



2013 ANNUAL REVIEW 2013

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



Tony Tyler
Director General & CEO
International Air Transport Association
Annual Review 2013
69th Annual General Meeting
Cape Town, June 2013

Disclaimer: Please note, the photographs used in this publication are for illustrative purposes only. The models depicted in these photographs are intended to illustrate the idea of real, everyday people from different cultures and regions. The authors do not intend that any of the views in this publication, or associated to the photographs, are to be held as the views of the models themselves.

A close-up portrait of a woman with dark, shoulder-length hair, looking directly at the camera. She is wearing a black and white striped shirt. The background is a plain, light-colored wall. A white-bordered box in the upper right corner contains text. A dotted line extends from the bottom of this box down towards the woman's hair.

"I own a tour company in Fiji. People come from all over the world to see our beautiful islands. We specialize in eco-tourism. Our guides speak at least three languages and have special training in local nature."

Tourism by air accounts for 25% of Fiji's GDP, and aviation supports 66,000 jobs on the islands. Globally, aviation directly employs 8.36 million people.

IATA Membership at 1 May 2013

ABSA Cargo Airline
Adria Airways
Aegean Airlines
Aer Lingus
Aero República
Aeroflot
Aerolineas Argentinas
Aeromexico
Aerosvit Airlines
Afriqiyah Airways
Aigle Azur
Air Algérie
Air Arabia
Air Astana
Air Austral
Air Baltic
Air Berlin
Air Botswana
Air Canada
Air China
Air Corsica
Air Europa
Air France
Air India
Air Koryo
Air Macau
Air Madagascar
Air Malawi
Air Malta
Air Mauritius
Air Moldova
Air Namibia
Air New Zealand
Air Niugini
Air Nostrum
Air One
Air Pacific
Air Seychelles
Air Tahiti
Air Tahiti Nui
Air Transat
Air Vanuatu
AirBridgeCargo Airlines
Aircalin
Airlink
Alaska Airlines
Alitalia
All Nippon Airways
AlMasria Universal Airlines
ALS
American Airlines
Arik Air
Arkia Israeli Airlines
Armavia
Asiana Airlines
Atlas Air
Atlasjet Airlines
Austral
Austrian
AVIANCA
Azerbaijan Airlines
B&H Airlines
Bangkok Air
Belavia—Belarusian Airlines
Belle Air
Biman
Binter Canarias
Blue Panorama
Blue1
bmi Regional
British Airways
Brussels Airlines
Bulgaria air
C.A.L. Cargo Airlines
Cargojet Airways
Cargolux
Caribbean Airlines
Carpatair
Cathay Pacific
China Airlines
China Cargo Airlines
China Eastern
China Southern Airlines
CityJet
Comair
Condor
Condor Berlin
Copa Airlines
Corsair
Croatia Airlines
Cubana
Cyprus Airways
Czech Airlines
Delta Air Lines
DHL Air
DHL International E.C.
Donavia
Dragonair
Egyptair
EL AL
Emirates
Estonian Air
Ethiopian Airlines
Etihad Airways
Euroatlantic Airways
European Air Transport
Eurowings
EVA Air
Federal Express
Finnair
flybe
Freebird Airlines
Garuda
Georgian Airways
Gulf Air
Hahn Air
Hainan Airlines
Hawaiian Airlines
Hong Kong Airlines
Hong Kong Express Airways
Iberia
Icelandair
InselAir
Interair
InterSky
Iran Air
Iran Aseman Airlines
Israir Airlines
Japan Airlines
Jat Airways
Jazeera Airways
Jet Airways
Jet Lite
JetBlue
Jordan Aviation
JSC Nordavia—RA
/...

Juneyao Airlines
 Kenya Airways
 Kish Air
 KLM
 Korean Air
 Kuwait Airways
 LACSA
 LAM—Linhas Aéreas de Moçambique
 LAN Airlines
 LAN Argentina
 LAN Cargo
 LAN Perú
 LAN Ecuador
 Libyan Airlines
 LOT Polish Airlines
 Lufthansa
 Lufthansa Cargo
 Lufthansa CityLine
 Luxair
 Mahan Air
 Malaysia Airlines
 Malmö Aviation
 Martinair Cargo
 MAS AIR
 MEA—Middle East Airlines
 Meridiana fly
 MIAT—Mongolian Airlines
 Montenegro Airlines
 NIKI
 Nippon Cargo Airlines
 Nouvelair
 Olympic Air
 Oman Air
 Onur Air
 PAL—Philippine Airlines
 Pegasus Airlines
 PGA—Portugália Airlines
 PIA—Pakistan International Airlines
 Precision Air
 PrivatAir
 Qantas
 Qatar Airways
 Rossiya Airlines
 Royal Air Maroc
 Royal Brunei
 Royal Jordanian
 SAA—South African Airways
 Safair
 Safi Airways
 SAS
 SATA Air Açores
 SATA Internacional
 Saudi Arabian Airlines
 Shandong Airlines
 Shanghai Airlines
 Shenzhen Airlines
 SIA—Singapore Airlines
 SIA Cargo
 Siberia Airlines
 Sichuan Airlines
 Silkair
 SKY Airlines
 South African Express Airways
 SriLankan Airlines
 Sudan Airways
 SunExpress
 Surinam Airways
 SWISS
 Syrianair
 TAAG—Angola Airlines
 TACA
 TACA Peru
 TACV Cabo Verde Airlines
 TAM—Transportes Aéreos del Mercosur
 TAM Linhas Aéreas
 TAME—Linea Aérea del Ecuador
 TAP Portugal
 TAROM
 Thai Airways International
 THY—Turkish Airlines
 Tianjin Airlines
 TNT Airways
 Transaero
 TransAsia Airways
 TUIfly
 Tunis Air
 Ukraine International Airlines
 United Airlines
 UPS Airlines
 US Airways
 UTair
 Vietnam Airlines
 Virgin Atlantic
 Virgin Australia Airlines
 Virgin Australia International Airlines
 Vladivostok Air
 Volaris
 Volga-Dnepr Airlines
 VRG Linhas Aéreas
 White Airways
 Wideroe
 Xiamen Airlines
 Yemena

The Chairman's message

The aviation industry can reflect on a year of success and achievement.

Nearly three billion people and 47 million metric tons of cargo were transported safely by air in 2012. That activity supported some 57 million jobs and \$2.2 trillion in economic activity—about 3.5% of global GDP.

Air transport connects businesses to global markets and enables worldwide access to time-sensitive products, from medicines to fresh produce to emergency aid.

More than half the world's tourists travel by air. And aviation underpins iconic major events, such as the Olympic Games.

Harder to measure, but equally important, is aviation's role in bringing together families and friends, bridging cultures, and spreading ideas. Aviation enriches lives, just as it spreads prosperity.

We should be proud of all these achievements—and we should be forthright in promoting them.

At the same time, we must be clear about the challenges we face.

It is essential that we continue to maintain the highest standards of safety, security, and environmental sustainability, as the foundations for our growth as an industry. IATA's 240 members, in cooperation with governments and other partners, are working toward continuous improvement through dedicated programs in each area.

We must also continue to work with governments to ensure that policy and regulatory settings encourage rather than restrict aviation's economic contribution.

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Alan Joyce
Chairman
IATA Board of Governors
2012—2013

Many airlines have embarked on major transformation programs, reshaping their business, reengaging employees, and revitalizing customer service. Many are forging ahead with new investments and new partnerships.

Yet aviation's costs remain high and margins remain thin. Inefficient infrastructure or poorly conceived regulation—however well-intentioned—can threaten the industry's financial sustainability, which is a prerequisite

for the many economic benefits it generates.

Genuine collaboration between industry and government, focused on shared, long-term goals, will be vital if aviation is to continue creating jobs and driving productivity.

As I look ahead, I am optimistic about aviation's capacity to realize its potential. Aviation is safer, more efficient, and more

technically advanced than ever before, and our industry's leaders—with IATA in the forefront—are setting out an exciting vision for the future.

It has been an honor to serve as IATA's Chairman for the past year. In the pages of this review, you will read about our association's many significant achievements—and its aspirations for the next 12 months and beyond.

I hope that it will be an inspiration for my successor, and for all IATA's members, as we strive to take this wonderful industry to even greater heights.

Alan Joyce
Chairman
IATA Board of Governors
2012—2013

IATA Board of Governors 2012—2013

Akbar Al Baker
QATAR AIRWAYS

Khalid Abdullah Almolhem
SAUDI ARABIAN AIRLINES

Richard Anderson
DELTA AIR LINES

Tawfik Assy
EGYPTAIR HOLDING
COMPANY

David Barger
JETBLUE

David Bronczek
FEDEX EXPRESS

Yang Ho Cho
KOREAN AIR

Andrés Conesa
AEROMEXICO

Enrique Cueto
LAN AIRLINES S.A.

Peter Davies
AIR MALTA

German Efromovich
AVIANCA

Christoph Franz
LUFTHANSA

Tewolde Gebremariam
ETHIOPIAN AIRLINES

Goh Choon Phong
SINGAPORE AIRLINES

Naresh Goyal
JET AIRWAYS (INDIA) LTD

Peter Hartman
KLM

James Hogan
ETIHAD AIRWAYS

Harry Hohmeister
SWISS

Alan Joyce
QANTAS

Temel Kotil
TURKISH AIRLINES

Liu Shaoyong
CHINA EASTERN AIRLINES

Titus Naikuni
KENYA AIRWAYS

Masaru Onishi
JAPAN AIRLINES

Calin Rovinescu
AIR CANADA

Emirsyah Satar
GARUDA INDONESIA

Vitaly G. Saveliev
AEROFLOT

Si Xian Min
CHINA SOUTHERN AIRLINES

John Slosar
CATHAY PACIFIC

Jean-Cyril Spinetta
AIR FRANCE/KLM
(representing AIR FRANCE)

Antonio Vázquez
IBERIA

Willie Walsh
International Airlines Group
(representing BRITISH
AIRWAYS)

Strong partnerships, strong business.

Airlines are delivering weak profits in difficult times. In 2012, the industry made an aggregate profit of \$7.6 billion. On revenues of \$638 billion, that's a 1.2% net profit margin.

That airlines made any money at all with GDP growth at 2.1% and oil averaging a record high of \$111.8 a barrel (Brent) was a major achievement. To put that into perspective, in 2003 the industry was in the red, with oil at less than \$30 a barrel and economic growth at 2.8%.

Profitability is being delivered as a result of efficiency gains and improvements to the industry's structure. One illustration of this is that the average passenger load factor has increased by some eight percentage points over the last decade.

The current year promises some modest improvement. There is no relief in sight for oil prices. But the global economy

is showing signs of strengthened growth powered primarily by robust emerging markets.

Aviation's role as a catalyst for economic growth has never been clearer. The developed economies desperately need economic growth. It is the only way out of the set of fiscal crises that they face. And aviation is a critical link to facilitate trade with those economies that are expanding.

Aviation is a team effort. Its fortunes and its ability to play this vital role are dependent on strong partnerships across the value chain and with governments. In many cases, these partnerships are delivering progress. In others, the industry faces strong headwinds.

With an average of one major accident for every five million flights on Western-built jets last year, safety is a clear success story. A common commitment, global standards, and cooperation delivered the safest year in aviation history. The IATA Operational Safety Audit (IOSA) is making a significant contribution to improved performance. The 380-plus airlines on the IOSA registry did not record a

single hull loss with a Western-built jet in 2012, and the total accident rate among them was 4.3 times less than that of airlines not on the registry.

A similar cooperative approach between industry and government is improving security as well. Alignment exists on the promotion of a risk-based, data-driven approach.

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This is helping to move forward our two flagship security programs: Checkpoint of the Future and Secure Freight. With regard to the former, we have agreed to standards, we are testing components, and we are planning for a phased rollout commencing in 2014. Turning to cargo, Kenya, Mexico, Chile, Egypt, the UAE, and Jordan have all implemented Secure Freight pilot projects following that program's successful test implementation in Malaysia.

Aviation also made progress on its commitment to environmental sustainability in 2012. The industry remained united behind the goals of improving fuel efficiency an average 1.5% annually to 2020, of achieving carbon-neutral growth from 2020 (CNG2020), and of cutting net emissions in half by 2050 compared with 2005.

Market-based measures (MBMs) will be critical to meeting the CNG2020 commitment. And because aviation is a global industry it is critical that such measures be coordinated globally. With the European Union having "stopped the clock" on its unilateral plan to include international aviation in its emissions trading scheme in late 2012, the focus of both policy makers and the aviation industry is on the International Civil Aviation Organization (ICAO) and its triennial assembly later this year. To support a government-led agreement, airlines are working hard to find an industry solution on how to share the burden of CNG2020.

Airlines are also working with the travel value chain to address the urgent need to modernize distribution through travel agents. Specifically, the New Distribution Capability (NDC) initiative aims to develop XML-messaging standards for communication between agents and airlines. The goal is to enable travel agents to be able to offer travel buyers the same content-rich shopping experience that is offered through airline websites. This cannot be offered today because of the limitations of global distribution systems (GDS's), which are built on pre-Internet technologies. A resolution establishing the NDC standards is with the US Department of Transportation for approval, and we are confident of the outcome given the significant consumer benefits that NDC will facilitate.

It appears, however, that we have a more difficult job in convincing governments to alleviate the burden of high taxes and onerous regulations. The European Commission's agreement to drop plans to deviate from the *Worldwide Slot Guidelines* in its Airports Package of regulations was a significant achievement. But the industry's advocacy agenda remains full. The focus is on the global harmonization of regulations, and the priority list includes finding a reasonable approach for passenger rights, the universal adoption of Montreal Convention 1999 (MC99), and the adherence to ICAO principles by governments in the regulation and privatization of monopoly infrastructure providers.

Alongside working with external partners to improve the operating environment for IATA's members, IATA is itself determined to be a secure and ever-more reliable partner to the industry. This is evident in continuous efforts to strengthen IATA's settlement systems (ISS), on which the industry relies. In 2012, over \$371 billion was settled through the ISS. The Billing and Settlement Plan (BSP)—the largest of the IATA systems—settled nearly \$252 billion, with 99.976% accuracy. To improve ISS performance further, we will complete the migration of back-office functions to regional hubs and the automation of 96% of ISS settlements by the end of 2013. Longer term, the conclusion of a new data processing agreement is keeping us on track to achieve a 27% reduction in unit fees by 2017 compared with 2010.

To meet the needs and expectations of its membership, IATA is changing. We remain committed to our time-tested mission to represent, lead, and serve the airline industry. But we have set a vision that is even more ambitious. IATA will be the force for value creation and innovation driving a safe, secure, and profitable air transport industry that sustainably connects and enriches the world.

To that end, effective 1 July a major organizational restructuring will take effect. The aim is to be closer to the needs of our members. And that will be achieved with an organization that is focused on "Global Development, Regional Delivery." The governance structure remains unchanged. But you will see an even more vigorous IATA focused on delivering value to our 240 members and to the industry as a whole.

Two significant aviation milestones are in the offing. Annual passenger numbers are expected to exceed three billion for the first time in 2013. And 1 January 2014 will mark the 100th year of commercial aviation.

In a century, aviation has grown to be the lifeblood of a globalized economy and a true force for good in our world. Your association remains dedicated to its further sustainable development as a safe, secure, and profitable industry.



Tony Tyler
Director General & CEO

The industry story in 2012.

In 2012, strong economic growth in emerging markets resulted in an expansion of passenger traffic and greater aviation connectivity. And despite record aircraft deliveries, asset utilization reached new highs, boosted by consolidation and other improvements to the industry's structure. Newly delivered aircraft, meanwhile, also brought significant efficiency improvements.

The picture was very different in the air freight business, which suffered a second difficult year of shrinking markets, falling utilization, and lower yields.

The good volume performance of the passenger business, however, led to better airline profitability than expected. This is especially so given that developed economies remained weak and jet fuel prices reached new annual highs.

Of the three largest markets that together constitute 83% of global traffic, Asia-Pacific airlines continued to deliver the highest margins and largest profits, albeit profits that were lower than in 2011 because of the weakness of air freight. North American airlines generated the second-largest profits and improved their performance as a result of the efficiencies resulting from consolidation. European airlines only just broke even, largely as a result of the continued recession in the Eurozone.

Air travel market growth slowed in 2012 but outperformed a weak global economy.

Passenger traffic (expressed in revenue passenger kilometers) grew 5.3% in 2012. Although the growth rate is in line with industry trends, it should be noted that the rate of expansion slowed for the second consecutive year. Air travel nevertheless has been unusually robust in the face of difficult economic conditions. In the past 20 years, air travel growth has averaged 1.8 times that of global GDP growth. But in 2012, air travel grew 2.5 times as fast as global GDP.

Global connectivity expanded further.

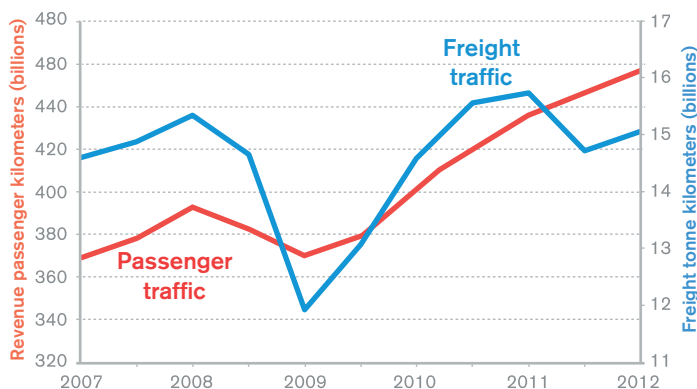
Network development continued to improve connectivity for the world's passengers and economies in 2012. Airlines put on new services for a net addition of 974 airport pairs, taking the seasonal July peak to over 40,000 pairs, an increase of 2.5% over the same month a year earlier. Also comparing July 2012 to July 2011, flight frequencies remained relatively stable, with an average of just above two daily flights between each airport pair.

The majority of that growth came from emerging markets.

The reason for this robustness was the strength of emerging markets. Economic growth and air travel have been weak in the developed economies. Emerging markets, however, in Asia, Latin America, and Africa, have experienced strong economic growth. This, in turn, has supported the growth of air travel by more than global GDP numbers suggest.

During 2012, 65% of the growth in passenger numbers in international markets took place in markets linked to emerging economies. Travel within Asia accounted for just over half of this growth. Other important growth markets were between Europe and Asia and on segments connecting Europe and Asia via the Middle East. Markets from Africa to the Middle East and to Asia were also strong, reflecting the development of new South-South trade lanes. Another 23% of 2012's international air travel growth was generated within Europe, which looks odd given the severe recessions in many Eurozone economies. It should be noted that the European growth statistics include passengers originating in Russia, in central and eastern Europe, and in Turkey, where growth remained considerably stronger than in the Eurozone.

The picture was similar in domestic markets. The developed US market rose just 0.8%. The fastest growth came from such emerging domestic markets as China, at 9.5%, and Brazil, at 8.6%. The exception was a 2.1% decline in air travel in the Indian domestic market, a reversal resulting from airlines trying to adjust to high costs.



Total passenger and air freight traffic, seasonally adjusted (Source: IATA)

Business travel growth and the premium segment remained strong.

In 2012, the number of international passengers traveling in premium-class seats rose 4.8%, which was slightly down on the 2011 growth of 5.5%. Economy travel, however, saw greater expansion, of 5.8%, modestly reversing the 2011 trend that saw premium travel grow 0.4 percentage points faster than economy travel. Despite the slowdown in growth, the proportion of passengers in premium seats held steady at 8%, which meant that premium travel maintained its 27% share of air travel revenue.

The slowdown in the growth of the premium travel segment over the past year resulted from a slowdown in business-related travel. World trade growth slowed from 6.3% in 2011 to 2.9% in 2012, and business confidence trended down. Ordinarily, these factors would have adversely affected business travel, but the strong growth in emerging markets generated an expansion of premium travel.

The two big premium travel markets, the North Atlantic and within Europe, shrank in 2012, reflecting the weakness in the key developed economies of those regions. The fastest-growing premium travel markets were within and connected to Africa, South America, the Middle East, and Asia. This reflects the strength of the economic expansion in these regions and the structural development of new South-South trade lanes, as business travel and cargo follow the direct investment flows that have taken place in recent years.

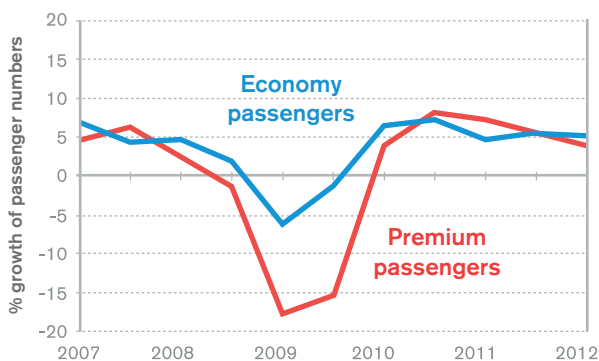
It was another year of decline for air freight markets, but the value of goods carried increased to an estimated \$6.4 trillion.

In contrast to passenger travel, air freight volumes were again weak relative to global economic conditions. Growth in world trade has slowed sharply, but it still expanded 2.9% in 2012. Air freight, measured in global freight tonne kilometers, nonetheless shrank 1.5% as it lost share to other modes of transport.

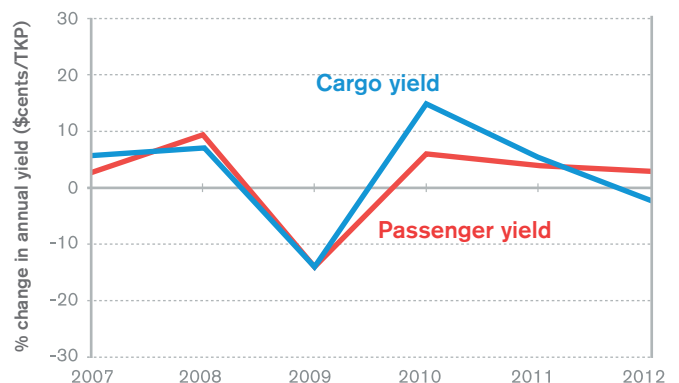
This pattern is typical of previous cycles. Air freight does well during economic upturns, when shippers need the speed provided by air transport and are prepared to pay the additional cost over sea or land transport. During periods of relative economic calm, however, air freight grows more slowly than overall world trade.

In past cycles, the turning point for air freight's declining share in world trade has come when the global industrial production cycle turns up. It looks like that point was reached in late 2012, after which a slow upturn in the air freight market appeared to begin.

Most major trade lanes were weak during 2012. Transatlantic air freight was the weakest market, but the lack of consumer demand in Europe and the United States meant that air freight flows also shrank across the Pacific and across Europe-Asia markets. There were, though, some areas of strength on thinner trade lanes. Within Africa, air freight flows saw one of the strongest expansions, followed by trade lanes between Africa and the Middle East and Asia. Robust economic growth and investment in these regions and the recent development of new trade lanes on an extended version of the central Asia market helped boost regional air freight flows in 2012.



% growth in international premium and economy passenger numbers (Source: IATA)



% change in passenger and cargo yields, Cents/tonne kilometer performed (TKP) (Source: IATA)

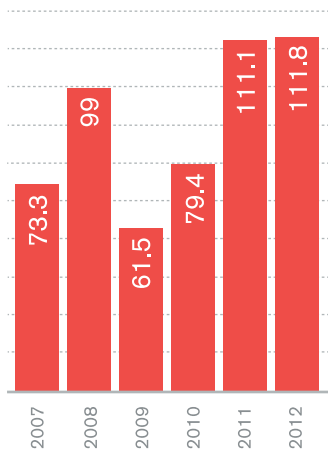
It was also a year of record high fuel prices.

The spot price of jet fuel in 2012 increased a couple of dollars above the previous year's level to average just under \$130 a barrel. That was in large part driven by a rebound of the price difference, or crack spread, between crude oil and jet fuel to 16% from the lower levels of the previous year. The crack spread has been approaching 20% as demand for middle distillates, including jet fuel, picks up. Brent crude oil prices edged up to a little less than \$112 a barrel in 2012.

Fuel hedging strategies had a negative impact on the fuel bill in 2012. Although the average spot price increased \$2, the actual rise in the fuel bill to airlines was higher, as the hedged 2011 price had benefited from lower 2010 spot prices. As a result, the industry's fuel bill rose to \$209 billion in 2012, or 33% of operating costs. The rise in the price of fuel accounts for over \$60 billion of the \$70 billion rise in the industry's fuel bill since 2010.

Hedging is also becoming more problematic because of a divergence in the cost of jet fuel from its traditional crude oil benchmark of West Texas Intermediate (WTI). The WTI price is falling as new oil sources in the US are being exploited. Consequently, the spread between WTI and jet fuel widened compared to the spread between jet fuel and the other crude oil benchmark, Brent.

The oil market is going through dramatic shifts in regional demand and supply balances. Social and political changes in the Middle East and North Africa (MENA) region are increasing the challenges of bringing supply to market. The influence, moreover, of the OPEC cartel remains strong. The sharp but temporary dip in oil prices in mid-2012 followed a dispute within OPEC over whether \$100 a barrel was the "right" target price. New, non-OPEC supplies are developing, but in 2012 the influence of OPEC and strong demand from the Brazilian, Russian, Indian, and Chinese (BRIC) economies prevented a decline in price.



Brent oil price, \$/barrel
(Source: Platts)

Aircraft deliveries rose to their highest-ever level.

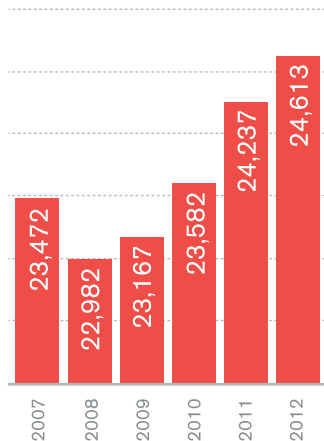
Partly in response to the sustained high cost of jet fuel, the delivery of new, fuel-efficient aircraft rose to a record level in 2012, with 1,374 jets and turboprops delivered. These new aircraft brought with them an additional 238,000 seats, equivalent to adding 7%–8% to global capacity. High fuel costs also encouraged airlines to retire or put into storage older aircraft, however, so the in-service commercial fleet actually expanded by less than 500 aircraft, to end the year at 24,613 aircraft. The number of available seats rose by 123,000, or a little less than 4%.

Asset utilization suffered in the air freight business but was high in the passenger business.

The success of the passenger business became an issue for air freight in 2012, as increasing amounts of new freight capacity came onto the market in the bellies of newly delivered passenger aircraft. With freight markets shrinking in the first three quarters of 2012, that additional capacity caused overall freight load factors and the utilization of freight aircraft to decline further from a year earlier.

The picture was very different in the passenger business. Consolidation in and the lack of new entries to the air passenger business helped the industry keep new capacity additions well below the growth of passenger traffic. This allowed passenger load factors to rise to an average of 79.1%. The highest level of seat utilization continued to be set by North American airlines in international and domestic markets—largely the result of keeping capacity more or less unchanged.

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Commercial airline fleet composition
(Source: Ascend)

Airline profits fell in 2012 but held up better than expected in difficult economic conditions.

At the other end of the spectrum, African airlines accelerated the additions of capacity they brought to international markets, leading to a small fall in their load factor, which was already the lowest of all regions. The largest increase in load factors was produced by the Middle Eastern airlines, which managed to fill a greater proportion of seats despite a 12.5% rise in passenger capacity.

Domestic markets overall saw mixed performances in 2012. Airlines in Brazil slowed their capacity growth and improved their load factors. In China and India, however, load factors fell as additions to capacity exceeded slowing traffic growth. Japan's domestic market has failed to recover to pre-earthquake levels, and load factors in Japan remain the lowest of all the major domestic markets.

It was not surprising that airline profits fell in 2012. Over the past 20 years, whenever global economic growth (aggregated using market exchange rates) has fallen to 2% the airline industry has gone from profit to loss. Global GDP growth in 2012 slowed to 2.1%, and the average price of jet fuel rose to a high of \$129.5 a barrel. Profits declined, but a net profit of \$7.6 billion was a good performance given the economic conditions.

The industry's \$7.6 billion of net profit was less than the \$8.8 billion achieved in 2011 and represents a net posttax margin of just 1.2%. That's after paying for debt interest. The industry's return on capital was 4%, still way below the 7%–8% investors would normally consider the minimum for an industry with aviation's risk profile. Nevertheless, the industry was profitable when economic conditions suggested a loss. This is a measure of the industry's improvements in efficiency and industry structure. There is a long way to go before investors receive an adequate return, but progress has been made.

Asia-Pacific airlines generated the highest margins and profits

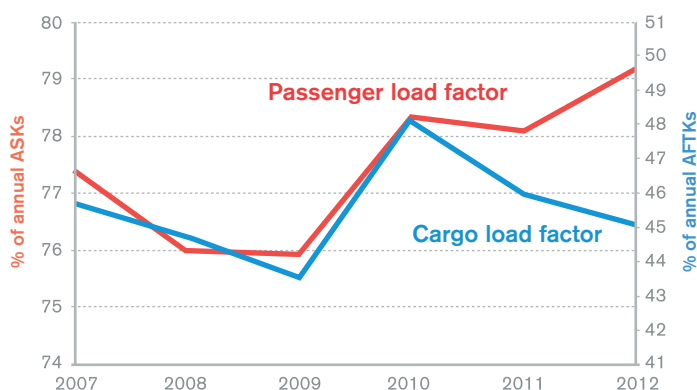
in 2012, with net profits of \$3.9 billion. But that, too, was a decline from the previous year and reflected the weakness of air freight markets. North American airlines, reflecting the efficiencies brought about by consolidation, saw an improvement in profitability and generated the second-highest net profits, of \$2.3 billion. European airlines, conversely, saw further deterioration in their profitability as recessions in Eurozone markets persisted. Net profits for European airlines were barely above breakeven. With the exception of airlines in Africa, though, airlines in all regions did generate profits in 2012.

The outlook for the next 12 months is slowly improving. Business confidence and export orders have been rising from what now seems to be their low point in late 2012. The Eurozone, though, remains a downside threat to growth, especially should market confidence deteriorate. At the moment, however, financial markets seem resilient to the continuing uncertainties in Europe, and that has lowered the risk of a renewed crisis. Potential threats to growth from the US debt situation and from issues in China have also diminished. The result-

ing improvement in business confidence has started to be reflected in a slow improvement in air travel markets, and stronger export orders should benefit air cargo markets.

Headwinds from the wider economic situation and continued high jet fuel prices will keep overall travel and cargo market growth subdued. But the direction is positive, and markets connected to emerging economies will again show strong growth. It will be the developed markets, especially those linked to the Eurozone, that will continue to grow slowly in 2013.

Airline profitability should nevertheless improve over the next 12 months. Much of that improvement, of course, will depend on achieving further efficiency gains and on keeping asset utilization high. Consolidation, too, will be critical to generating this better performance, and we anticipate gains from the mergers and joint ventures that have taken place recently to boost industry net posttax profits above \$10 billion in 2013. At less than 2% of revenues, however, this margin generates an inadequate level of returns for investors.



Passenger and cargo load factor on total market Seasonally Adjusted (Source: IATA)



Airline net profits, \$ billion (Source: IATA)

Air connectivity is the key to economic growth.

Some governments have integrated policies that promote the economic development that aviation brings. Other governments put roadblocks in the way in the form of onerous taxes, burdensome regulation, and tiresome bottlenecks in infrastructure development.

As highlighted by Oxford Economics studies on the benefits of aviation covering 59 countries, governments must understand that these roadblocks put jobs and economic growth at stake.

Allowed to thrive, air connectivity inspires a cascade of benefits for all, from governments to the individual.

Take the tourism industry, which is a key driver of economic growth, particularly in developing economies. Nearly 35% of international tourists travel by air, and by 2021 the World Travel and Tourism Council (WTTC) expects more than 120 million people globally to be in direct employment in the tourism industry.

Greater connectivity will only enhance economic benefits. New Zealand, for example, would see a \$99.7 million per annum increase in long-run GDP if it could improve its frequencies and aviation network to include more destinations of economic importance. Overall, Oxford Economics suggests global GDP has been boosted by an additional \$200 billion thanks to the increase in connectivity in the past 20 years.

Air connectivity opens up new markets for a country and sparks more export activity. Nearly 85% of companies believe that air services are important for their sales, according to Oxford Economics. The number rises to over 90% for Chinese and US firms.

And according to UK Trade and Investment, London Fashion Week (LFW) attracts visitors from over 25 countries thanks to air connectivity. Orders in excess of \$159 million (£100 million) are estimated to be placed during LFW each season. UK designers export two-thirds of the clothing that they produce, and overseas sales of the UK apparel and textiles industries combined are worth \$10.2 billion (£6.4 billion) at manufacturers' prices.

At the same time, greater connectivity increases competition and choice in the home market from foreign-based producers. This encourages domestic companies to adopt best international practice in production and management and to specialize in areas where they possess a comparative advantage.

Greater connectivity also makes it easier for them to attract outside investment. Foreign direct investment is a further boon for local employment and encourages competitiveness.

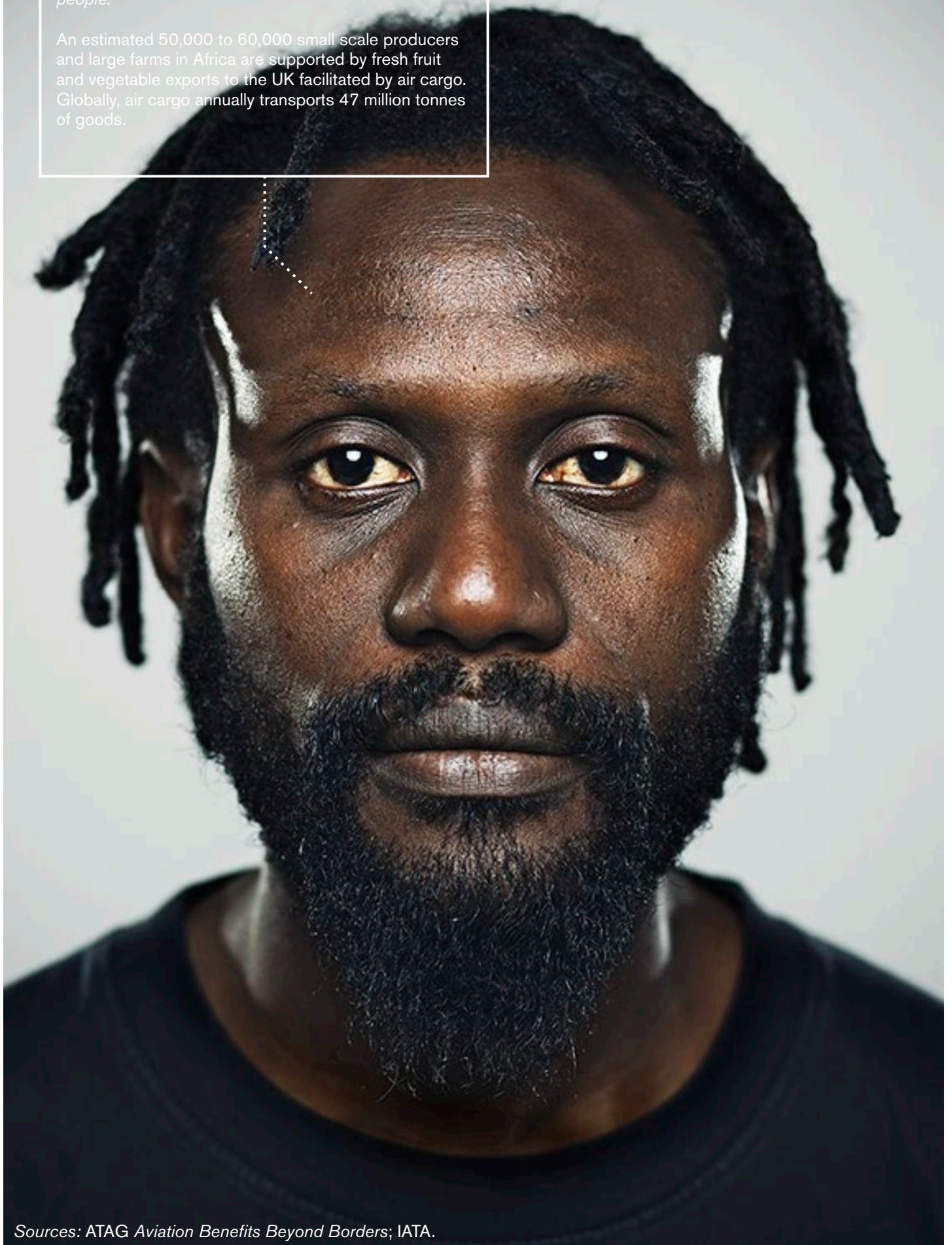
The end result of all this activity is higher-quality products at a lower cost for the consumer. A strong aviation network is the heartbeat of the modern world.

“Especially in the current economic environment, governments should prioritize connectivity rather than putting regulatory and tax roadblocks in the way.”

Brian Pearce, Chief Economist, IATA

"I'm from Ghana. I run an organic farm. I fly my produce to sell in Europe. Demand is high, and I get a good price. Business is expanding, and I'm hiring more people."

An estimated 50,000 to 60,000 small scale producers and large farms in Africa are supported by fresh fruit and vegetable exports to the UK facilitated by air cargo. Globally, air cargo annually transports 47 million tonnes of goods.



Safety is the number one priority for the aviation industry.

Aviation had its safest year ever in 2012. And efforts continue for further improvements.

0.2
in 2012

The **global** hull-loss rate per million flights of Western-built jets

0
in 2012

The **IATA member or IOSA-registered airline** hull-loss rate per million flights of Western-built jets

Globally, there were 29.6 million commercial Western-built jet (WBJ) flights in 2012 and six hull-loss accidents. This equates to a hull-loss rate of 0.20 per million flights, or one hull loss for every five million flights. This is the lowest rate in aviation's history and a 46% improvement over the rate in 2011, which was itself a record year for aviation safety. It should be noted that the hull-loss rate is now so low that any change in the number of hull losses causes a large percentage swing compared with the previous year's performance.

The strong safety performance notwithstanding, every accident is one too many. So there is no room for complacency. The industry and its regulators remain focused on improvements. Airlines continue to work with the International Civil Aviation Organization (ICAO), airports, air navigation service providers (ANSPs), manufacturers, regulators, and multiple international safety organizations on initiatives to raise aviation safety performance worldwide.

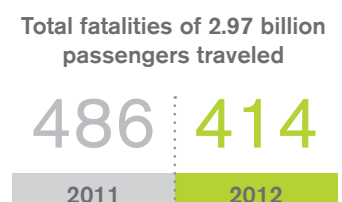
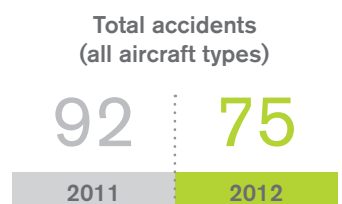
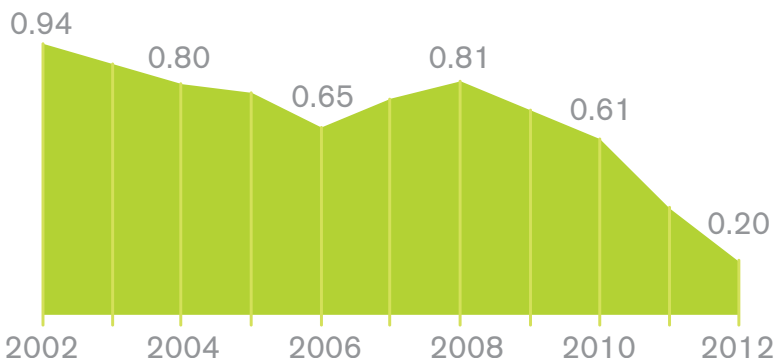
Efforts are focusing on two causes of accidents: runway excursions and loss of control in flight.

Runway excursions represented 28% of all accidents in 2012. Information development, best practices training through regional runway safety seminars, and an enhanced IATA Runway Excursion Risk Reduction (RERR) toolkit are vital to reducing this type of accident. IATA's Flight Data eXchange (FDX) program has runway-specific system performance data for over 1,100 airports and is expanding rapidly. The FDX allows airlines to identify proactively operational risks, such as meteorological conditions, or terrain hazards, and to implement improvements in their operations or develop solutions in cooperation with airports and ANSPs.

Loss-of-control in-flight (LOC-I) accidents are only a small proportion of aviation safety accidents. When they happen, however, they result in many fatalities. Some 60% of fatalities in the past five years are due to LOC-I accidents. IATA, ICAO, Airbus, Boeing, and other

industry partners are focused on enhanced pilot training and improved simulators to reduce LOC-I accidents. This joint effort addresses the major contributing factors to LOC-I events, including pilot actions and cockpit coordination during critical flight phases, such as adverse weather or following aircraft malfunction. The IATA LOC Prevention toolkit will be launched in May 2014.

Western-built jet hull-loss rate per million sectors, 2002–2012



Reporting and data analyses help raise safety standards.

With the decrease in the number of accidents, techniques to improve aviation safety have moved beyond the analyses of accidents in isolation to a data-driven analyses of trends and the interaction between the links in the air transport chain. This approach follows safety management system (SMS) principles, including risk assessment and risk mitigation strategies. As such, it establishes the foundation for performance-based management and the ability to conduct more predictive analyses.

The approach is supported by the Global Safety Information Center (GSIC). The GSIC is a collection of safety information

from across seven different safety databases. These databases include the IATA accident database, the Safety Trend Evaluation Analysis and Data Exchange System (STEADES) reports, IOSA and ISAGO audit findings, the FDX, the Ground Damage Database (GDDB), and a new cabin safety operational report database.

More than 470 organizations around the globe submit safety data to the GSIC. Over 90% of IATA member carriers are participating.

The structure of the GSIC will help to build an all-encom-

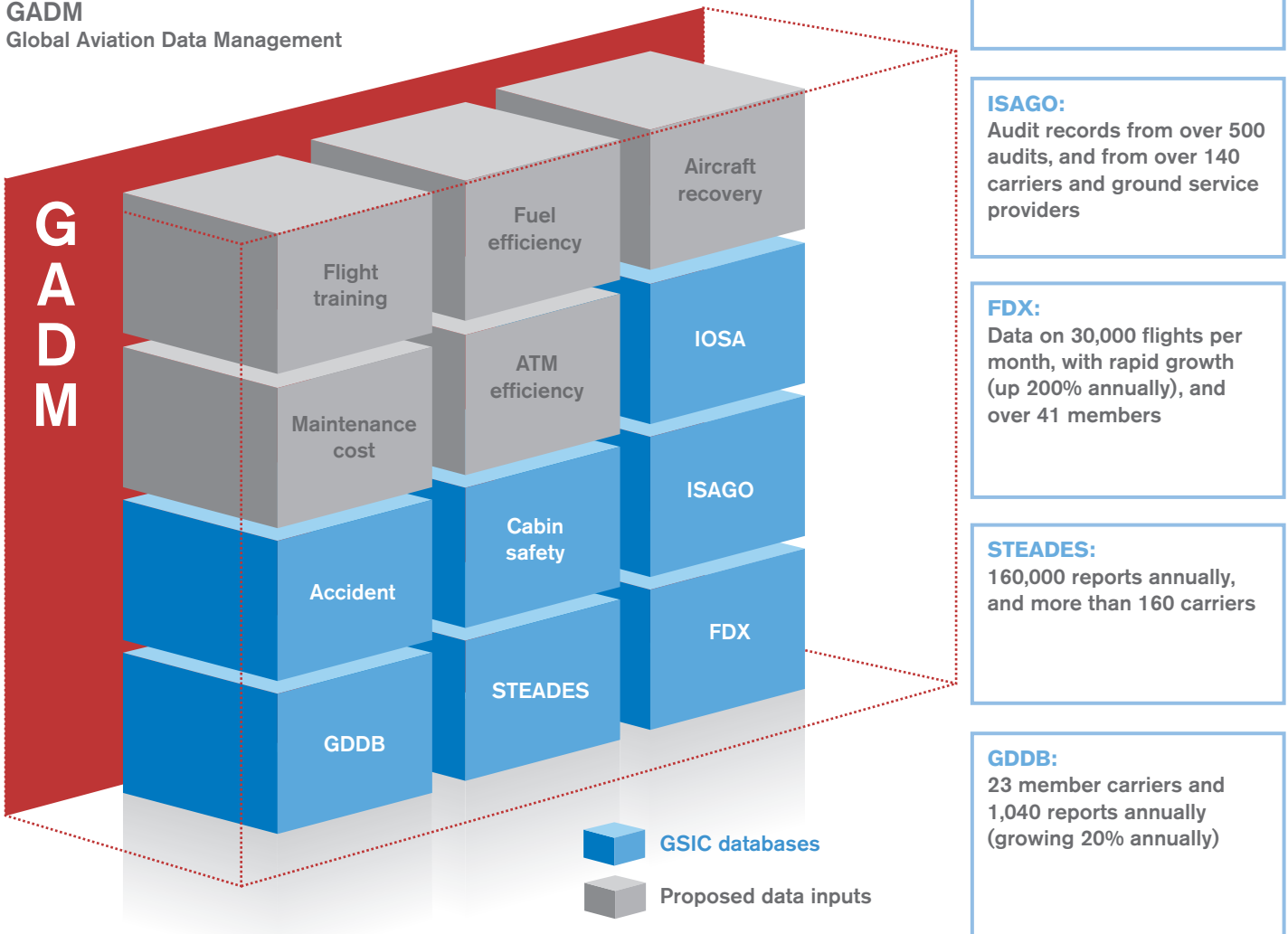
passing Global Aviation Data Management (GADM) platform. The GADM will integrate data from multiple sources and areas of aircraft operation into the most comprehensive aircraft operational database available.

Safety improvement is the primary purpose of the GADM. However, the provision of a wider range of data gives the potential for initiatives in such areas as fuel and ATM efficiency, operational costs, pilot training, and maintenance.

In addition to the GSIC, the GADM will soon include data from the following airline operations:

- Flight training, multi-crew pilot licensing (MPL), and evidence-based training (EBT)
- Fuel efficiency
- Aircraft recovery
- Maintenance cost
- ATM efficiency and performance-based navigation (PBN)

GADM
Global Aviation Data Management



Audit programs are a key element in driving safety improvements.

IATA Audit Programs:

- IOSA: IATA Operational Safety Audit
- ISAGO: IATA Safety Audit for Ground Operations
- IFQP: IATA Fuel Quality Pool
- IDQP: IATA Drinking Water Quality Pool
- DAQCP: IATA Deicing/Anti-icing Quality Control Pool

IOSA, which marks its 10th anniversary in 2013, is the only worldwide airline operational safety audit program. The total accident rate for IOSA carriers in 2012 was 77% lower than the rate for non-IOSA operators. For IATA members, IOSA is mandatory. It is, however, a global standard recognized well beyond IATA membership: As of 1 May 2013, 138 (37%) of the 381 airlines on the IOSA registry were non-IATA member airlines.

IOSA standards and best practices are constantly evolving with the cooperation of the industry and its regulators. A decade of experience with IOSA, in fact, is leading to a significant evolution in the program's implementation. The Enhanced IOSA (E-IOSA) program adds continuous conformity with ICAO Standards and Recommended Practices (SARPs) to the audit scope. In 2012, 10 E-IOSA trial audits were conducted, and, recently, two online training modules were launched. The rollout of the complete E-IOSA program is scheduled for September 2015 (see article on page 18 for more information).

The need for standardized global audits to improve aviation safety applies as much to the ground as to the air. Ground damage costs the industry billions of dollars annually and is the third most common type of accident after runway excursions and either gear-up or gear-collapse landings, representing 13% of all accidents during the period from 2008 to 2012. IATA continues to develop its GDDB to collect and analyze reports of ground damage from participating operators and ground service providers (GSPs). In addition, the *IATA Ground Operations Manual (IGOM)* was completed in 2012 and complements the ISAGO program.

ISAGO is the global standard for the oversight and auditing of GSPs. It is supported by 64 governments and airport authorities and aims to improve safety and to manage airline costs. The work of ISAGO pool members allows for report sharing, thus eliminating duplicate audits up to 53%. Since ISAGO's launch in May 2008, almost 600 audits have been conducted. They have involved over 125 GSPs at almost 200 registered stations.

The DAQCP is a group of more than 100 airlines that perform inspections on approximately 600 companies that provide deicing and anti-icing services and post-deicing/anti-icing checks at more than 300 airports worldwide. Its main goal is to ensure that safety guidelines, quality control recommendations, and standards of deicing and anti-icing procedures are followed at all airports. Active members of this pool save an average of 70% on their scheduled inspections.

Fuel quality is being strengthened through joint action at ICAO and among key associations and suppliers.

The Cathay Pacific fuel contamination incident in Surabaya in spring 2010 triggered significant action within the fuel community. The IFQP acted proactively to use a draft global fuel handling standard for its mandatory regulatory fuel audits. Having trained fuel auditors use the fuel handling standard increases safety, promotes audit sharing, and saves an airline and its suppliers several million dollars annually. Membership in the IFQP has grown rapidly, to 125 member airlines.

The IATA Technical Fuel Group likewise took an active role, developing the *ICAO Manual on Civil Aviation Jet Fuel Supply* in conjunction with Airlines 4 America (A4A), Airports Council International (ACI), and ICAO. This manual, otherwise known as ICAO Doc. 9977, was issued in November 2012 and is a signpost document with global, industry-recognized practices.

The *ICAO Manual on Civil Aviation Jet Fuel Supply* will be the basis of a number of industry initiatives to ensure that fuel-quality standards are enhanced. The industry's Standard Fuel Contract, for instance, will be updated with reference to the manual. And major aviation stakeholders will launch an industry education campaign with the manual as its basis and comprising an information DVD and technical training.

Regional variations in safety performance are notable and are being targeted by tailored campaigns.

In 2012, African carriers experienced one hull loss for every 270,000 WBJ flights compared with the industry average of one accident per every 5 million WBJ flights. The poor safety record of some African carriers has a reputational impact across the industry and is responsible for carriers from certain African countries being banned from flying to the European Union.

IATA is focusing on improving African safety performance for all carriers by working with the industry and African governments. Key stakeholders on the African continent have committed to implementing the African Strategic Improvement Action Plan to improve aviation safety in Africa. The plan was presented to civil aviation authorities in Africa during the 2012 African Union ministerial meeting and

became part of a document known as the Abuja Declaration. This declaration was endorsed by the African Union in January 2013 and includes the following priorities:

- Establishment of independent and sufficiently funded civil aviation authorities
- Implementation of effective and transparent safety oversight systems by all African countries
- Completion of IOSA by all African carriers
- Implementation of accident prevention measures focused on runway safety and LOC-I
- Implementation of flight data analysis (FDA)
- Implementation of SMS by all service providers

Implementation of the Africa Strategic Improvement Action

Plan is an IATA Board of Governors' priority for 2013 and includes bringing 10 additional African-based airlines into IOSA by 2015. IOSA-registered airlines in Africa, including all IATA members in Africa, have a safety record in line with the global average. This shows that IOSA can be a driver in improving African safety. So far, 10 airlines have been identified for special assistance in reaching the IOSA standard. This will be provided in cooperation with the IATA Airline Training Fund (IATF).

In Russia and the Commonwealth of Independent States (CIS), there were no WBJ losses among IATA members. The region's all-accident rate, however, which includes turboprop planes, Eastern-built jets, and substantial damage accidents, shows an accident

rate of 3.63 per million flights, or one every 275,000 flights. That is the second-worst rate of any region.

To ensure that aviation safety in Russia and the CIS matches the safety performances of the world's safest regions, the following four areas are being focused on:

- Improved oversight from regulators, including the implementation of harmonized standards and of audits
- Implementation of ICAO national safety programs and SMS
- Training, particularly for the MPL
- Investment in technology and infrastructure, including warning devices and improved air navigation routes.

Western-built jet hull-loss rate per million sectors



Airlines are committed to making the safest mode of transportation even safer.

Aviation had its safest year in 2012. But it was not perfect. There is no complacency when it comes to the industry's number one priority, and initiatives to improve safety continue apace.

The IATA Operational Safety Audit (IOSA) has played a major role in the industry's safety performance since 2003. In 2012, carriers on the IOSA registry did not suffer a single Western-built jet hull loss. It is an impressive milestone in the quest for a perfect year of zero accidents. And it shows that IOSA is a key component on which the quest must be based.

More than 2000 IOSA audits have been performed. The lessons learned have been put into practice, and IOSA standards have constantly improved. A new concept of continuous safety performance monitoring during the two-year audit cycle promises to be a significant development. This enhanced version of IOSA will build on the excellent 2012 safety results.

The primary goal of IOSA is unchanged—to improve safety. But Enhanced IOSA (E-IOSA) adds the dimension of constant conformity with the IOSA Standards and Recommended Practices (ISARPs).

Under E-IOSA, an airline will conduct internal quality assurance activities against the ISARPs during the 24 months in between two IOSA audits. Ensuring the ISARPs are engrained in day-to-day safety performance will in effect hand back responsibility to the airlines and strengthen their internal quality programs. The focus on ISARPs will also promote the further standard-

ization of auditing principles and techniques throughout the industry. A proposal has been put to the IATA Board to make E-IOSA mandatory for all IOSA renewal audits after 1 September 2015.

Proof-of-concept workshops and live trial audits have proved the validity of the new concepts. By year-end 2013, 10 airlines will have undergone E-IOSA.


IATA is developing a plan to support airlines in the transition process. The plan includes training development and suggestions for strengthening airlines' internal quality departments. Also, Auditor Actions, a tool currently used by IOSA auditors, will be made available to the airlines to support them in assessing ISARPs internally.

IATA, moreover, will offer a Partnership for Quality initiative to assist airlines in conforming with E-IOSA. Workshops and toolkits will be delivered in the regions.

Airlines that are used to dealing with IOSA will have a few changes to incorporate. As an example, they will need to re-release a conformance report to the audit organization containing internal audit results prior to the E-IOSA audit.

“The airlines need to start their preparation for E-IOSA now. It is the next step in evolving the IOSA program to ensure that safety levels continue to improve.”

Günther Matschnigg, Senior Vice President, Safety, Operations & Infrastructure, IATA



"I'm a metallurgy student at Sheffield University in the UK. I grew up in India. I miss home sometimes, but it's easy enough flying back when I need to. I'm researching the next generation of advanced alloys, so flying often kind of fits."

An Oxford Economics study shows that Sheffield's 9,370 overseas students generate an economic benefit of £120 million for the city's economy per annum. Globally, 3.6 million students study outside their own country each year.

Aviation security is being strengthened with a data-driven, risk-based approach.

Security is the responsibility of individual countries. But delivering it effectively requires the cooperation of the entire value chain and harmonization among governments. The challenge of delivering effective passenger security is being made more difficult by two factors. Traffic is growing and will continue to do so. And governments have added onerous processes to checkpoints that are largely unchanged since the 1970s, when the threat was very different.

Before 9/11, the average checkpoint processed 350 passengers per hour. Today, the number is below 150. Resources are being stretched, and accommodating the security footprint in airports is becoming a challenge. We must transition from the one-size-fits-all proscriptive model to a data-driven, risk-based approach. This means focusing on desired outcomes, not prescribed processes, and recognizing that the vast majority of passengers and cargo pose no security threat.

Such changes require government and industry to work together as they have done on safety. The agenda for 2012 and into 2013 focuses on three areas:

1. The harmonization of government security standards and the provision of data and respect for global agreements
2. The development of the Checkpoint of the Future (CoF)
3. The implementation of secure supply chains in major markets

The harmonization of border control data requirements is a top priority.

Government demands for airlines to provide passenger data are growing. A total of 42 countries now impose Advance Passenger Information (API), and a further 28 countries are considering such requirements. Nine countries require access to Passenger Name Record (PNR) data, and as of April 2013 another 25 were preparing to enforce such a requirement.

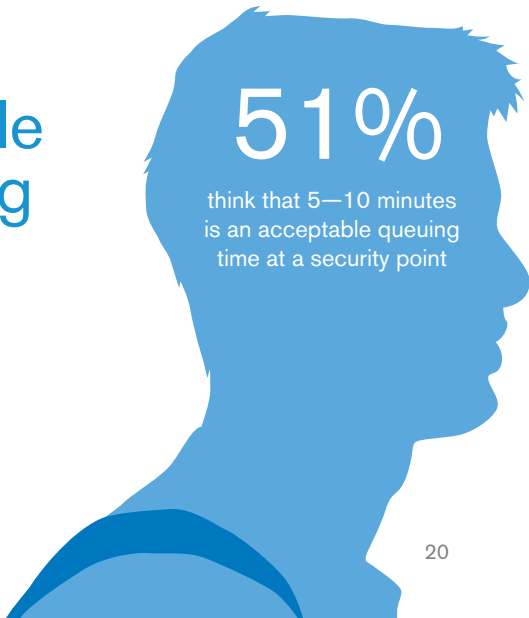
Global standards exist for the collection and transmission of such data. Many countries, though, ignore them. Managing nonstandard requirements adds costs to airlines. What is more, it is difficult to see a security benefit from these costly deviations from established standards.

IATA and the airlines are working with governments to rectify the situation. In 2012, for example, IATA worked with Brazil's civil aviation agency, ANAC, and with other Brazilian stakeholders for PNR and API

regulations aligned with the international standards and best practices adopted by ICAO and the World Customs Organization (WCO). Brazil also adopted a single-window approach to data submission and committed to eliminating and preventing any further non-standard local requirements, an issue that has been ongoing since 2008.

In 2013, IATA will continue the drive for global standards in a coalition that includes regional airline associations; data service providers; ICAO; the WCO; FRONTEX (the European agency in charge of managing external borders); and others. IATA additionally will develop materials to help governments find innovative ways to collect, store, and transmit passenger data.

Security: what people are thinking



One-stop security is a test of harmonized, joined-up security processes.

Every day, millions of travelers who are at transfer airports as part of an international connecting itinerary are subjected to duplicate and redundant security screening that wastes their time and absorbs scarce security resources. This can be avoided by applying one-stop security, the principle under which passengers and hold baggage are not rescreened between flights provided that countries recognize the security screening conducted at the origin airport as equivalent to their own. IATA continues to work with countries to achieve the benefits of one-stop security.

One-stop security has been approved by the European Commission (EC) but has to be adopted on an airport-by-airport, nation-by-nation basis in the European Union (EU). It is already in place for flights within the EU and, unilaterally, for flights from the United States to Europe.

In 2012, several regions and countries embraced one-stop security and the recognition of equivalence. One-stop security pilot projects were conducted in Panama and El Salvador. In a major breakthrough, the US, EU, and Switzerland agreed to a mutual recognition of each other's cargo security programs. The US and Canada signed a similar agreement, and the EU and Canada carried out an initial comparison of their respective security systems.

Work with ICAO is under way in 2013 to promote one-stop security to other regions and countries, particularly the recognition of either unilateral or one-way, one-stop agreements. Additionally, work is ongoing to provide passengers on flights from Europe to the US with the same one-stop benefits provided to passengers traveling in the other direction.

The Checkpoint of the Future has moved from a theoretical program to a practical project.

Two years ago, IATA unveiled its vision for a Checkpoint of the Future. That vision foresees security resources allocated based on risk and air travelers enjoying an uninterrupted journey through airport security with few hassles and minimal need to divest through the use of advanced screening technology and differentiation based on passenger information.

In 2012, the CoF program increased its momentum by moving from the drawing board to airport trials of CoF technology. The first trials, at Geneva and London Heathrow airports, focused on identity management and how biometrics could be introduced into the screening process to enable the identification of passengers and their risk levels. Subsequent testing, at Amsterdam Schiphol airport, experimented with how laptops and large electrical items could remain in passengers' hand luggage while being efficiently screened.

Concurrent with this development was the publication of the *Blueprint for a Checkpoint of the Future*, which articulates how successive iterations of the CoF may look and operate in the years 2014, 2017, and 2020. The blueprint comprises 12 modules and covers details of everything from passenger risk assessments to advanced screening technology and lane design. It offers an ambitious but realistic plan for global checkpoint change and improvement.

In 2013, trials of up to 10 components are planned at selected airports. They will provide proof of concept for the key elements of the CoF initial version that will be evaluated at two airports in 2014.



33%

would like to be better informed of security procedures before they arrive at the airport



73%

would share personal information with governments to speed up screening



93%

think dedicated security lanes are a good idea; for example, "frequent travelers" or "families with children"

Accurate, timely, and harmonized data collection is crucial for air cargo security.

More than 170 WCO member countries have committed to introducing standards to secure and facilitate global trade (known as the SAFE Framework). So advanced electronic information (AEI) data is increasingly being pursued, such that countries are facing implementation challenges. In 2012, IATA provided capacity-building assistance to a number of customs administrations. IATA is also working with the WCO on further measures to help governments implement AEI.

The Air Cargo Advance Screening (ACAS) voluntary pilot program provides the data for security risk analysis prior to the departure of an aircraft bound to the US. It commenced shortly after the attempted shipment from Yemen of explosives concealed in ink cartridges in October 2010 and was initially conducted with integrated express carriers.

In the last 18 months, the ACAS program has been expanded, and passenger carriers bearing cargo, all-cargo carriers, and freight forwarders are participating. The US government is expected to introduce legislation on ACAS standards for all carriers flying cargo into the US in 2014. The EU has commenced a voluntary pilot program similar to ACAS that is expected to become mandatory in 2014. IATA supports the ACAS program and is calling for the EU to use the same harmonized standards for its program.

To assist with the global harmonization and efficiency of submitted cargo security data, the industry and its regulators developed an electronic version of the standard consignment security declaration (e-CSD) for cargo and mail that provides an audit trail of the security information of a typical supply chain movement. The e-CSD identifies which party secured what consignment and how and when and ensures that security measures have been applied through a harmonized mechanism and a standard template. It is anticipated that the e-CSD will be used by authorities to help provide the advance data they require.

The implementation of effective cargo supply chain security regimes is vital.

The long-term vision of the Secure Freight initiative is an air cargo industry of global operators providing secure supply chains in accordance with internationally adopted and recognized standards. The intent is to improve security and enhance nations' aviation security regimes.

In 2012, the Secure Freight project successfully concluded its inaugural Malaysia pilot project; established subsequent pilot projects in Kenya, Mexico, Chile, and Egypt; and obtained recognition for the Secure Freight guidance material from such prominent nations as Australia and the United Kingdom and by the WCO.

As of 1 May 2013, Secure Freight guidance material has been recognized by the European Commission and two pilot projects have been launched, in the United Arab Emirates and in Jordan. A significant step forward is a letter of intent submitted by Brazil to conduct a pilot project in the second half of 2013, the first BRICS nation to do so. IATA's contribution will help shape the ICAO capacity-building strategy for the security of air cargo and mail. Secure Freight's net economic benefit is substantial. A case study in Malaysia quantified this. It revealed a benefit of from \$1 billion to \$2 billion over a five-year period for the Malaysian economy, generating a substantial increase in jobs and domestic investment.

Unfortunately, not all regulators are taking a holistic, data-driven supply chain approach. In 2012 the EU adopted regulations known as Air Cargo or Mail Carrier operating into the Union from a Third-Country Airport (ACC3). From 1 July 2014, airlines will need to ensure that their operations into the EU from third countries have been independently validated to comply with published cargo security laws. This includes screening or possessing a recognized secure supply chain.

To assist the aviation industry and regulatory authorities with the ACC3, IATA has established a Center of Excellence for Independent Validators (CEIV). The CEIV offers countries an approved training program for states that mobilizes a number of independent validators needed to meet the ACC3 requirements.

A risk-based approach is essential to aviation security.

Flying is secure. But a one-size-fits-all approach is neither the best use of resources nor adaptable enough to cope with ever-increasing passenger numbers.

To remedy the situation, airlines are working with governments to implement a risk-based approach to security. This means differentiating between passengers based on their risk profiles. Most passengers pose no risk at all. Clearing them with minimal fuss will allow resources to be deployed where they will have the biggest impact on reducing risk.

Much of the information needed to differentiate passengers is already being provided to governments for the purposes of border control. Advance Passenger Information (API) and Passenger Name Record (PNR) information could also be used to provide automated risk assessments that determine the level of screening each passenger should receive.

And known traveler programs, such as PreCheck and Global Entry in the United States and Nexus in Canada, are successfully using a risk-based approach already. The popularity of these programs—about 1.4 million travelers are signed up to Global Entry, for example—highlights passenger willingness to share data for a defined benefit.

But risk-based security for passengers will find its ultimate expression in the Checkpoint of the Future (CoF). This next-generation security checkpoint is being designed in collaboration with governments and industry partners and is premised on risk-based passenger differentiation and advanced technology.

Global standards are being developed and tested for the CoF, and adhering to these standards will keep aviation secure. But that doesn't mean all CoFs will look the same. Countries will implement a version of the CoF that is practical.

Trials have proven the viability of some of the individual components of the CoF, and a blueprint targets progress through milestones in 2104, 2017, and 2020.

“The current system simply will not be able to cope with the doubling of passenger numbers that we expect to see by 2030. Both governments and industry realize this and are looking at new ways of providing security.”

Ken Dunlap, Global Director, Security & Travel Facilitation, IATA

Aviation is a heavily regulated industry.

Regulation should enable aviation to generate economic growth.

Bad or poorly drafted regulations undermine aviation's ability to be a catalyst for economic growth. In cooperation with other stakeholders positively affected by aviation, IATA advocates for fair regulations that balance the need to preserve market competition and passenger and employee rights with the ability of aviation to grow and serve communities directly and indirectly.

The proliferation of unharmonized passenger rights regulations is not in the passenger's interest.

Airlines have a vested interest in getting passengers to their destination on time and without incident. Commercial pressures ensure that this is a top priority. And when incidents happen, the same commercial discipline encourages airlines to provide appropriate assistance. Nevertheless, some isolated and extraordinary incidents have caused governments to regulate the industry on passenger rights.

To be effective, passenger rights regulations for a global network industry such as aviation must be transparent and based on internationally agreed-to principles. Over 50 countries have aviation-specific passenger protection of some kind. The regulations are not harmonized, and some have extraterritorial provisions. This creates difficulties for airlines and confusion among passengers. The unintended negative consequences of multiple consumer protection rules can be significant. Additional costs need to be recouped, for example, and mitigation strategies for onerous delay penalties could see increased flight cancellations or reduced interline connectivity (see article on page 29 for more details). In 2013, the industry has begun developing a common commitment to a minimum set of passenger rights standards to help governments harmonize their requirements globally.

The EU revision of Regulation 261/2004 is a missed opportunity to promote greater connectivity.

A European Commission proposal for the revision of the EU passenger rights regulation (Regulation 261/2004), released in March 2013, had two positive conclusions. Airlines should not be held indefinitely responsible for care and assistance in circumstances completely beyond their control and the impact of a delay on a passenger varies with journey length.

Unfortunately, several negative conclusions also emerged. The most damaging would see the first carrier on a journey take full responsibility to compensate travelers for any delays or missed connections before they reach their destination. These potential liabilities could discourage regional airlines from offering interline connections to long-haul destinations and are a departure from global standards. IATA will be advocating with industry partners for a more balanced approach as the proposal moves through the legislative process.

A proposed US rule on ancillary data will cause confusion and increase costs.

The US Department of Transportation (DOT) is expected to propose Consumer Rule III. It is understood that this rule will require any airline that sells tickets through global distribution systems (GDS's) to provide information to those GDS's on three optional services: checked baggage fees, advance seat selection, and advance boarding. The rule is not expected to require that airlines make these products available for sale through GDS's, only that the prices and other pertinent details must be displayed.

IATA continues to argue that airlines already provide this information on their websites and that the legacy systems used by the GDS's cannot adequately or accurately display it. The rule thus will result in passenger confusion; will ignore market developments, including the New Distribution Capability (NDC); will stifle new entry in the distribution area; and will not be justified in terms of costs and benefits.

Regulations that deal with unruly passengers need updating.

In the past five years, the instances of unruly and disruptive behavior on board aircraft have increased dramatically. Such behavior can create serious safety and security risks for airlines. The international legal framework for dealing with unruly passengers (Tokyo Convention 1963) needs modernization.

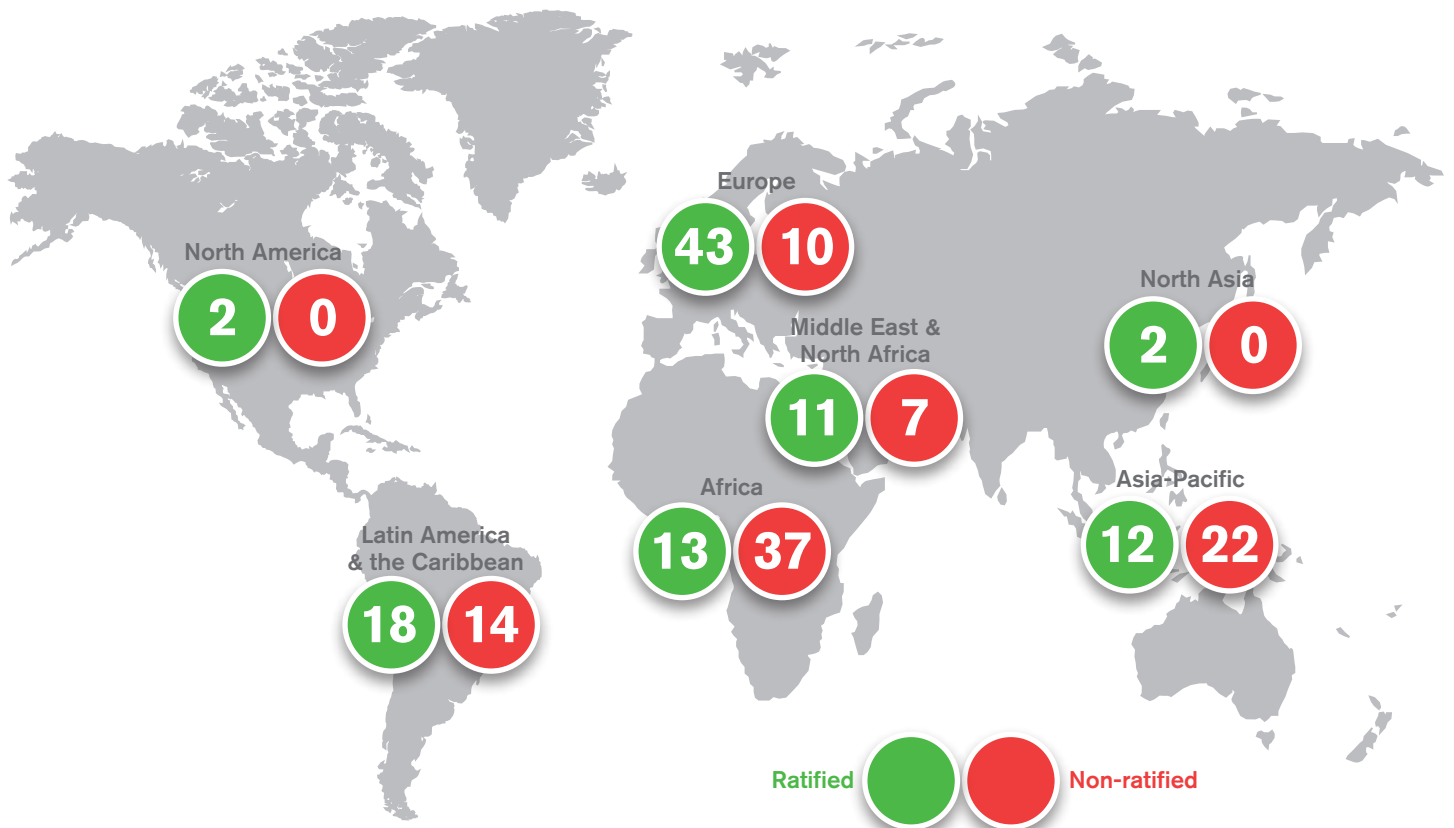
IATA is participating in ICAO discussions on revisions. To date, guidance material and recommended practices to enhance the prevention of unruly passenger behavior and improve the management of such incidents have been developed at ICAO by the industry.

Montreal Convention 1999: a global industry needs a single liability regime.

Montreal Convention 1999 (MC99) is a modernization and unification of the different treaty regimes covering airline liability that have developed haphazardly since 1929. The global ratification of MC99 is an industry priority. MC99 gives consumers better protection and compensation and facilitates faster air cargo shipments, while airlines enjoy greater certainty about the rules affecting their liability. It also establishes the legal framework allowing airlines to make use of electronic documentation for shipments, thereby reducing costs and increasing efficiency.

A decade after MC99 came into force, however, only 103 of the 190 ICAO-contracting states, or just 54% of the total, have adopted it. A number of fast-growing aviation markets in Asia, such as Thailand, the Philippines, Indonesia, and Vietnam, have yet to sign up. Russia is another notable absentee. This means that a patchwork of liability regimes exists around the world. The result is confusion and complexity in determining which regime covers a particular passenger or cargo itinerary. Claims handling and litigation from claims or accidents are unnecessarily complicated.

MC99: current treaty ratification status (member states by region)



Governments should not stand in the way of liberal market developments.

The ICAO Sixth Worldwide Air Transport Conference in March 2013 supported the liberalization of airline ownership and control restrictions.

A fully liberalized industry regime will take years, if not decades, to achieve. In the meantime, countries should consider actions to enhance connectivity and therefore the economic and social benefits of aviation. In this tough economic environment, airlines are showing that with innovative tie-ups they generate consumer benefits and become more viable businesses.

LAN/TAM in South America is breaking the mold through its consolidation. Qantas and Emirates have established a cooperative agreement. Franchising is yet another possible way forward. Governments should not stand in the way of these developments but should consider how the global and hypercompetitive nature of the airline business will require a consistent approach by competition authorities.

Deviating from accepted slot management rules will negatively affect passengers.

The lack of capacity in the airport system to cope with increasing demand is a major concern. There are 160 airports formally designated as Level 3 (most congested, requiring slots), and this number is expected to grow significantly over the next five years.

IATA's *Worldwide Slot Guidelines (WSG)* is the accepted global standard for the policies, principles, and procedures of airport slot management.

A European Commission proposal for a new slot regulation includes a plan to deviate from the WSG by replacing the 80-20 "use it or lose it" slot rule with an 85-15 rule. In the first reading, the industry successfully argued that it was not clear how 85-15 would achieve a greater utilization rate than the 95% achieved under 80-20. We hope, therefore, that this idea will be withdrawn in the next draft of the proposal.

Also in 2012, the industry worked closely with the Indian, Colombian, and Brazilian governments to promote WSG policies and principles when they draft and publish their slot regulations. The Chinese slot management system also needs to be aligned with the WSG, and a number of constructive meetings were held in 2012 that made notable progress in this regard.

Collaboration is the key to tackling US customs delays.

There are repeated instances of long customs lines at US gateway airports. So IATA; Airlines for America (A4A); Airports Council International-North America (ACI-NA); and the US Travel Association formed a coalition to work closely with US Customs and Border Protection (CBP) to address this issue.

The CBP has faced significant budget shortfalls, and IATA and A4A have consistently opposed any suggestion regarding the raising of user fees to address this challenge, particularly as sea and land borders do not pay user fees. In 2012, the CBP provided the coalition with data from five airports that the coalition will study to explore ways to deal with the CBP's challenge and the issue of lineups.

President Obama's fiscal 2014 budget proposal includes funding for 1,600 new customs officers and an increase in user fees to fund an additional 1,877 officers. IATA will oppose any increase to user fees and will seek to ensure that the 1,600 new officers are deployed at airports rather than at land or sea borders.

Taxation

Unwarranted or excessive taxation on international air transport has a negative impact on economic and social development. IATA, in conjunction with industry partners, is running a number of campaigns to persuade governments to reduce or withdraw such taxes.

In the United States, the Obama administration's fiscal year 2014 budget proposal seeks a \$5.5 billion increase in aviation taxes and fees above the \$19 billion paid by commercial aviation in 2012. Although the proposal is not expected to pass, the fact that aviation is seen as a source of yet more tax revenue at a time when the government should be focused on the industry as a generator of jobs is a concern.

Taxation initiatives that specifically penalize the aviation industry adversely affect economic growth. The latest increase in the UK air passenger duty (APD) in 2013 will cost the UK economy \$459 million (£300 million) per year in lost GDP and lead to 7,000 job losses. The Northern Ireland Assembly recognized the negative impact of APD when it set its rate to zero for all flights from Northern Ireland to protect the only direct flight from Belfast to the United States. Germany and Austria reduced their environmental taxes in 2012, but these taxes should be removed completely.

Tourism taxes also defeat their purpose. The Australian government acknowledged this when it dropped plans to fund a tourism marketing campaign through an annual inflation-indexed increase in its passenger movement charge from 2013. Other governments have yet to see the wisdom of this move. Jamaica, for example, recently doubled its tourism tax, costing air passengers an extra \$22 million annually.

ICAO policies on jet fuel, meanwhile, direct countries not to impose taxes on uplift for international flights. In 2012, the industry had some success in removing or reducing taxes on fuel for international operations in Latin America and in North America. The reduction of a tax on jet fuel in the Dominican Republic will save airlines some \$45 million per year. In Canada, the elimination of a tax on international jet fuel in the province of British Columbia will save airlines an estimated \$15 million annually. Ontario, however, still applies its provincial fuel tax, an annual penalty of \$52 million on the province's economy.

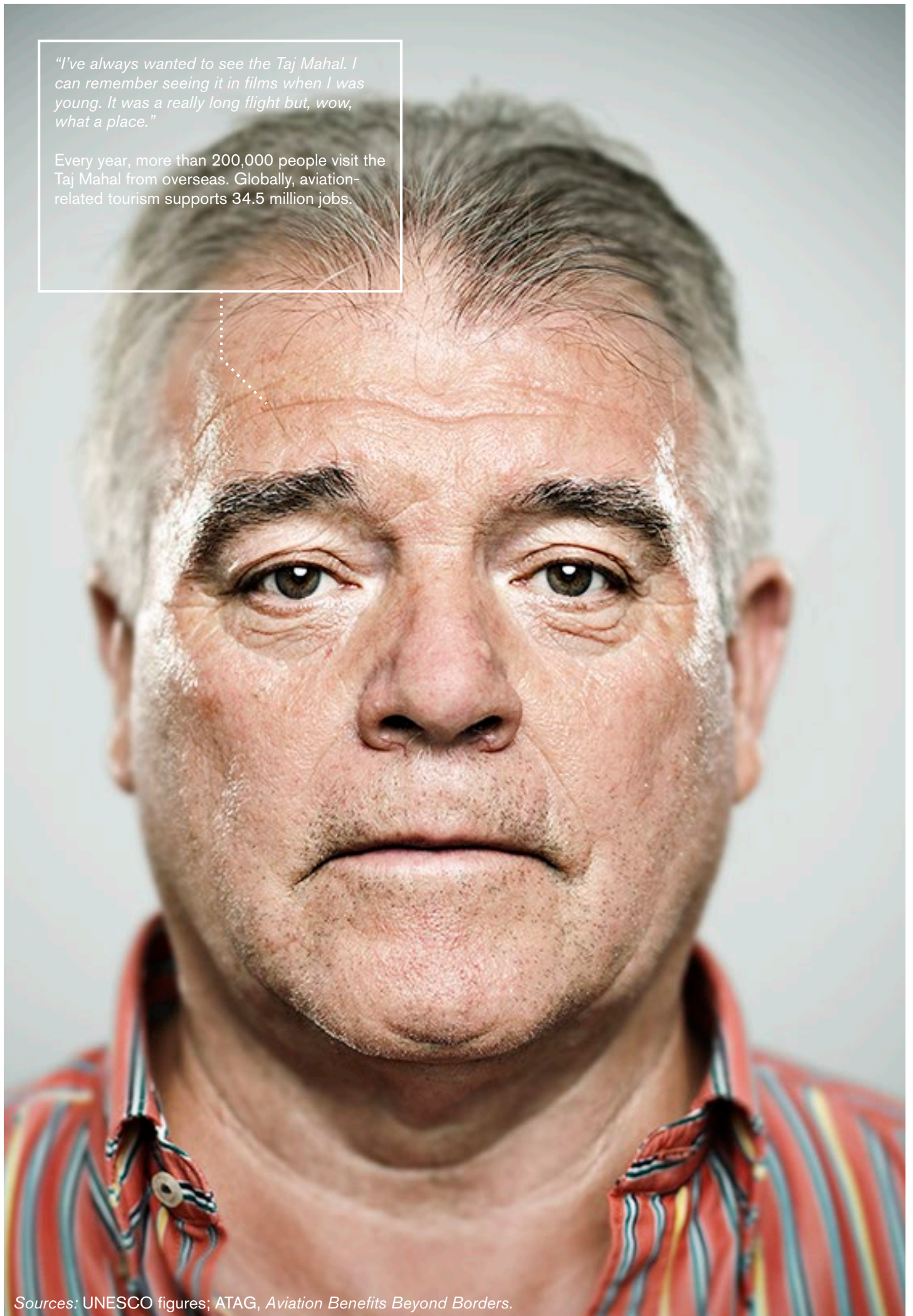
In Brazil, the use of parity pricing linked to the cost of importing jet fuel from the US Gulf Coast has resulted in a gross distortion of the market. Approximately 75% of the jet fuel supplied to airlines in Brazil is produced at Brazilian refineries, not imported. Yet on average fuel accounts for 43% of the operating cost of airlines there. This represents an estimated \$400 million annual cost penalty on Brazil's competitiveness. IATA is campaigning for Brazil to change its pricing formula to reflect market realities.

Value-added tax (VAT) and other sales taxes should not be levied on international air transport either. The European Commission has provided assurance that the exemption for intra-EU air travel will remain during the ongoing review of the EU VAT Directive. And the Seychelles government exempted international travel when it recently replaced a 15% sales tax on air tickets with a 15% VAT. IATA continues, however, to challenge India's service tax, which is levied on air tickets, fuel, and airport and air navigation services.

In Africa, there is an increasing number of proposals for so-called solidarity taxes. Nine countries in the region have followed the example of France and implemented duties on air travel to fund the fight against HIV/AIDS, malaria, and tuberculosis. The latest country to implement such a tax was Chad, in March 2013. These taxes are discriminatory and impede the development of aviation links that would boost economic growth. The industry favors voluntary schemes.

"I've always wanted to see the Taj Mahal. I can remember seeing it in films when I was young. It was a really long flight but, wow, what a place."

Every year, more than 200,000 people visit the Taj Mahal from overseas. Globally, aviation-related tourism supports 34.5 million jobs.



Passengers suffer from the consequences of poorly drafted regulation.

Airlines want to get passengers to their destinations on time. But occasional delays or cancellations are inevitable. When that happens, there is a legitimate role for governments to regulate protections for consumers. But too often, a lack of joined-up thinking among governments has created a complex patchwork of regulation that disadvantages passengers as well as airlines. More than 50 countries have their own versions of passenger rights regulations, the majority of which have come into force in the last seven years.

Israel is a case in point. In August 2012, the country introduced an Aviation Services Law that covers all flights bound for and departing from Israel irrespective of the airline operating the flight or the city from where it started. So, for a flight that originates in the United States, stops over in Europe, and ends its journey in Israel, all three of the jurisdictions could legitimately argue that their laws are applicable.

It is not only the lack of harmonization that is a concern but also the perverse incentives some of these regulations provide. In the United States, draconian tarmac delay rules have increased cancellations up to 24% because, under certain circumstances, a cancellation becomes preferable to a heavy fine. But it means that passengers have to rebook on a flight later in the day or even the following day, depending on space and frequency, rather than just suffering a delay of a few hours.

There is no monopoly on bad regulation. IATA has long been a critic of European Union (EU) Regulation 261/2004, which places the financial burden on airlines for delays even in cases where the causes of the delay are beyond the airlines' direct control.

A European Commission proposed revision of EU 261 acknowledges that airlines should not be held indefinitely responsible for assistance in circumstances completely beyond their control. But overall the proposed revision amounts to a missed opportunity.

It proposes that in cases of connecting flights the complete burden for compensation for delays should fall on the operator of the first flight.

This is contrary to the Montreal Convention and will discourage regional operators from offering connecting flights, disrupting passenger convenience. Furthermore, it suggests that diversions could count as cancellations, which has clear safety implications.

There is some hope. IATA is pressing for the adoption of globally harmonized core principles on consumer protection. A Working Group operating under the IATA Industry Affairs Committee identified these core principles and presented them to the Sixth Worldwide ICAO Air Transport Conference. They include ensuring that consumer protection regulations are in accordance with the existing international frameworks on air carrier liability, namely the Warsaw-Hague regime and Montreal Convention 1999, and avoiding extra-territorial legislation that creates overlapping regimes.

But with aviation already arguably the most regulated consumer-facing industry in the world, it is hoped that market forces will prove the foundation for most passenger rights revisions around the world.

Australia and Singapore have resisted the urge to pass punitive legislation. They have put their faith in the market to apply the necessary pressure on service levels and passenger care.

“In many ways, a competitive airline market is self-regulating. Commercial discipline is the most effective protector of consumer rights.”

Thomas Windmuller, Senior Vice President, Member & Government Relations, IATA

More than ever, working with partners is critical to connectivity.

Partnerships with infrastructure providers are critical to enabling the industry to meet rising demand for connectivity.

A number of significant capacity development projects are under way at airports or in air traffic management (ATM). Discussions with businesses and trade unions to promote the benefits of responsible, sustainable growth at constrained airports will continue.

Europe sees some of the fiercest debates over airport development. Airlines and IATA are campaigning for a third runway to relieve the 99% congestion at London Heathrow. In September, the UK coalition government announced an Airports Commission to “examine how the UK’s status as a leading global aviation hub can be maintained.” IATA will be submitting evidence to that commission throughout 2013.

Germany also faces capacity challenges. A much needed new airport for Berlin is not expected to open until 2015, and there are doubts that the full opening capacity of the airport will be realized. IATA also works closely with aviation stakeholders in Germany to communicate the economic consequences of the decision to ban night flights at Frankfurt airport.

In the Asia-Pacific region, IATA is supportive of plans for a third runway at Hong Kong International Airport. IATA will also provide input to the Australian government’s consultation on a new masterplan to address the terminal and airfield requirements for Sydney Airport for the next 20 years.

Work is expected to commence in 2014 on the new Beijing Daxing airport. IATA has met with the management team to examine the proposals for the airport, which is scheduled to open in 2017. In the intervening period, Beijing Capital Airport will commission T3D and optimize its existing terminal infrastructure. The airport has agreed to the establishment of a joint working group to include airport, airline, and IATA representation.

Airspace capacity improvements are vital in fast-growing markets.

Aircraft movements in the Middle East and Asia-Pacific have increased dramatically in recent years in response to passenger demand. That, in turn, has put pressure on ATM infrastructure. In the Middle East, there are around 30 different projects to increase airspace capacity and efficiency out of Dubai, with similar programs under way in Abu Dhabi and Doha. A key project for improving capacity in Asia-Pacific is the Seamless Asian Skies initiative. Its primary objective is to increase airspace and infrastructure capacity by standardizing services, harmonizing regulations, and ensuring interoperable ATM across the Asia-Pacific region. Seamless Asian Skies differs from other, single-sky global programs in that countries will retain their sovereignty of airspace and service provision.

The Asia-Pacific Seamless ATM Planning Group, formed in 2011, is finalizing the Seamless Asia Plan for presentation to the Asia-Pacific Air Navigation Planning and Implementation Regional Group in late June 2013. The plan includes a timeline for air navigation infrastructure improvements consistent with ICAO’s Aviation System Block Upgrades. Those improvements are to airspace capacity across the region to

meet future air transport demand. IATA advocated strongly on behalf of member airlines for the development of the seamless planning activity and is active in the development of the Seamless Asia Plan.

The megaprojects, meanwhile, of NextGen in the United States and of the Single European Sky (SES) continue to develop, but only slowly. The benefits of the enhanced capacity of NextGen have been estimated at \$77 billion from reduced delays over the period 2011–2030.

The SES has set four high-level goals to be met by 2020:

- A threefold increase in capacity where needed
- An improvement in safety performance by a factor of 10
- A 10% reduction in the effects flights have on the environment
- A reduction in the cost of ATM services to airspace users of at least 50%

(See article on page 33 for information on SES developments.) IATA, the airlines, and aviation stakeholder groups continue to press for stronger political action to ensure that these vital projects succeed.

There were some examples of cooperation in the setting of airport charges.

Infrastructure charges must be set at levels that enable airlines to satisfy demand for connectivity, that provide a reasonable return on investment, and that allow for sufficient investment in future developments and service quality.

Because infrastructure providers often enjoy monopoly or quasi-monopoly status, governments and regulators have a vital role to play in maintaining vigorous oversight of charges and development. Airlines, furthermore, require a formal role in capital investment decisions, since it is they who will be paying for those investments.

ICAO principles have been established to ensure transparency and a proper role for customers in the decision-making process on infrastructure investment and charges. This partnership can be mutually beneficial while enhancing the passenger's experience.

There were numerous examples of this cooperative system working well in 2012:

- Seoul Incheon Airport and the Greater Toronto Airports Authority agreed to plans that will save airlines \$64 million and \$355 million, respectively, through 2015
- Following airline input, Lima's airport recognized that there is no need for a proposed second runway because its runway capacity is not being fully utilized
- Similarly, the long-standing campaign with South Africa airports (ACSA) has allowed the deferral of two large CAPEX programs that would have adversely affected charges

But a number of challenges remain to ensure that ICAO policies on transparency and user consultation are upheld.

In 2012, civil aviation authorities in Mongolia and Pakistan unilaterally increased their charges. The combined annual estimated cost to airlines: nearly \$130 million.

Prefinancing to support potential development is a recurring problem. ICAO principles are clear that today's passengers should not have to pay for infrastructure that may benefit passengers tomorrow. Benin, Cameroon, the Democratic Republic of the Congo, Gambia, Guinea-Bissau, Mali, Niger, Sierra Leone, and Togo all have development charges ranging from \$9 per passenger to over \$50. Senegal's airport development fee stands at about \$68 per passenger—the highest in Africa.

Another challenge exists in Brazil, where in 2012 the government sold concessions for three airports that raised

five times the estimated price. IATA is neutral when it comes to airport ownership, and a concession model probably provided the best opportunity to address deficiencies at São Paulo-Guarulhos, Viracopos, and Brasilia ahead of the 2014 FIFA World Cup. But the sale of these airports was flawed in several respects:

- Aeronautical revenues are capped, but in other essential operational areas and services, such as fuel supply areas and airport space used by airlines, the charges are only monitored
- Airlines were not given a formal role in capital investment decisions at the airports
- There is a potential conflict of interest between the regulator that sets the price and the government that receives dividends
- It has been proposed that concessionaires have to pay into a development fund to cross-subsidize smaller airports, which is against ICAO guidelines and adds to airline costs without a corresponding gain in capacity or efficiency

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Air traffic management charges remain too high, particularly in Europe.

Governments in Indonesia, the Philippines, Vietnam, South Korea, and elsewhere are likewise looking to the private sector to raise funds. But there needs to be a good reason for privatization, such as efficiency improvements or private-sector investment. It also is imperative to have effective and transparent economic regulation in place prior to privatization. This must ensure focus on efficiency and cost control.

IATA continues to remind providers of their obligations to consult with users and to maintain full transparency on charges. In 2013, IATA will support this work by tackling the root causes of high charges. Efforts will include lobbying governments to scrutinize privatization and concession models.

In India, the decision by the Airports Economic Regulatory Authority to allow the returns over five years at Delhi Airport to be recovered in under two years contributed significantly to that airport's enormous 346% increase in charges in 2012. IATA continues to appeal this and other increases. It is also asking the Indian government to consider using the 46% of top-line revenues paid to the government as a concession fee to alleviate the pain of Delhi's increases.

The tariff hike in Delhi was followed by a fresh round of charge increases at other Indian airports, including at Mumbai and Chennai. This significantly raises the overall cost of operations in India, and IATA is appealing these increases.

The 50% reduction in air navigation charges envisioned by the European Commission's SES project are under threat from a lack of will among European states and air navigation service providers (ANSPs). European ANSPs' failure to meet even watered-down cost-efficiency targets in the first reference period of the SES Performance Scheme, 2012–2014, and their resistance to more ambitious targets for the second reference period, 2015–2019, threaten to undermine the SES's progress.

At a time when the European economies can least afford it, European ATM is costing airlines and their passengers an extra \$6.5 billion (€5 billion) a year in inefficiencies.

As highlighted in a 2013 industry report, *A Blueprint for a Single European Sky*, the solution is a binding performance scheme administered by a single independent regulator. A more unified European airspace, moreover, should be put in place by reducing the current 63 air traffic control centers to not more than 40. IATA will continue to lobby for these changes in 2013 and will work with the European Commission in driving top-down change in European airspace (see article on page 33).

Elsewhere, results are mixed. ASECNA, which manages the airspace of 17 French-speaking African countries, from Madagascar to Senegal, froze charges in 2013 for the eighth consecutive year and committed to long-term cost-efficiencies. But in Brazil, airlines absorbed a 150% increase in en route charges in 2012 and would have suffered a further 83.8% increase in 2013 had not the industry's strong advocacy efforts persuaded the Brazilian government to cancel the additional increase. Approach charges in Brazil, meanwhile, rose 13.2% in 2012, with no increase in sight for 2013. Brazil's government, though, has set guidelines for future increases that will be tied to the consumer price index.

Transparent prices and competition in the supply of jet fuel are essential.

Fuel is 33% of airlines' operating costs. For an industry with wafer-thin profit margins, transparency on the components of fuel prices and confidence in the reported market price of the product are essential to securing significant savings.

With these objectives in mind, the airline industry actively participated in 2012 in the consultations conducted by the International Organization of Securities Commissions (IOSCO) on behalf of the G-20. The purpose of those proceedings was to understand the shortcomings of market price discovery mechanisms and to arrive at guiding principles for oil price reporting agencies (PRAs). The IOSCO guidelines for PRAs have been issued, and key international PRAs have agreed to a voluntary code of conduct. It is expected that these developments will improve user confidence in price reporting going forward.

In Angola, IATA has worked with the state oil company, Sonangol, to secure reductions in fuel storage, into-plane, and inventory costs. The effort has saved airlines operating to the country an estimated \$110 million annually. IATA continues to work with the Angolan government on further rationalizing costs.

By engaging with Indian authorities to provide open access to jet fuel infrastructure at Kolkata and Chennai airports, IATA enabled private-sector suppliers to enter India's fuel market in 2012. The industry has also succeeded in ensuring competitive markets in eastern Europe, with achievements in Poland and Russia being of significance.

Swift progress on the SES is essential for travelers and the European economy.

The full implementation of a Single European Sky (SES) promises substantial benefits.

Aircraft will arrive within one minute of the planned arrival time regardless of weather conditions. On average, travel time will be reduced by 10 minutes. And each of the 20 million flights per year will be handled with even greater levels of safety.

Travelers will benefit immediately from this. And so will the European economy and the airlines that provide it with global connectivity.

Today, the inefficiencies in European air traffic management (ATM) that could be

eliminated with SES come with a cost—some \$6.5 billion. With demand growth to 20 million flights a year, that figure will expand to \$11.5 billion. On top of that, there is a broader economic benefit from research and development and improved connectivity as airline networks expand more easily and sustainably to meet evolving demand.

The European Commission understands the need to boost European competitiveness and is pushing for top-down change in SES implementation. The problem is at state level. Guided more by shortsighted interests, European countries are resisting change, watering down targets, and delaying the benefits that SES will bring.

In essence, European countries are propping up inefficient, state-owned air navigation service provider (ANSP) monopolies over the needs of travelers and the economy. Most European ANSPs did not meet soft cost-efficiency targets, for 2012–2014. And, under pressure from national governments, the European

Single Sky Committee endorsed weakened performance and charging scheme regulations for air navigation services for 2015–2019.

SES must move from debate to delivery. IATA, along with the Association of European Airlines and the European Regions Airline Association, published a report, *A Blueprint for the Single European Sky*. It anticipates that technical hurdles will be overcome but suggests three key reforms are essential to achieving SES.

First, an independent European regulator must establish a binding and robust performance system for air navigation charges.

Second, air traffic management structures need to be rationalized. The number of air traffic control centers in Europe should be reduced from 63 to no more than 40. The rationalization process would also enhance safety and environmental performance through reduced transfer points, improved information sharing, and better matching of resources to demand.

Third, next-generation systems must be implemented. These will facilitate more efficient routes and flight profiles that will reduce fuel usage by an average of 300 kilograms per flight. Multiplied by millions of flights a year, the potential carbon savings are in the millions of tonnes.

There is a timely political and economic outcome that should place this at the top of Europe's recovery agenda. The modernization and rationalization of the ATM supply chain is estimated to generate more than 300,000 additional jobs across the European aviation sector.

Unnecessary delays for passengers, endless discussions, and weak targets should no longer be tolerated. European ATM reforms must be implemented to the benefit of consumers, airlines, and Europe as a whole.

“We expect ANSPs to get on with the job of reforming European ATM, including rationalization of control centers from 63 to 40, and introducing competition for services.”

Peter Curran, Assistant Director, Infrastructure, Europe, IATA

The aviation industry is committed to reducing its environmental impact.

Environmental responsibility is a key element of the industry's "license to grow." That means managing and reducing aviation's environmental footprint.

Noise and air quality remain important environmental challenges. But carbon emissions are at the top of the public agenda and are thus the main focus of IATA's environmental work. To address the 2% contribution to man-made carbon emissions for which aviation is responsible, in 2009 the industry adopted a four-pillar strategy consisting of technology, infrastructure, operational improvements, and market-based measures.

The strategy will deliver three consecutive carbon emissions reduction goals:

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

No other industry has agreed to such ambitious global goals. To achieve them, however, the industry requires the support of governments in the way of globally aligned and coordinated policies.

A globally agreed economic measure to encourage carbon emissions reductions is critical to achieving carbon-neutral growth from 2020.

One of the most significant events of 2012 was the November announcement that the European Commission (EC) was "stopping the clock" on the inclusion of international aviation in its emissions trading scheme (ETS). Europe's governments recognized that their environmental goals with respect to aviation could best be met with a global measure agreed to through ICAO.

The EC also realized that its unilateral action to extend its scheme beyond its borders risked retaliation from non-EU governments, who regarded the move as an infringement of their sovereignty. Its suspension of the EU ETS, therefore, has given ICAO some breathing space to find a global solution.

A High Level Group of countries and experts within ICAO has been working to evaluate options on market-based measures (MBMs) for presentation at the ICAO Assembly later in 2013. The three main options on the table as of 1 May 2013 are as follows:

- A mandatory offsetting scheme
- A mandatory offsetting scheme with additional revenue raising
- A global emissions trading scheme

The aviation industry believes that an offsetting scheme without a revenue-raising element would be the quickest and simplest to introduce and administer. Such a scheme would generate maximum environmental benefits in the shortest time.

Should no global agreement on a single measure be reached at the upcoming ICAO Assembly, a framework to provide guidelines for the implementation of national or regional schemes might be considered.

To avoid the development of a patchwork of uncoordinated, overlapping, disputed policy measures, any such framework will need to recognize the historical and future contributions made by aviation through its participation in a multiplicity of schemes. It will also need to ensure environmental integrity, to minimize distortion and the administrative burden, to limit the allowable economic measures to those that are cost-effective, and—importantly—to not impede progress to a single global MBM.

Throughout 2012 and into 2013, IATA worked with its members and the wider aviation industry to provide input to ICAO and its member states, offering technical advice when invited to do so. IATA also has helped to facilitate airline discussions on the options for delivering carbon-neutral growth from 2020 (CNG2020; see article on page 37).

12

million tonnes of carbon emissions

The amount of carbon emissions saved by global aviation in 2012 through a combination of increased load factors, improved aircraft performance, and better "in-air" operations

1.7%

fuel efficiency improvement

12 million tonnes of CO₂ equates to a 1.7% fuel efficiency improvement and surpasses the 2012 industry target of 1.5%

40

thousand flights

12 million tonnes of carbon emissions is the equivalent of 40,000 round-trip New York to London flights

The four-pillar strategy is on track. But more supportive government policies are needed, particularly for biofuel production and airspace efficiency.

Political interest has centered on MBMs. But the other pillars of the emissions reduction strategy—technological innovation, operational improvement, and infrastructure investment—must also be addressed.

In 2012, the technological pillar achieved a significant boost with the agreement in July of a fuel-burn metric as a stepping-stone toward an ICAO CO₂ standard for new aircraft. Once adopted in 2016, the standard will be used to ensure that new aircraft meet a baseline for CO₂ emissions. Getting the diverse global stakeholders to agree to the metric was a significant challenge, and IATA assisted ICAO with the technical discussions.

Operational improvements, particularly the implementation of performance-based navigation (PBN) at airports to reduce fuel burn and noise, while enhancing safety, are a high priority. A PBN workshop has been developed in collaboration with ICAO and the Civil Air

Navigation Services Organization. This workshop is a next step from the Global PBN Go Teams that operated previously, and it focuses on training and guiding multidisciplinary teams to implement PBN.

Investment in air traffic management infrastructure, when coupled with operational reform, could lead to significant fuel-burn reductions. Programs such as NextGen in the US and the Seamless Asian Sky initiative could yield significant fuel savings. The Single European Sky has a target to reduce environmental impact 10% per flight; however, progress has been slow (see article on page 33).

Elsewhere, efforts are continuing to improve air traffic flow management (ATFM) and flexible use of airspace (FUA). Expanding the scope of localized ATFM to collaborative regional and eventually

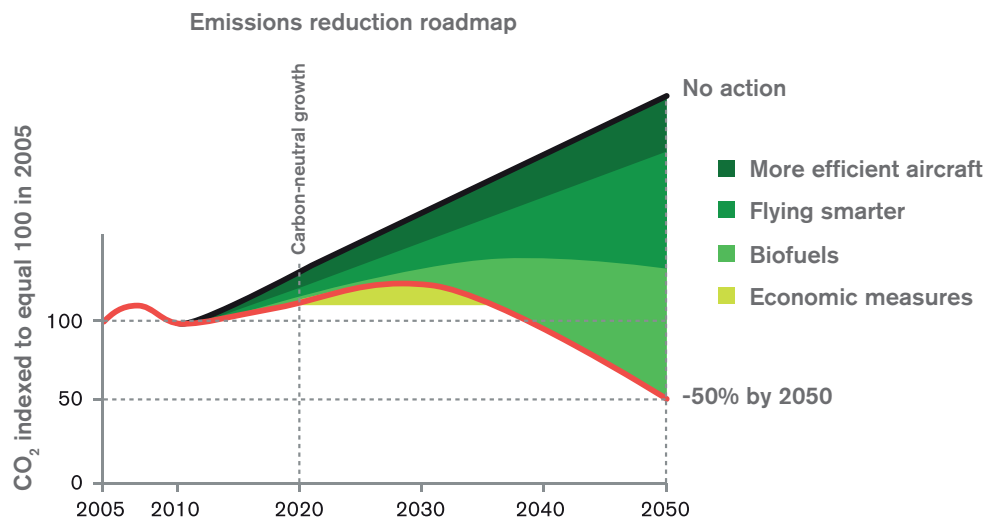
trans-regional areas and then globally should have significant operational and environmental benefits as airborne holding and other airborne delays are eliminated or reduced. The implementation of FUA relies on effective coordination between civil and military authorities to ensure that airspace is used as efficiently as possible, therefore reducing fuel burn and the emissions of airline users.

In addition, airlines and industry stakeholders are working to modify service priority levels from “first-come, first-served” to “most capable, best-served.” This evolutionary concept is expected to provide operational and environmental benefits to aircraft operators, including those that have invested in advanced capabilities, leading to greater network efficiencies.

Biofuel-powered flights by various airlines, meanwhile, continued throughout 2012 with the aim of achieving a better understanding of handling biofuels across the supply chain. A notable achievement was the series of biofuel flights that took ICAO Secretary-General Raymond Benjamin to the Rio+20 Summit.

A number of companies have announced plans to further biofuel production and research. But the industry needs a greater commitment from governments to encourage the ramp-up to the large-scale aviation biofuel projects that will bring costs down to a level where biofuel is competitive with jet kerosene.

Offsetting remains a useful option for individuals to contribute to mitigating climate impacts. To assist airlines in offering passengers a consistent, environmentally robust offsetting scheme, IATA has helped them to develop a standardized process.



Environmental best practices will be promoted through a new assessment program.

Many airlines have recognized the benefits of environmental management systems (EMS), but the standards and frameworks for EMS are challenging to implement in the airline industry context. To overcome this impediment, in 2011–2012 IATA utilized the internal systems and quality processes of its certification programs to develop standards and an assessment program. The initial pilot group for the IATA Environmental Assessment (IEnvA) program comprised seven airlines.

The aim of the IEnvA program is to improve airline environmental management practices and efficiency performance at the company level by setting internal targets, implementing management programs, and providing access to best practices and information sharing among airlines. The IEnvA consists of a modular approach so that airlines can benefit from it in the most relevant areas of their operations. As such, the IEnvA is applicable to all airlines regard-

less of the level of development of their environmental management initiatives. Airlines are able to phase in the implementation of the IEnvA in two stages, both verified by independent assessments undertaken by approved Environmental Assessment Organizations (EAOs).

The first group of airlines has gone through the independent IEnvA process. In 2013, the aim is to encourage more airlines to join the program and to continually improve the standards.

The carbon footprint of goods transported by air is attracting consumer interest.

The air cargo supply chain is developing a common calculation method for the reporting of CO₂ emissions for goods transported by air. New regulatory requirements are also coming into force, such as Grenelle II in France. From October 2013, all transport services that originate from or terminate at a French airport must communicate the CO₂ emissions related to their transport services. The Grenelle II law means that not only airlines but also travel agents and freight forwarders must inform their customers of the CO₂ emissions associated with the transport services they provide.

In March 2013, IATA was mandated to develop a common carbon calculation methodology. As part of that mission, IATA joined the advisory board of Carbon Footprint of Freight Transport (COFRET), a European project looking at the calculation of the carbon footprint along the entire supply chain.

Noise issues remain a concern for many communities.

Noise is tackled through a “balanced approach,” approved by ICAO in 2001, that calls on local authorities to address noise problems at airports by considering all available measures, including technological change, operational procedures, and land-use planning and management. Major progress made in recent months has involved technology. In 2012, ICAO agreed on a new noise standard (Chapter 14) for large new aircraft coming into service in 2017 and for regional aircraft coming into service in 2020. Whereas the time taken to agree to a 10-decibel reduction between the previous two noise chapters spanned 29 years, it took only half that time to agree on Chapter 14 and its further 7-decibel reduction.

Aviation has pledged to achieve carbon-neutral growth from 2020.

The industry's four pillar strategy on climate change provides the framework for hitting the CNG2020 target. Improvements in technology, operations, and infrastructure will work in conjunction with market-based measures (MBMs) to achieve CNG2020. Each pillar will make a significant contribution to CNG (see emissions reduction roadmap chart on page 35) and to the industry's ultimate goal of reducing CO₂ emissions 50% by 2050 compared with 2005.

MBMs are fundamental to achieving CNG in the short term. While the other three pillars will make an enormous contribution and have already decoupled traffic growth from emissions, MBMs will be the clinching pillar.

Even though MBMs are anticipated to be a temporary measure, the industry has focused on the successful implementation of a global MBM solution. It has campaigned against

regional schemes and the European Emissions Trading Scheme (EU ETS) in particular. With the "clock stopped" on the EU ETS, attention has turned to the elements that would make up a global MBM scheme. These are being debated at ICAO, with a decision expected later in 2013.

In the meantime, work will continue on the other three pillars. Technology innovations offer almost unlimited potential and will be the long-term solution. There is no telling what technologies might be on offer in the future, but new aircraft, lighter composite materials, and new engine designs are already making their mark and contributing to CNG2020. The high cost of jet fuel, which reached 33% of total operating costs in 2012, provides a strong incentive for change.

The high jet fuel price is also narrowing the gap with the current cost of biofuels. But biofuels are not commercially viable yet. A policy framework that promotes biofuel usage is absolutely essential. Over

1,500 passenger flights have been conducted that prove the viability of biofuels. These fuels can reduce CO₂ emissions 80% over their complete life cycle compared with normal jet fuel and would represent a major step on the road to CNG2020. The biofuels ball is now firmly in the court of governments.

Operationally, most improvement will come from improved flight procedures using performance-based navigation. This includes green departures, optimized trajectories, and continuous descent approaches. Many of these procedures are already in place in various regions and making a significant impact. Every minute of saved flying time reduces CO₂ emissions by 100 kilograms.

But the minor savings are no less important. Projects include reducing taxiing time and more efficient use of auxiliary power. One airline has even saved 30,000 tonnes of CO₂ annually by replacing its catering trolleys with a new lightweight model.

Such changes add up across an entire fleet. A recent evaluation undertaken by ICAO independent experts on operational goals has estimated the worldwide operational fuel and CO₂ reduction potential to be 12.75%.

Infrastructure gains will come most obviously through Next-Gen and the Single European Sky, the major air traffic management (ATM) projects in the United States and Europe, respectively. The Civil Air Navigation Services Organization estimates airspace efficiency at 92%–94%, so even small gains in efficiency would represent millions of tonnes of CO₂ savings.

“Market-based measures are a key element of the strategy to achieve carbon neutral growth from 2020. Governments, working through ICAO, must design a global MBM that allows the industry to achieve its aim.”

Paul Steele, Director, Aviation Environment, IATA

Air cargo is focused on its value proposition: speed, reliability, efficiency.

Air cargo transported goods valued at \$6.4 trillion in 2012. That impressive figure masks two years of declining volumes resulting from a sluggish global economy and a modal shift from air to sea transport.

The industry is focused on developing partnerships to strengthen air cargo.

The Global Air Cargo Advisory Group (GACAG) comprises the International Federation of Freight Forwarders Associations (FIATA); The International Air Cargo Association (TIACA); the Global Shippers Forum (GSF); and IATA. Their work is focused on the priority areas of e-commerce, customs and trade facilitation, security, and sustainability.

Since its inception in March 2011, GACAG has firmly established itself as the air cargo industry's primary stakeholder voice in dealing with governments and international organizations on unified industry positions. Its major accomplishment is the e-freight roadmap. But it also plays an important role in helping to drive the implementation of industry standards.

Reflecting the need for cross-industry collaboration, the World Cargo Symposium (WCS), hosted by IATA, has evolved to become a major industry decision-making event. The event also serves to raise the profile of air cargo with governments as a strategic partner, helping to ensure that cargo has the regulatory environment and infrastructure needed to successfully drive growth.

Related to this, the "Air Cargo Makes It Happen" campaign was launched in 2012 with similar goals. And in 2013 the first Future Air Cargo Executive Summit (FACES) was held to showcase the important role that future leaders will play in the growth of the air cargo industry.

Efficiency is being driven through e-freight.

Air freight's value proposition of speed, reliability, and efficiency is being reinforced through e-commerce and digital data transfer technologies—known as e-freight.

In 2012, GACAG endorsed an e-freight roadmap based on three key initiatives. IATA is leading the first two: expanding the global e-freight network and eliminating paper-based core transport documents. FIATA and the GSF are jointly leading the third initiative, which is to digitize commercial documents (see article on page 40 for more information).

To expand the global e-freight network, it is necessary for more countries to ratify Montreal Convention 1999 (MC99). MC99 supports the removal of paper documents accompanying shipments. The industry is focused on persuading governments in such cargo markets as Bangladesh, Indonesia, the Philippines, Russia, Sri Lanka, Thailand, and Vietnam to ratify this treaty. In addition, to help demonstrate the benefits of e-freight IATA will support e-freight proof-of-concept pilot projects in two of the BRICS countries, China being most critical.

/...

12
percent

Air cargo accounts for 12% of all industry revenues

\$6.4
trillion

The value of goods carried by air cargo in 2012, which is a third of all goods by value transported globally

Safety is being enhanced through strict compliance with enhanced dangerous goods regulations.

Airlines are taking the lead in eliminating the paper core transport documents by moving toward the 100% adoption of the e-Air Waybill (e-AWB). In 2012, Cathay Pacific, Emirates, and Singapore Airlines reached more than 75% e-AWB penetration out of their main hub airports. Many other airlines reached more than 20% e-AWB penetration. Case studies based on those successes reveal an average 20% efficiency gain for airlines, freight forwarders, and ground handlers when moving to a paperless environment. In some cases, the efficiency gains exceeded 44%.

To facilitate the adoption of the e-AWB, FIATA and IATA jointly developed a multilateral e-AWB agreement that in March 2013 was adopted by the Cargo Services Conference as Resolution 672. The multilateral agreement will enable parties to utilize e-AWBs under a common and internationally recognized legal framework, removing the burden of signing multiple bilateral e-AWB agreements. Recognizing that the necessary standards were in place for the e-AWB, the IATA Board of Governors in 2012 endorsed a target of 20% e-AWB penetration worldwide where legally feasible for 2013.

The challenge of adhering to the Dangerous Goods Regulations (DGR) is growing. This is particularly so amid the growth in manufacturing from emerging economies, the changing nature of business with the exponential growth of e-commerce, and the technological changes that have seen lithium batteries become the power source of choice in a vast array of consumer and industrial devices.

In 2012, there were a number of incidents where dangerous goods were either not packaged correctly or not identified as dangerous goods and instead offered as items of general cargo or as standard air mail parcels. Some of these shipments resulted in fires and in mercury leakages in aircraft.

IATA is working to ensure that continued strict compliance with the DGR is widespread within the industry and embedded in the standard operational practices of airlines. The development of the DGR over several decades has enabled almost every type of potentially hazardous material to be shipped safely. The challenge is for the whole air cargo supply chain to adhere strictly to the requirements of the DGR.

To address the mail issue, IATA worked with ICAO and the Universal Postal Union (UPU) to establish requirements for postal administrations to develop and implement appropriate dangerous goods training and controls to prevent such products from entering the air mail stream. The training and the control procedures are subject to review and approval by national civil aviation authorities.

IATA also sought to address undeclared dangerous goods incidents and to promote industry engagement on the carriage of lithium batteries. IATA conducted a series of informational events and in 2013 will issue a lithium battery guidance manual that provides practical detail on regulations for transporting lithium batteries.

In 2013, IATA will continue to work with ICAO to identify possible improvements to the DGR to further enhance safety. Additional workshops on dangerous goods and lithium batteries are planned to facilitate the industry's outreach to educate shippers and manufacturers on lithium batteries. And again IATA will work closely with the UPU to heighten safety regulations for air mail.

The Cargo Agency Program is being modernized.

In collaboration with FIATA, IATA is evolving the Cargo Agency Program to better address contemporary issues of accreditation, governance, training, and supplier and buyer collaboration. The program will respond to industry customer demands; preserve the Cargo Accounts Settlement System (CASS); protect member funds; and create a collaborative environment where cargo service standards and solutions can be universally implemented to improve safety, security, and operational efficiency.

Other benefits of the modernized program include a simplified governance structure that enables shared accountability and reduces the global administrative workload. Given that 80% of freight transactions are performed under a principal-to-principal relationship, the proposed Cargo Agency and Air Cargo Programs aim to better administer an industry involving a buyer and seller relationship.

In 2012, the Cargo Agency Program obtained the support of the Cargo Committee and of the IATA Board. In 2013, the goal is to draft new resolutions and program rules for the Cargo Agency Program and for the IATA-FIATA Air Cargo Program (IFACP). Final approval for those resolutions and rules will be sought from the Cargo Agency Conference (CAC) in the fourth quarter of 2013 or in early 2014. Assuming approval is obtained from the CAC, regional implementation of the programs will begin in 2014.

E-freight will put an end to paper-based processes in air cargo.

Some 50 million tonnes of cargo are transported annually. It doesn't need another 7,800 tonnes of paperwork to make it happen.

To ensure the success of e-freight, the Global Air Cargo Advisory Group (GACAG)—consisting of IATA, the International Air Cargo Association, the Global Shippers' Forum, and the International Federation of Freight Forwarders Associations—has developed a roadmap to 100% e-freight that defines the approach, structure, and targets for the e-freight program.

The first element of the e-freight roadmap is engaging regulators and governments to ensure a legal framework that supports paperless cargo. The goal is to achieve 80% network coverage by volume. As of 1 May, penetration stands at 37%.

The focus is on China and India. Both countries have ratified Montreal Convention 1999, a key enabler of paperless transactions, but this agreement hasn't yet been embedded in their regulatory frameworks. In China, for example, customs regulations do not recognize electronic documentation. It is a similar situation in India. The goal is to work with government and industry players to pilot e-freight in both countries by the end of 2013.

The second element of e-freight is digitizing the air waybill document. At the end of 2012, the electronic air waybill (e-AWB) had achieved 7.2% penetration. The aim is to achieve 20% by the end of 2013 and 100% penetration by the end of 2015. These are ambitious targets, but the industry has taken an enormous step forward with the

introduction of the IATA Multilateral e-AWB Agreement.

Previously, penetration was held back by the need for individual agreements between airlines, freight forwarders, and airports. The IATA Multilateral e-AWB Agreement clears this blockage by providing a single standard agreement that airlines and freight forwarders can sign once with IATA to enter into e-AWB agreements with all parties.

With the e-AWB in place, the third element of the roadmap calls for the entire cargo pouch of documentation—up to 30 documents—to go electronic. This includes individual documents for each area of cargo, such as flowers or dangerous goods. Converting all documents to an electronic form is a huge undertaking, involving tens of thousands of freight forwarders and millions of shippers. But once e-AWBs are in universal use and the benefits of digitization is clear, progress is expected to be swift.

Once 100% e-freight has been achieved, governments and industry partners will benefit from increased levels of information, reliability, and security. Freight forwarders could get savings of around \$2 per shipment if e-freight is combined with an e-archiving system. And customer service will be transformed too. Total productivity gains for the overall document handling process once everything is implemented, including airline and ground handling activities, is estimated at 48%.

“E-freight is the single most important project in improving air cargo’s competitiveness. The roadmap provides the targets that will help us realize the e-freight vision.”

Des Vertannes, Global Head of Cargo, IATA

"I'm a doctor, and I'm also part of a team that sets up medical and vaccination centers in disaster-hit areas. The last project was in Haiti after the big earthquake."

The day after the Haiti earthquake struck, air traffic controllers arrived and over the next 12 days coordinated 2,500 flights carrying over 2,000 tonnes of emergency supplies.



Passengers want control of their journeys.

The New Distribution Capability benefits passengers, airlines, and travel agents.

Technology is making it possible to improve the passenger experience and to reduce costs in the face of rising passenger numbers and more onerous security requirements. It is also helping the industry to meet the rising expectations of travelers accustomed to having more control in other areas of their lives through amenities such as e-commerce and self-service banking.

In November 2012, the Passenger Services Conference endorsed a white paper titled *The New Simplifying the Business Program*. That document discusses a *Simplifying the Business (StB)* program that builds on the success of the original StB initiatives to make conveniences such as kiosks, e-tickets, and bar-coded boarding passes commonplace within five program areas: a new distribution model, the enhanced provision of passenger data, better access to real-time information for passengers, a hassle-free ground experience, and a seamless end-to-end customer journey with a focus on interoperability across the value chain.

The Internet has fundamentally reshaped the way sellers and consumers interact. Today, 40% of ticket sales by value come directly through airline websites. Airlines use their websites to provide consumers with their complete range of services and product innovations. They are, moreover, able to tailor their offers to meet a customer's particular needs. This is similar to the experience that customers have when accessing any leading retail website.

But the majority—some 60% by value—of airline sales remain in the indirect channel, through online and brick-and-mortar travel agents. Travel agents access offers that are put together by global distribution system (GDS) companies. There are three main GDS's outside China. They use pre-Internet messaging standards based on EDIFACT and Teletype that were at the cutting edge of technology in the 1970s. Today, those standards are severely limited compared with what is possible with the XML messaging used to power the Internet.

As a result, GDS's are unable to provide easily the same sophisticated shopping experience or rich content available

to customers on an airline website. This denies consumers using the indirect channel the opportunity to know about the many innovations in which airlines are investing. In many instances, GDS's cannot provide complete product information, let alone comparison shopping for personalized offers.

To eliminate this gap, IATA is leading an industry initiative to develop a new data transmission standard. The New Distribution Capability (NDC) will enable airlines to offer the full range of their services to customers regardless of customers' choice of buying channel (see article on page 47).

The NDC standards have the potential to create benefits for all parties in the airline-GDS-agent relationship. But the NDC does not mandate changes to the industry—it will be for the market to judge whether new entrants or new business arrangements will be successful.

As required under a US Department of Transportation (DOT) rule, IATA filed for DOT approval of Resolution 787, which is the foundation standard for NDC. The public comment process ensures a robust and transparent hearing for the opinions of all interested parties. IATA welcomes the scrutiny of DOT and all others who choose to comment on this resolution.

The enhanced provision of passenger data and real-time information for passengers will match government and customer expectations.

The global security agenda in the decade since 9/11 has led governments to request more Advance Passenger Information (API—see information on page 20). An ICAO standard defines the 40 elements of API. Many governments, however, have chosen to add further requirements, leading to a lack of consistency in the type and the transmission method and frequency of the information provided. The industry is working with governments to agree to harmonized requirements and a consistent data transmission process.

As mobile connectivity increases, customers expect real-time notification of delays or schedule disruptions. Forthcoming regulation in the United States and potential legislation in Europe will require airlines to inform passengers of disruptions where possible. Although airlines have access to the contact details of about 50% of their passengers through direct sales and frequent flier programs, they typically don't have access to passenger contact details from sales in the indirect channel. IATA is working with the value chain to update reservations standards so that agents can input passenger contact details. The new standards will be presented for approval by the relevant industry conferences at the end of 2013.

Another project in the area of granting passengers better access to real-time information is the Ease of Access to Travel Information project. It looks at ways airlines and airports can offer passengers information on such issues as waiting times and delays to allow passengers to take appropriate action.

\$36.1
billion

The size of the airline ancillary sales market in 2012

11.3%
increase

Ancillary sales jumped 11.3% over 2011

Empowering passengers

He booked through an online travel agency. But if the flight's delayed, he wants a text message alert from the airline.

As many as 68% of travelers want updates directly from the carrier.

When he flies with his daughter, he's interested in priority boarding.

Fully 69% of air travelers say they buy ancillary products to personalize their journeys.

He'd be happy to check in his bag but worries about losing it.

Fully 81% of passengers want to track their baggage in real time.

She lost her boarding pass. Luckily, she has an NFC*-enabled mobile phone, so it's easier to get another.

Almost 1 in 3 devices are NFC equipped.

**Near-field communication*

She checked in on her iPhone and printed her boarding pass at a kiosk.

Nearly 75% of passengers prefer to check in on the Internet or at a kiosk.



A hassle-free ground experience is being made possible through improved self-service options and optimized security processes.

Passengers' demands for self-service options throughout their journeys, from boarding pass to baggage collection, are increasing. IATA's Fast Travel initiative is helping airlines to meet these expectations through six specific projects: check-in, travel document scanning, bags ready-to-go with baggage self-tagging, self-boarding, flight rebooking when itineraries are interrupted,

and self-service registration of mishandled bags.

Over 100 airline-airport pairs implemented Fast Travel projects in 2012. The Fast Travel program is moving toward the mass implementation of self-service. The 2013 target is for 20% of passengers to have access to four of the six Fast Travel options.

The Baggage Improvement Program (BIP), meanwhile, was successfully completed in 2012. Over BIP's 2007–2012 period, baggage mishandling

rates were cut from 19 bags per 1,000 passengers to 9 bags for every 1,000 passengers.

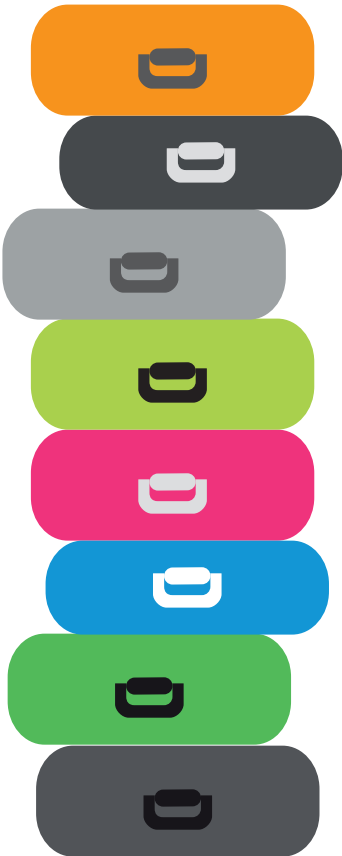
In 2013, BIP is being replaced by the InBag Program, which has three objectives. The first is to continue to reduce baggage mishandling. The new target, for 2016, is a rate of 4.5 bags per 1,000 passengers. The second aim of the program is to improve the efficiency of baggage operations and the third to enable baggage handling innovation by developing modern standards for communications and systems design that make innovation easier. The ability to offer an ancillary product, such as a baggage delivery service from the airport to a hotel, is an example of such innovation.

To complement the Checkpoint of the Future (CoF) project (see page 21), the Passenger Facilitation project works with airports to optimize facilities to keep costs constant even as passenger numbers increase. In 2012, Passenger Facilitation performed security access diagnoses at 5 airports and assisted in the implementation of automated border controls (ABC) at 10 airports. IATA is focusing in 2013 on working with partners to implement ABC at 15 airports and on conducting security access diagnoses at 10 airports.

Three additional projects are being developed through 2013 to move toward the hassle-free vision. E-borders will help governments provide e-visa programs. Single Token will enable passengers to go through all the airport processes using a single piece of identification, whether an e-passport, biometrics, or e-boarding pass. And Check Out will automatically check in passengers at the time they book their flights.

19

mishandlings per thousand passengers in 2007



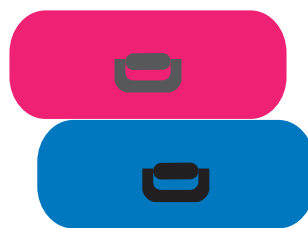
9

mishandlings per thousand passengers in 2012



4.5

mishandlings per thousand passengers target for 2016



Partnerships across the travel chain are being enhanced to ensure a seamless end-to-end journey for the customer.

Modern travel often involves many partners. A trip, for example, may start with a train ride to the airport, followed by a flight and then a rental car or a bus connection to a cruise ship or a hotel. A disruption at any point in the trip may require the alteration of plans for the rest of the journey.

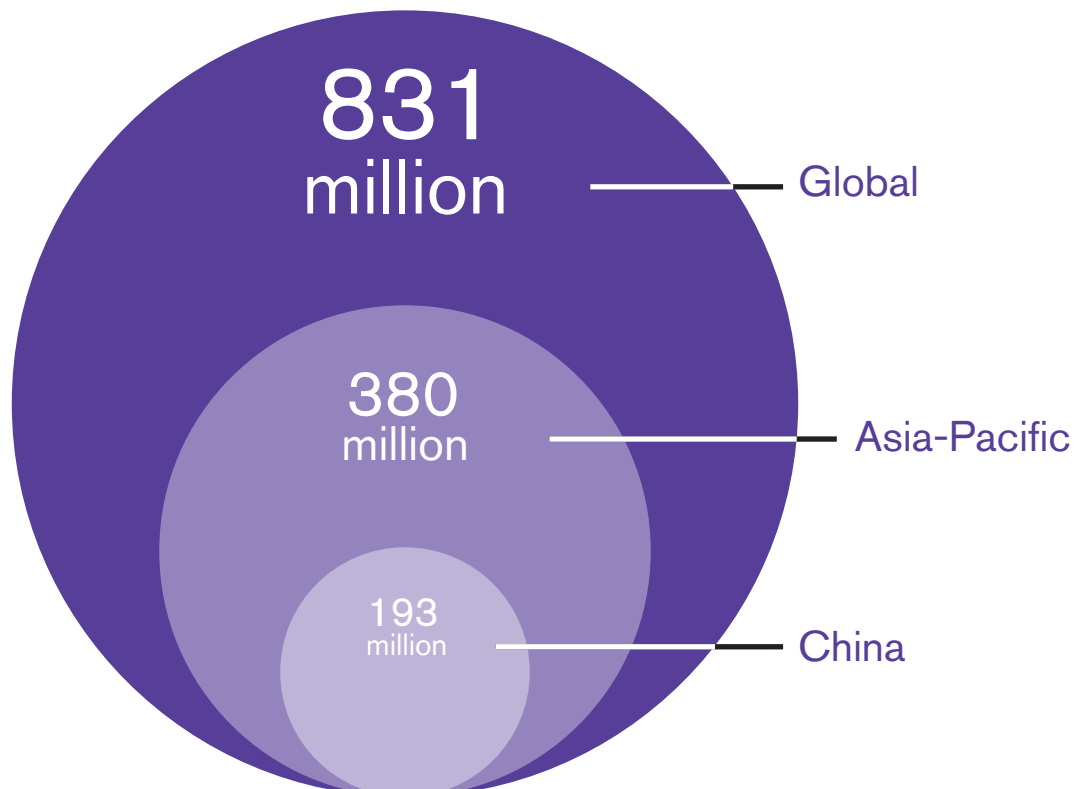
There is, however, no single communications vehicle that links travelers to all the partners along their travel chain. Formidable technical challenges stand in the way of creating such a communications vehicle. As a first step, airlines, systems providers, and other partners in the travel chain must collectively develop a “common-language” industry data model by which their diverse systems can communicate to facilitate joint business, interlining, codeshare, and other types of collaboration.

E-services marks the final step on the path to paperless travel.

The e-services project is the last step in removing paper documents from the passenger’s journey. The process began with e-ticketing and continued with bar-coded boarding passes. E-services will now eliminate a range of paper miscellaneous documents, such as those for excess baggage tickets or lounge access. Electronic versions of these documents exist, but they are built on differing standards and are thus difficult to apply to interline journeys. The e-services project is mobilizing the industry to adopt IATA’s electronic miscellaneous documents (EMD) standard.

A benefit of the EMD standard beyond its standardization is that it enables the sale of a range of optional services through travel agents, from additional legroom while flying to a car service when you reach your destination. It should be noted, however, that EMD is focused on the back-office functions that accompany the selling of ancillary services through travel agents. It is not a substitute for the broader NDC messaging standards being developed. The EMD standard, however, also makes possible lower costs, due to simplified revenue accounting and back-office processing, while allowing for the faster tracking and attribution of ancillary revenues.

In 2012, 80 airlines implemented EMD and the overall capability covered some 75% of passenger volumes. From the end of 2013, IATA’s Billing and Settlement Plan (BSP) will only accept EMD for processing. Where needed, however, workaround solutions will be implemented.



Estimated additional passenger volume in 2016 (compared with 2011)

"I sell mobile phone accessories over the Internet. The products are manufactured in China, and we guarantee worldwide delivery in seven days. I'm in Asia a lot looking for new ideas and gadgets."

China and Hong Kong between them handle 6 million tonnes of air freight annually. Chinese air cargo growth will average 3.8% over the next five years. Globally, air cargo carries goods to the value of \$6.4 trillion annually.

Air travelers should benefit from targeted travel offers from every sales channel.

Air travelers should benefit from targeted, personalized offers no matter the sales channel of choice.

A passenger booking through an airline website already accepts personalized sales as the norm, with a whole range of options on offer. But booking through a travel agent typically will get only the price and schedule.

The simple reason for this discrepancy is that travel agents don't have access to the same information. In effect, airline customers purchasing through travel agents—a channel that accounts for about 60% of ticket sales by value—are denied the opportunity to understand the true value of an airline product. It is an unacceptable state of affairs for a 21st-century business serving a 21st-century customer.

The New Distribution Capability (NDC) is an IATA-led, collaborative industry initiative that will enable travel agents to offer consumers the same rich content airlines already offer on their own websites. The NDC defines a new messaging standard between airlines and travel agents that will allow airlines and third parties to display more information on flight options and services than is currently available through the agency channel, meaning that customers will be better informed.

Greater transparency and choice for consumers will allow them to comparison shop among airlines armed with the full scope of the airlines' product offers and not just the base airfare and schedule. This is no more than the modern passenger expects. And airlines and travel agents must be able to meet these expectations.

Passengers will have the option to provide personal information when using an online travel site or speaking to a travel agent. If they do so, they could receive targeted, personalized offers through a two-way flow of information with the airline, something that isn't possible with the current global distribution system (GDS) setup.

But the system doesn't require this level of disclosure. Passengers can simply book a ticket with the minimum level of information if they wish.

IATA welcomes participation and input in the NDC from all participants in the travel value chain, including travel agents, agent associations, airlines, GDSs, and other technology providers.

“With the NDC, customers can get the same travel options, regardless of whether they shop through an airline website or visit a travel agent.”

Eric Leopold, Director, Passenger, IATA

Global aviation relies on trusted financial services.

Airlines require robust, reliable, and speedy settlement systems to ensure that their cash flow is not disrupted. That is a formidable challenge given that the global, interconnected structure of the airline business involves the transfer of billions of dollars in ticket sales from third-party sales points, such as travel agents and freight forwarders, and, to facilitate interlining, among airlines.

IATA is the industry's trusted partner for efficient, reliable, and cost-effective means to simplify the selling, reporting, and remitting procedures of airline tickets and air waybills. In 2012, \$251.8 billion was settled in the Billing and Settlement Plan (BSP) and \$31.7 billion in the Cargo Accounts Settlement System (CASS). IATA operates BSPs in 177 countries and territories and CASS in 83 countries and territories around the world. More than 400 BSP and 270 CASS airlines participated in IATA's settlement systems in 2012, together with more than 60,000 BSP and over 16,000 CASS agents. The settlement success rates were 99.976% for the BSP and 99.989% for CASS. For consumers, this means that travel—no matter how complex the itinerary and how many borders are crossed—can be purchased in a single currency.

Offsetting billings and managing currency clearance helps maintain smooth operations.

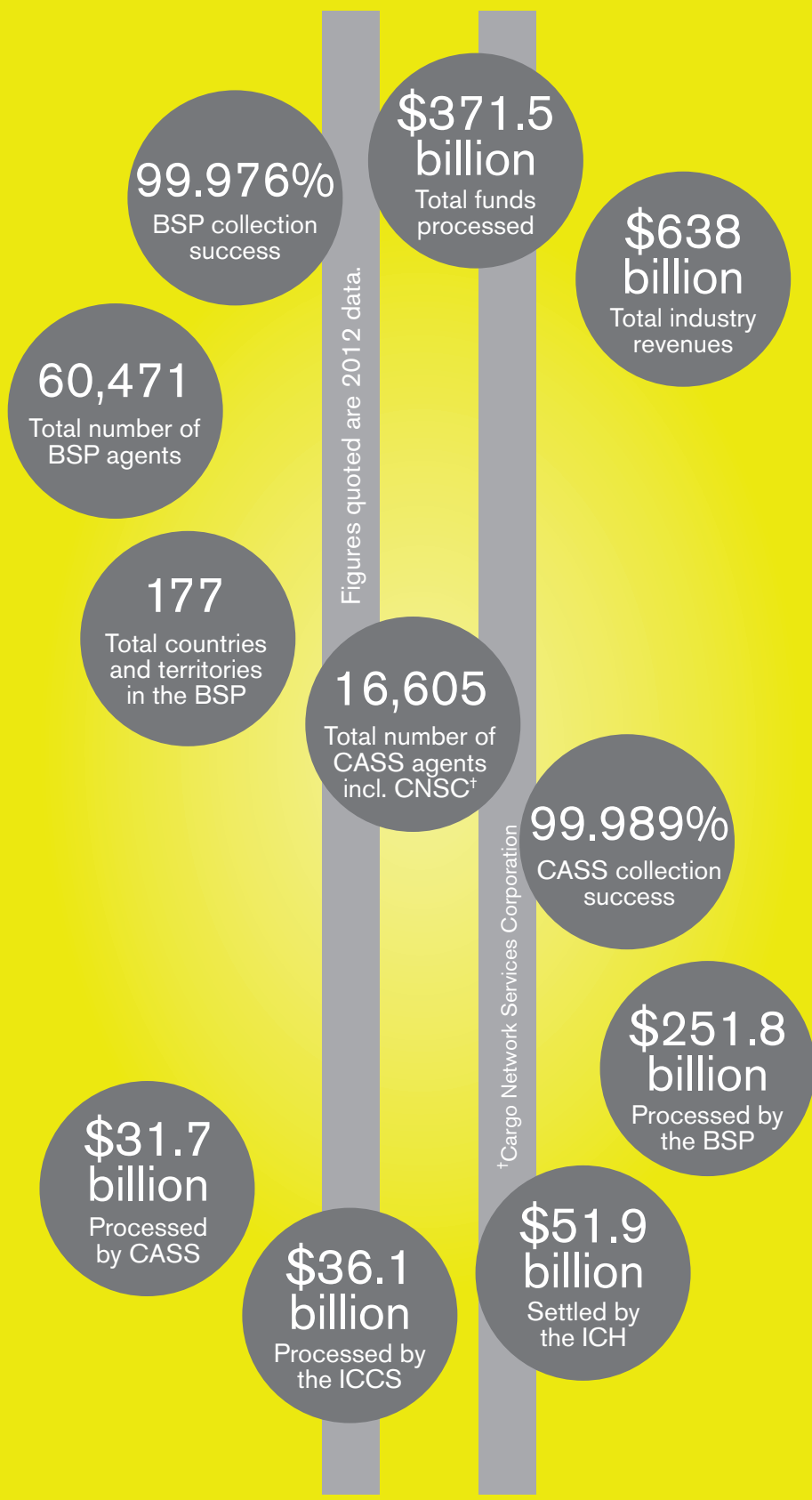
To reduce risk and transaction fees, IATA operates the IATA Clearing House (ICH). The ICH facilitates the offsetting of billings between more than 350 airlines and around 90 associated companies and reduces industry financial risk by minimizing the time and money involved in outstanding inter-company debts. In 2012, ICH billings transactions throughput grew almost 5%, to \$51.9 billion. This is a record for the ICH. As a result of the offset provided by the netting service, the amount of cash required to settle these billings was only \$16.1 billion, giving a net offset ratio of almost 70%. The ICH's settlement success rate was 99.996%.

Fluctuations in global exchange rates can be considerable, and businesses remitting large sums in multiple currencies require extensive and active management to maximize efficiencies and minimize risk. The IATA Currency Clearance Service (ICCS) provides a centralized approach to airline global cash management activity while offering highly competitive market exchange rates to help airlines efficiently manage the repatriation of their worldwide sales. In 2012, the ICCS assisted over 300 member airlines repatriate in excess of \$36 billion of their sales proceeds from more than 125 countries.

Reforms to strengthen further the reliability of IATA's settlement systems are firmly established.

Enhancing the security and reliability of the IATA Settlement Systems (ISS) has been an ongoing project for the past 15 years. In the latest step, made possible by advances in technology and financial infrastructure and systems, IATA has consolidated remittance and settlement services to five regional hubs: Amman, Beijing, Madrid, Miami, and Singapore. This Strengthening ISS (SISS) initiative has now moved into the next stage, involving migrating the remaining ISS activities, including agency management, risk management, billing and reporting, invoicing, collection, and customer service, from IATA local offices to the regional hubs. The migrations are taking place in four waves. The first wave has been successfully completed. The remaining are planned to be completed by December 2013.

To improve further the automation, standardization, control, security, and simplicity in remittance and settlement (R&S) operations, IATA has adopted a new tool: the IATA R&S Integrated Solution (IRIS). IRIS was released in 2012 and is aimed at minimizing errors and the risk of fraud while increasing efficiency and operational effectiveness. By the end of its implementation, scheduled for December 2013, IRIS is targeted for use for 96% of the industry's worldwide annual net cash sales settlements.



Simplified Interline Settlement removes paper from the billing process.

The Simplified Interline Settlement (SIS) platform, introduced in 2011, is an electronic invoicing system that optimizes interline billing and settlement processes. In SIS, electronic billing files are automatically settled by the ICH. On 8 May 2012, the second stage of SIS was implemented, extending SIS to cover cargo and the Universal Air Travel Program, thus completing the delivery of the SIS platform.

In its first full year of operations, SIS signed up 411 members in 158 different countries and processed over 870,000 invoices with a settlement value of \$32 billion. May 2013 marks another important milestone. The legacy ICH web application will be shut down, and SIS will be the only invoice submission method for all settlements by the ICH. All billings will therefore be processed in a paperless manner.

Funds delayed or blocked by governments increased in 2012.

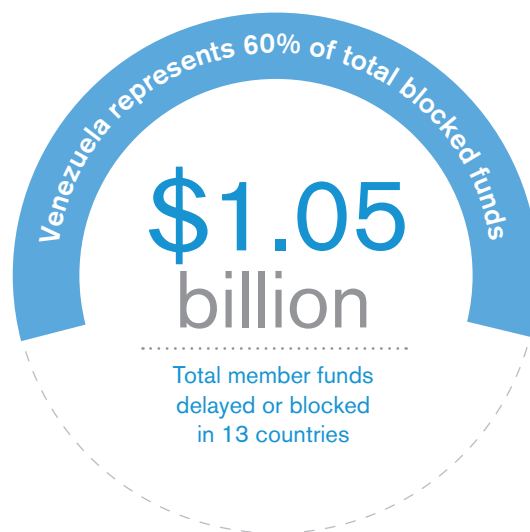
IATA helps airlines to access funds from restrictively regulated markets and countries. According to the 2012 Remittance of Foreign Balances (RFB) survey results, \$1.05 billion of members' funds remains delayed or blocked in 13 countries. This is an increase of \$471.6 million (81%) over the 2011 year-end figure of \$582 million. The increase is largely due to the repatriation difficulties faced by the airlines in Venezuela, Iran, and Algeria. Venezuela is still the most challenging country—representing 60% of total blocked funds.

The top five priority markets identified in the 2012 RFB are Venezuela, Iran, Algeria, Sudan, and Eritrea.

Airline infrastructure charges are reduced through the IATA Enhancement and Financing Service.

The IATA Enhancement and Financing (E&F) Service offers air navigation service providers (ANSPs) and airport authorities the opportunity to improve the efficiency and quality of their invoicing and collection process. The service helps users to strengthen their cash flow and improve their collection ratio. For airlines, E&F ensures charges are collected on a transparent and equal basis. E&F can also help airports and ANSPs to secure cost-effective financing for investments in civil aviation infrastructure because the E&F Service is able to transfer collected amounts directly to the party financing the investment.

Most of the invoices produced by E&F can be submitted electronically to the airlines and settled through the ISS. E&F invoices are automatically transmitted to airlines that are members of SIS using the industry IS-XML standard, allowing for increased automation on the airline side. Airlines, airports, and ANSPs can thus benefit from a standard format electronic invoice, a standard and simplified dispute process, and a more efficient billing and collection service. In 2012, IATA's E&F Service processed more than \$3.2 billion in 50 countries.





"I'm an event manager for blue-chip Asian companies. Our clients like holding events in luxury destinations or in their emerging markets. Often we're drawn to the Middle East because of its excellent facilities and global connectivity."

The UAE reported 2.55 million business arrivals in 2012, rising to 2.76 million in 2013 and 3.55 million in 2014. By 2016, total spending on business travel globally will hit \$1.4 trillion a year, representing compound annual growth of 7.7% since 2012.

Designing products for a sustainably profitable industry.

Aviation is a tough business, and the challenges to manage costs and improve efficiency are continuous. IATA products take advantage of global expertise and deep industry knowledge to support the success of players across the value chain.

Passenger solutions

Business intelligence helps airlines to optimize their networks, develop new routes and products, plan their fleets, and manage inventories.

IATA's **PaxIS** and **Direct Data Service (DDS)** products ensure that airlines get route-specific and point-of-sale information that, in turn, enables them to benchmark their performances against the market standards.

PaxIS is still an important product, but it is being superseded by DDS (see article on page 55). DDS was launched in mid-2012 and is a more comprehensive approach to deriving business intelligence from ticketed passenger data. It combines the available agency sales that PaxIS offers with the direct sales data from participating carriers. Twenty-four airlines are full participants in DDS. Combined with PaxIS data derived from Billing and Settlement Plan (BSP) operations, DDS represents 86% coverage of worldwide travel agency data.

IATA's **Airs@t** product identifies what customers value most.

Market analysis can provide vital explanations for the emergence of route trends. Airs@t is a survey scoring carriers on the basis of over 70 customer touch points, from reservation to baggage claim. In 2012, over 50,000 passengers were surveyed for routes from North America, Europe, the Middle East, and Asia. Airs@t delivers a solid representation of air passengers' preferences—the carriers surveyed have a combined market share of nearly 75%. In 2013, Airs@t will be expanded to include attributes surrounding frequent flier programs.

The **Weblink** service facilitates the deployment of the agency direct sales channel to reduce airlines' distribution costs.

Weblink allows financial transactions to be completed using IATA's BSP. And in 2012, it saw a 200% increase in usage as nearly \$4 billion went through the system. The increase came primarily in two of the fastest-growing aviation markets, Asia-Pacific and Latin America. The service is expecting to achieve even greater penetration in 2013.

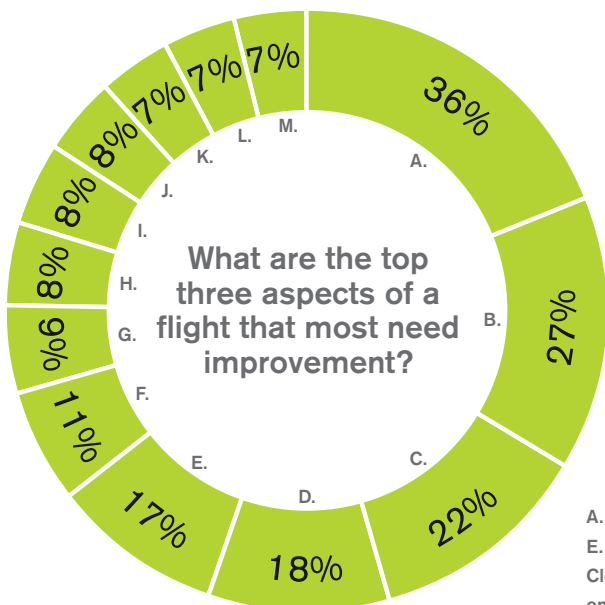
The Consulting group continues to assist airlines across all facets of the aviation business.

The **Airline Consulting** group took on a number of specialized assignments that focused on revenue management, business planning, network and fleet optimization, maintenance and engineering, and fuel conservation. As an example, in 2012 an Airline Consulting team was engaged in a business plan review project with a major African carrier. It was deeply involved in implementing the plan, which touched many commercial aspects of the airline, including network design, fleet planning, revenue management, supplier relationships, and fuel management. The consulting team's work helped to stabilize this evolving carrier against a backdrop of political change.

Timatic is the industry standard used by airlines and travel agents for compliance with border control rules and regulations.

Timatic Autocheck, a product that automates the document compliance process, continued to gain traction in 2012, taking on such clients as a major US carrier and a global travel management company. Timatic Autocheck is integrated into booking and departure control modules to increase customer service and to reduce fines by automatically checking every international passenger for proper documents and certificates prior to boarding. A web version of the program, TimaticWeb2, was launched in 2012.

Extract from **Airs@t** data
 Period: Jan. 2012 to Dec. 2012
 Routes: EU-NAM, EU-AMEA-Asia, NAM-Asia
 Passenger sample: 44,600
 Travel cabins: Economy+Business



A. Sleeping comfort; B. Amount of legroom; C. Seat comfort; D. Meal(s) and/or snack(s) quality; E. Selection of movies; F. Cabin temperature; G. Picture quality; H. Punctuality of departure; I. Cleanliness of toilets; J. Selection of newspapers/magazines; K. Sound quality; L. Reliability of entertainment system; M. Speed of luggage delivery

Cargo solutions

CargoIS is the only business intelligence tool for the air cargo market that reflects real transactional data.

Its data comes from IATA's **Cargo Accounts Settlement System (CASS)**, which settled over 75% of the world's air cargo volumes in 2012. New CargoIS customers for 2012 include Aeroflot and Munich Airport. Beginning in mid-2013, CargoIS will move to a new SAP platform that will greatly boost the power of its visual and analytical tool set. CargoIS will benchmark client data in all key markets.

The **Dangerous Goods Regulations (DGR)** continues to be the industry standard reference manual for the carriage of dangerous goods.

In recent years, a number of safety-related issues have occurred because the DGR has not been followed correctly (see page 39 for details). These incidents demonstrate that the DGR remains more relevant and important than ever.

The Air Cargo Tariff (TACT) was updated in 2012 in support of the IATA objective of increasing efficiency by promoting electronic data exchange and taking paper out of the air cargo chain.

TACT coverage was expanded in 2012 to include new sections on e-freight and advanced electronic information (AEI) requirements by country. Also in support of increased efficiency and paperless trading in air cargo, a major licensing deal was signed with SAP for the integration of TACT into its Air Cargo Module Transport Management Solution (TMS). Two large supply chain players based in Europe have already signed on for the product.

Airports and civil aviation solutions

Based on IATA's BSP data, **AirportIS** provides airports and consulting firms worldwide with comprehensive traffic data in support of marketing and air service development.

AirportIS saw an influx of new clients in 2012 in the Asia-Pacific and Latin America regions, including airports in Bogota, Cairns, Osaka, Melbourne, Tokyo (Narita), Perth, and São Paulo.

The **Airport and Civil Aviation Consulting** group had a robust year. The group undertook major projects in Africa, the Americas, and Asia-Pacific:

- A major Asian airport commissioned IATA to deliver comprehensive traffic forecasts for the period 2013–2055 to help it determine the basis for its long-term infrastructure development plan
- An African airspace management organization commissioned IATA to develop Area Navigation (Global Navigation Satellite System) procedures at 24 of its aerodromes to enhance safety and to help achieve air traffic control and approach efficiencies
- An airport authority in the Caribbean mandated IATA to carry out an infrastructure review to ensure one of its airport's compliance with international safety and security standards

The **Airport Handling Manual (AHM)** is regarded as the definitive source of industry-approved standards.

These standards help simplify processes and interactions between airlines, airports, and ground handlers. The 33rd edition, published in 2012, contains an updated version of the Standard Ground Handling Agreement and was purchased by member and nonmember airlines, airports, and ground handlers.

Industry-related solutions

The wider aviation industry has opportunities to influence or benefit from IATA products and services.

The **Strategic Partnerships Program (SPP)** brings together some 350 industry-related suppliers with IATA member airline executives to discuss areas as diverse as passenger service and engineering and maintenance. Since 1990, these partners have worked with member airlines to help shape some of the most important developments in aviation history, such as e-ticketing. Reflecting partner feedback, in 2012 distribution and cargo XML was added to the SPP.

An offshoot of IATA's successful PaxIS product, **MarketIS** was launched in 2012 to serve non-aviation clients. A number of companies became subscribers during the year, including consulting firms, tourism authorities, and academic institutions.

IATA has BSP coverage in 177 countries that features over 40 years of expertise in financial settlement and collection for the airline industry. With the introduction of the **Travel Industry Exchange Settlement Solution (TIESS)** in 2011, IATA offers this expertise to organizations outside aviation. In 2012, 11 companies, including rail operators, cruise companies, tour operators, and travel insurance companies, joined TIESS when it was introduced in the Americas and Europe. In 2013, TIESS coverage will expand to countries in the Middle East, Africa, and Asia-Pacific.

IATA events are renowned for their ability to create value by bringing decision makers together.

The unique collaborative nature of the aviation business across an extended value chain means that demand for opportunities to meet to shape the industry's agenda is strong. IATA hosts major commercial conferences focusing on airline schedules, air cargo, aviation law, commercial strategy, ground handling, revenue accounting, passenger travel, operations, fuel, and human resources. IATA events are often timed to coincide with key events in IATA's governance processes. For example, IATA's **New Distribution Capability (NDC)** was highlighted at the World Passenger Symposium in October.

IATA's training activities helped more aviation professionals develop their skills than ever before.

The **IATA Training and Development Institute (ITDI)** was established to develop the skills of aviation professionals worldwide. The list of ITDI-accredited training organizations expanded 30%, to some 440 institutions, in 2012. Over 90,000 students trained with the ITDI and its

partners during the year. The ITDI also works with top-class academic institutions—Harvard University, the University of Geneva, Nanyang Technological University, and Stanford University—to help advance aviation industry leadership.

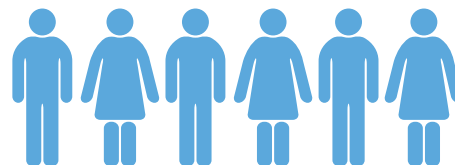
ITDI-related developments in 2012 included the implementation of a learning management system for a seamless customer experience, mobile learning for travel and tourism training, and a partnership agreement with Rosetta Stone for language solutions. Also notable was the 23% growth in the cargo portfolio, making it the second most popular subject, behind tourism. In total, 52 air cargo related courses and 8 air cargo related diplomas, in English, Mandarin, and Spanish, are offered.

For 2013, the ITDI aims to introduce more blended learning solutions that mix classroom with distance learning and more action-based learning—an educational process whereby people work and learn together through practice rather than through traditional instruction.

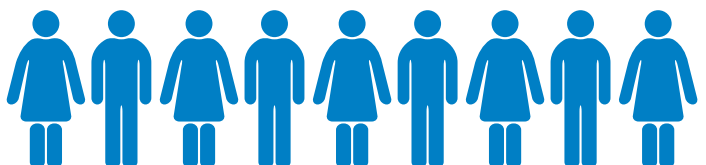
The **International Airline Training Fund (IATF)** is a nonprofit foundation that provides training support to airlines in developing nations to increase their competitiveness and to help them meet industry challenges. In 2012, the IATF sponsored a wide range of training opportunities for 2,079 aviation industry professionals from developing nations.

Aviation safety enhancement remained the IATF's number one priority through the delivery in 2012 of the **SMS Implementation Training Program (SMSITP)** to 13 airlines from Africa, the Middle East, Russia, and Latin America. This is in addition to the 28 airlines that benefited from the program in 2011. Also in 2012, the IATF offered its innovative **People Management and Development for Airlines (PMDA)** program to 20 airlines from Africa, the Middle East, Asia, and the South Pacific. The PMDA teaches best practices in manpower management and development.

65,000
students
trained worldwide in 2011



92,000
students
trained worldwide in 2012



Knowledge is power.

Business intelligence gives airlines the ability not only to meet customer expectations but also to anticipate them.

The latest IATA business intelligence product, Direct Data Service (DDS), promises to be a game changer. It is an evolution of the successful PaxIS product. And while PaxIS has a strong reputation in the market for its broad and global set of data, DDS will be even more powerful.

PaxIS relies on some of the airline ticket sales in IATA's BSPs. DDS incorporates this, as well as some additional indirect sales data not included in the PaxIS product. The DDS database also contains a unique and growing amount of direct sales data that is not provided by the GDSs in their bookings products.

This richness will empower airlines to make better-informed decisions on how to develop their businesses to serve their customers. Knowing how the market is trending plays into so many business decisions that ultimately focus on providing airline passengers with the destinations, and frequencies, they need.

DDS, which was established by IATA in conjunction with Airline Reporting Corporation, has been set up with a unique sales positioning as a community subscription product. So, to access the DDS database airlines have both to subscribe to the service and contribute their data to it.

DDS provides a powerful competitive alternative to the indirect sales bookings business intelligence products of the GDS's. Not only is the DDS priced on a very competitive basis but it also comes with an innovative web access tool that makes it easy for airline planners to extract the right data they need to make informed business decisions.

DDS is allowing airlines to be more effective competitors by making better market-based decisions and bringing needed competition into the market place for these essential business intelligence tools.

As of 1 May 2013, coverage of more than 86% of the market means DDS is already established as a comprehensive source of business intelligence for the airline community.

“DDS has become the biggest travel database in the world. Use it to make the very best travel service decisions.”

Bryan Wilson, Director, Airline Distribution Optimization, IATA

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"Since graduating, I've been working on nextgen software for aircraft navigation. It's pretty amazing how intelligent we can make planes now. We've got customers all over the world."

Fully 80% of Poland's growing aerospace manufacturing sector is established in "Aviation Valley" near Rzeszow. Globally, aviation generates an economic impact of \$2.2 trillion annually.

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