael Palin, Actor and travel documentary maker

I recall the thrill of my very first flight in 1954 aged ten.... The memory includes a very close-by church steeple and gripping my mother. As an international lecturer, I use [planes] worldwide and very often on a weekly basis.
Sir Ranulph Fiennes, Explorer



Sir Ranulph Fiennes

Roberta L. Bondar

Each time I step into a commercial aircraft, I think of my family and how much fun it would be to see them travel the great distances in comfort to places that they have read about—places that I saw from space and now enjoy exploring from a closer perspective. For as the world evolves, so will the view out the window. It should not be missed.
Roberta L. Bondar, Canada's first female astronaut

To this day I still marvel at the machines that fly. Getting the right plane with the right passengers, crew, food and luggage and doing it hundreds of times a day to near perfection: magic.
Richard Quest, Anchor, CNN

[I remember] flying on the new Boeing 707 in the 1970s to university in America. That was when I discovered the splendid, meditative solitude of looking at clouds for hours on end. It was the beginning of my love story with commercial flying: it opened up the romance of travel for me as a young person.
Ho Kwon Ping, Executive Chairman, Banyan Tree Holdings

Ho Kwon Ping

Aviation is not just about the airline business, it contributes significantly to the economic development and prosperity of the cities involved. It is thus vital for the cities—and their countries—to recognize that and ensure their policies support and facilitate the development of aviation, in an open and fair environment.
Philip Chen, Managing Director, Hang Lung Properties Ltd.

Throughout the year of aviation's 100th anniversary, IATA invited people to comment online about what aviation means to them. A number of world leaders also took the time to express their thoughts on the importance of commercial flight (see appendix A).

Memories of a first flight

The first time for me was 2005 when I traveled with Qatar airways from Sudan to Malaysia through Doha. It's awesome.
Badreldin

Every time I take a plane, I remember how human beings are capable of doing the impossible. I am not going to share my first experience, as every time is a first experience to me.
Tareq

My first flight was around 2002, from Nanjing to Guangzhou. At that time, people still used paper tickets to check in.
Hongmei

My first flight was in 1990 to Paris on a Soviet Aeroflot TU154. I will remember it all my life...especially the smell of freedom in Charles De Gaulle airport! I'll never ever forget that amazing smell mixed with French perfume.
Vytis

My first flying experience was at the age of 11 in a brand new 747 owned by Sabena, Belgium's airline. The flight brought us from Brussels to New York. I can still feel the excitement when I saw the New York skyline coming closer and closer... an image I will never forget.
Carine

When I was 16 years old in 1975 I took my first flight ever, Dublin to Shannon on board an Aer Lingus 747—the true and original Jumbo Jet. It is true what they say—we do not remember days, we remember moments.
Patrick

The first flight experience that I can recall was when I was about seven. I can't remember the flight itself, but I do remember the feeling I had of boarding an airplane on a cold winter day in Russia, and next day arriving to a hot summer day in Zimbabwe.
Mila

My best, most beautiful flight was December 1970. It was my first from Argentina to Paris in France. Only three or four passengers were flying. Since then I've visited a lot of different places around the world. Flying is the best thing that can happen to you.
Nancy

Sparking a friendship

When I look at my Facebook Newsfeed I see friends' faces from all over the world; people I never would have had the chance to meet had we not boarded a flight and taken a chance to explore a new place.
Kate

To conclude the campaign, children were invited to submit their ideas on what flying will be like in 100 years' time

Connecting with friends overseas is a wonderful privilege that aviation has afforded us in recent decades.
Chris

Children today are able to see, smell, and taste food that comes from all over the world. This surely is something to celebrate. I believe it brings us closer to cultural diversity and through that a greater understanding and appreciation of the world as a community. I celebrate the chicken tikka sandwich.
Rosebud

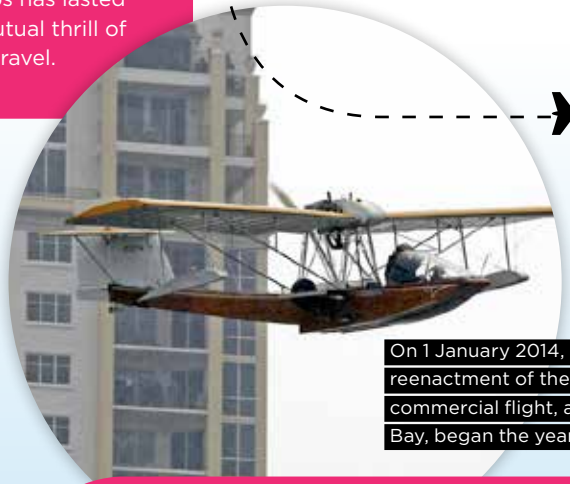
A number of airports displayed information on the anniversary. Geneva airport branded an entire bus!

I didn't realize that everyone going to work on my summer camp was also on the same flight, and we'd actually been put in seats next to each other! Twelve years later I'm still friends with some of them.
Richard

As a child of an army officer who was often stationed abroad, I went to boarding school and had to travel for a number of years as an unaccompanied minor. With hours before flights spent in a holding lounge trying to be grown-up and highly sophisticated, you often struck up friendships with your fellow "Dilbert-badge" wearers. One of those friendships has lasted over 25 years and was absolutely born from a mutual thrill of flying without parents and the love of air travel.
Abby

Favorite food from around the world

It's amazing what sort of food we can access the world over thanks to air cargo. I wouldn't be able to make my favorite Corsican dish without Brocciu [cheese]. Don't even get me started on the list of wines to go with the cheese, another truly global commodity!
Victoria



On 1 January 2014, a reenactment of the first commercial flight, across Tampa Bay, began the year's celebrations.

Family flights with special memories

One of my fave memories was taking my niece for her first flight on a girls' holiday with my mom and sister to see our grandparents. She was quite little at the time and was surprisingly easy to travel with. She was very happy and very fascinated by the sights and sounds and all the people in the airport and in the plane. It is a sweet memory.
Kate

When I was 8 years old, in 1960, I flew with my parents on a Lockheed Electra II from Dallas to Washington, D.C. I remember the stewardess (as they were then called) let me open the passenger door when we arrived. It was one of the formative experiences leading me to become a pilot myself.
Ed

It was only in my second year of working that I managed to sponsor the whole family for a trip. It was a memorable moment for me to see them getting excited, and they couldn't stop looking out of the window. "This plane...it seems like it's not moving," dad tells his backseat passenger. I just chuckled with mum, glad that there wasn't turbulence to freak them out.
Ain

Appendix A: Letters from Leaders

Letter from Celso Amorim, Minister of Defense, Brazil

I first boarded an airplane in 1953 from Florianopolis to Rio de Janeiro. At the time, I could hardly imagine the revolutionary impact flying would have on my profession.

The airplane has changed forever the speed of diplomacy.

When it comes to building trust and negotiating agreements, there is no substitute for human interaction on the international scale.

Diplomatic mediation requires much coming and going with ideas and proposals.

In my tenure as Foreign Minister of Brazil under President Lula, there were a number of times when I thought a particular mission would not be possible. But the airplane made it happen. I once visited 10 countries in the Middle East in 10 days!

More than 50 years later, every time I board an airplane, I can't help looking at the future of aviation with excitement.

The relation between man and the air machine, demonstrated by the first time in Paris, in 1906, by my fellow compatriot Santos Dumont, might just be in its beginning, and a new future of speed, of safety, of comfort, and of range of travel might just be ahead of us.

Fly us there!

Letter from Benigno S. Aquino III, President of the Philippines

My warmest greetings to the International Air Transport Association as you celebrate International Civil Aviation Day.

Human ingenuity has allowed us to rapidly reach new horizons and transcend our limitations. It has been 100 years since the first commercial passenger flight took to the skies, marking the beginning of a revolution in transport. Since then, our nations, economies, and societies have become permanently less distant. Without the tireless work of the engineers and designers who dared to imagine and consistently pushed the envelope of this field forward, travel by air would have remained an unpredictable and expensive endeavor.

Civil aviation has likewise played an integral part in bringing equitable progress to the Philippines. It has allowed us to convey a greater message that we are a growing market ripe for investment, and that our locales are among the best destinations in the world for people to discover.

I am confident that your industry will remain vital partners in ensuring that our agenda of inclusive growth is realized. May you continue to innovate and allow your breakthroughs to connect us even more intricately in the name of advancement and prosperity.

I wish you a happy and meaningful celebration.

Letter from Anthony R. Foxx, US Secretary of Transportation

Thank you for your letter asking me to share my thoughts on the occasion of the 100th anniversary of the first commercial airline flight.

Commercial aviation has contributed greatly to the economic and social development of our Nation. It has redefined opportunity and geography for our citizens. From traveling home for the holidays to the overnight delivery of time-sensitive goods, commercial aviation is an integral part of everyday life and commerce. It links businesses worldwide, accounting for $1.5 trillion of economic activity and almost 12 million U.S. jobs.

The first 100 years of commercial flight moved 65 billion passengers across the globe. Predictions are that an additional 65 billion passengers will fly in the next two decades. To meet this challenge, we must modernize our air traffic system to ensure industry-leading standards for both capability and performance. That's why we are committed to working with industry to deliver the Next Generation Air Transportation System, or Next Gen. We also must continue to use risk management principles to improve safety by better targeting our efforts and resources.

And all stakeholders must strive to provide leadership globally to foster collaborative, cost effective efforts to enhance the safety, efficiency, and sustainability of commercial aviation.

Letter from Stephen Harper, Prime Minister of Canada

I am pleased to mark the 100th anniversary of the first commercial airline flight.

Commercial aviation has changed our world for the better. Destinations once weeks of travel apart can now be reached in hours. For a country as vast as Canada, this has been of enormous significance, as previously isolated regions are now accessible year round. Commercial flights have also played a vital role in shaping our prosperity by enabling trade and tourism in a truly global marketplace.

The next century of commercial aviation will bring new technologies, new destinations and new possibilities. Canada is proud to play a leadership role in this essential industry. I extend my best wishes to all involved in commercial aviation from ground crews to pilots to the passengers en route to every corner of our globe.

Letter from Barack Obama, President of the United States of America, to Flight 2014, Inc., the organizing body of the centennial reenactment ceremony on 1 January 2014

I am pleased to join all those celebrating the 100th anniversary of commercial flight. America has always been a nation that empowers visionaries and entrepreneurs, and for generations daring men and women have pushed our boundaries and kept America on the cutting edge of innovation. One century ago a pilot and a passenger aboard a small plane carried this tradition forward by successfully completing a flight on the world's first airline. This short trip from St Petersburg to Tampa ignited an industry that changed the way we travel, and helped lead to today's interconnected world.

As we celebrate this remarkable achievement in the history of aviation and the life of our nation, let it inspire us to continue the important work of testing the limits of our times. While we cannot predict where innovation will take us, this milestone serves as a reminder that when bold ideas unite with a spirit of discovery, the sky is no limit.

Letter from Lee Kuan Yew (1923–2015), First Prime Minister of Singapore

I congratulate the aviation community for reaching this milestone of 100 years of commercial flight.

I remember fondly the Singapore Airlines Concorde flights that allowed one to have a late breakfast in Singapore and lunch in London on the same day. But we have yet to overcome the sonic boom that so greatly affected the economics of supersonic flights so air travel today remains subsonic.

Air travel has catalysed and transformed the world we live in. It has allowed businesses and markets to become more integrated, fostering innovation and economic development. By exposing more people to the world, it has broadened our horizons and improved our wellbeing and quality of life. As Asian economies develop and mature, more people will take to the skies for the first time. I am confident that air travel will continue to bring people closer together and enable countries to grow and prosper.

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