

2012 ANNUAL REVIEW 2012 ANNUAL REVIEW 2012



Tony Tyler Director General & CEO

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The air transport industry is fragile. Airlines made a profit of \$7.9 billion in 2011. That is half of the \$15.8 billion profit realized in 2010. And on 2011 revenues of \$598 billion, that translated to a net profit margin of just 1.3%.

The current year promises to be more challenging. April was the 15th month with oil prices above \$100 per barrel (Brent). Fuel now accounts for over 30% of average operating costs. A decade ago, it was 13%. A further price spike could easily push the industry into losses.

Airlines are similarly vulnerable to economic cycles. Historically, the airline industry has produced a collective loss when GDP growth falls below 2%. In April 2012, the Economist Intelligence Unit was predicting growth of 2.2%. Political instability continues in the Eurozone as it grapples with the sovereign debt crisis. The United Kingdom and Spain have already gone back into recession. If others follow, the ripple effects would most certainly be felt in all global markets.

The Director General's message

In the face of such strong headwinds, keeping revenues ahead of costs is a major challenge. We still expect airlines to make a collective profit in 2012. But it will be razor thin. Conserving cash, carefully matching capacity with demand, and managing costs will remain the focus for most airline managements.

Behind the scenes, IATA has redoubled its efforts to manage the industry's settlement processes reliably. Fully \$367 billion passed through IATA's financial systems in 2011. The Billing and Settlement Plan the largest among IATA's financial services—settled nearly \$250 billion in volumes with 99.971% accuracy. We are determined to do even better.

IATA is strengthening its settlement systems. By migrating functions to regional hubs, we will operate to a single global standard on fully integrated IT systems. The migration will take place progressively until mid-2014. In a separate program, we are taking paper out of the processes for the \$49.5 billion IATA Clearing House.

Along with ensuring reliable financial services, IATA is working with its members on aviation's most fundamental challenges—safety, security, and sustainability. 2011 was the safest year for civil aviation. There was one hull loss for every 2.7 million flights with Western-built jets a 61% improvement on the performance a decade ago. The IATA Operational Safety Audit (IOSA) is making a difference. Airlines on the IOSA registry—some 375—outperformed the accident rate for non-IOSA operators by 52%.

Together with the International Civil Aviation Organization (ICAO), the US Department of Transportation, and the European Union, we continue to build the Global Safety Information Exchange. This collection and sharing of data will enable analysis for targeted programs to make our safe industry even safer.

Security processes must evolve to be risk-based and data driven. Our flagship security programs—Checkpoint of the Future and Secure Freight—are built around these principles. Support from governments is growing as they recognize the value of these initiatives.

Aviation remains united in its global approach to managing its carbon emissions. Airlines, airports, air navigation service providers, and manufacturers reiterated their commitment to improve fuel efficiency 1.5% annually to 2020, to achieve carbon-neutral growth from 2020, and to cut net emissions in half by 2050 compared with 2005 levels.

Governments are important partners in meeting these targets. They must implement policy measures that de-risk investment in sustainable biofuels, unlocking their potential to reduce aviation's carbon footprint up to 80%. And they must agree on a global approach to positive economic measures through ICAO. Progress is being held back by the global backlash against the extra-territorial inclusion of aviation in the EU Emissions Trading Scheme (ETS). ICAO offers a process to reach the global consensus that all parties-including Europe-desire.

The ETS impasse highlights the urgent need to reaffirm our agenda with governments on jobs and growth. Many governments sacrifice the benefits of aviation-enabled connectivity for the shortsighted budget and political gains of high taxes, misguided regulations, and growth restrictions.

Job creation is a priority of all governments. Aviation can help. Already our industry supports the livelihoods of 56.6 million people and \$2.2 trillion in economic activity. And governments must understand that with an enabling policy environment we could do much more. When aviation gets stronger, so does the economy.

I am passionate about aviation. As the Director General and CEO of IATA I have proudly sung aviation's praises and advocated policies and partnerships that support its success. I thank the IATA Board of Governors and our members and partners for their great support in helping IATA help the industry.

Aviation is indeed fragile. But by working together, I am confident that we can strengthen the foundations of our safe, secure, and sustainable industry.

Tony Tyler Director General & CEO

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BUSINESS? VACATION? VISITING LOVED ONES?

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FLYING MAKES THAT POSSIBLE FOR YOU AND 2.8 BILLION OTHER PEOPLE A YEAR.



The story in 2011.

In 2011, air transport passenger traffic grew 5.9% but profits fell 50% as difficult economic headwinds buffeted the industry. Worldwide international and domestic revenue passenger kilometers flown grew 5.9% to a new high of 5.2 trillion kilometers in 2011. The growth of the past two years compares favorably with the 4% to 5% trend of the past 20 to 30 years. Contributing to the surge in air travel was a rebound from the recession of 2008 and 2009. Clearly, air travel demand remains robust despite slow economic growth in many regions.

Nevertheless, despite the increased passenger demand, airlines struggled to make significant profits. Although revenues rose 9.4% to \$598 billion, profits fell by almost half compared with 2010, to \$7.9 billion. This was largely due to a sharp increase in the cost of fuel; the average price of a barrel of oil rose from \$79 in 2010 to \$111 last year.

Looking at 2012, rising oil prices and continued economic weakness, especially in Europe, appear to be the greatest threat to airline profitability. Direct services are increasing.

In 2011, airlines added 865 direct services, bringing the total number of direct airport-pair connections to nearly 35,000 by the end of 2011, but there was substantial geographical variation in passenger market performance. Latin American airlines saw the fastest growth, with an expansion of over 11%. African airlines experienced the weakest performance, with barely positive growth, partly due to the impact of the Arab Spring on the north of the continent. Among airlines in the larger regions, North American carriers grew less than 3%, reflecting the maturity of their domestic markets and the lack of significant capacity growth. Growth for the Asia-Pacific airlines was over 5%, but down on the previous year's performance, due mostly to the impact on travel of the tsunami and earthquake in Japan. European airlines saw the strongest growth, at 9%, among airlines in the three largest regions.

When looked at in isolation, the trends in domestic air travel have a different pattern. Representing just under 40% of worldwide industry volumes, domestic aviation markets are dominated by the United States and China. The US market expanded just 1.3% in 2011. But the Chinese market grew almost 11%. The Indian market. which is one-twelfth the size of the US market, grew even faster at 16%. Brazil is another example of an emerging market with large potential. Growth there was almost 14% in 2011. Japan's domestic market, conversely, shrank 15% because of the tsunami and earthquake in early 2011.



market in millions (source: IATA) China USA China USA

Domestic passenger



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

Net posttax earnings were halved to \$7.9 billion in 2011.

Airline earnings before interest and tax (EBIT) declined from the highs of 2010 to \$16.2 billion (2.7% of revenues). Although this decline was not as severe as the 2008 experience, at the net posttax level the impact was more marked. After debt interest, tax, and financial transactions, industry profits were more than halved from 2010 to a total of \$7.9 billion, or 1.3% of revenues. Profits were squeezed by a combination of slower revenue growth and further large fuel cost increases.

The regional experience continued to be diverse. Asia-Pacific airlines delivered the largest absolute net profits and the highest EBIT margins for the second consecutive year. But within this region there was much variation, with significant losses in Indian domestic markets and substantial profit in Chinese domestic markets. Next to Africa, the weakestperforming region was Europe, where EBIT margins barely exceeded 1% on average. But again there is much variation, with the large quoted airlines in Europe delivering a similar performance to those in the United States.

US airlines saw their profits reduced in 2011, but they continue to generate EBIT margins close to 3% despite little market growth as a result of limited additional capacity. Profitability in the US domestic market has been particularly robust as a result.

Elsewhere, the Latin American airlines continued to show reasonable profit, albeit at margins that were lower than in 2010. The Middle Eastern airlines saw only a minor reduction in profitability in 2011, as structural improvements at some airlines partly offset the rise in fuel costs. Revenues expanded to nearly \$600 billion.

Airline industry revenues expanded 9.4% in 2011 to \$598 billion, driven in equal part by a rise in volumes and an improvement in yield. Passenger and cargo revenues rose above prerecession levels, but the industry has lost around two years of revenue growth since early 2008.

In 2010, the network airlines had a strong boost relative to other airlines in the industry from the robust growth of longhaul premium revenues and cargo. During 2011, there was further growth in the premium segment, but there was no longer the marked gain versus other segments. Cargo revenue growth slowed sharply in 2011. An average jet kerosene price of \$127.50 in 2011 set a new record.

The average price of a barrel of jet kerosene rose 40%, to \$127.50, in 2011. This took average fuel prices above the previous annual record of \$126.70 per barrel, set in 2008.

In 2008, jet fuel prices spiked to over \$180 a barrel before falling sharply, whereas in 2011 the peak was \$143, 20% lower than in 2008. By the end of the year, prices were still high. The contrasting extreme volatility of fuel prices in 2008 caused billions of dollars of fuel hedging losses. A major problem for airline fuel hedging in 2011 was the distortion in the price of the West Texas Intermediate crude oil benchmark. Nonetheless. new industry-wide hedging practices and the stability of the crack spread with the Brent oil benchmark meant that the fuel hedging experience of airlines in 2011 was much better than it was in 2008.

Fuel prices were driven higher in 2011 by crude oil costs. The crack spread between jet fuel and crude remained at 15%. The upward pressure on oil prices came from a combination of continuing strong demand from emerging economies and a supply squeeze by producers, shown in the decline of oil inventories. More recently, concern about supply disruption caused by the situation in Iran has put further upward pressure on energy prices.

The airline industry's fuel bill rose to \$177 billion in 2011, some 30% of costs.

Total net profits in \$ billion (source: IATA)



Brent oil price \$/barrel (source: Platts)



Strong business travel kept premium seat growth ahead of economy seat growth.

A sign of buoyant air travel markets in 2011 was the growth in the sale of first- and business-class seats, which expanded 5.5% on international markets compared with the growth in economy seat sales of 5.1%. This, however, was not apparent in all markets. Within Europe, where distances are relatively short, there has been a structural shift away from premium seats, resulting in the faster growth of economy travel. On the important transatlantic and transpacific markets, though, premium travel continued to grow substantially faster than economy travel. This reflected the continuation of business travel growth in most regions and the lull in leisure travel in many developed economies because of weak consumer confidence.

Goods worth over \$5 trillion were transported by air in 2011, but air cargo volumes slipped slightly.

After an exceptionally strong rebound in 2010, air freight metric ton kilometers flown fell 0.4% worldwide in 2011. The air freight market is no bigger than it was four years ago. Since air freight volumes have on average grown from 5% to 6% a year over the past 20 to 30 years, growth in the past four years has been exceptionally weak. Even so, with the estimated value of world trade at more than \$16 trillion in 2011 airlines were still responsible for carrying more than \$5 trillion worth of the world economy's internationally traded goods.

Airline load factors exceeded 78%, close to historic highs, and the fleet continued to expand, with 1,268 new aircraft delivered.

Worldwide passenger capacity accelerated in 2011, growing 6.6% as measured by available passenger kilometers in international and domestic markets. That exceeds the expansion of 4% in 2010.

There was a substantial difference between domestic and international markets. In domestic markets, slightly less capacity was added than growth in the market: 4.0% versus 4.1%. The opposite prevailed in international markets, where the pace of capacity expansion was in excess of the expansion of demand: 8.1% versus 6.9%. But the excess of capacity growth was not too large, and so load factors remained close to historic highs in 2011, with a worldwide average of 78.3%. Domestic markets saw load

factors rise even further, to a new high of 79.6%. This was an important factor leading to stronger airline profitability in the US and Chinese domestic markets in 2011.

The delivery of new aircraft picked up in 2011, with 1,268 new aircraft delivered to airlines. Taking into account aircraft retirements, which typically involve around 400 to 500 aircraft, hull losses because of accidents, and movements in and out of storage, the inservice fleet of the commercial airline industry expanded 763 aircraft to 24,605 aircraft by year-end 2011.

International passengers by seat class (source: IATA)



Passenger and cargo load factors (source: IATA)



Yields improved 4% in 2011.

Passenger yields worldwide rose 4% in 2011, following an increase of more than 6% in 2010. Much of the 2011 yield increase was as a result of airlines attempting to recoup costs associated with the rise in the price of oil. Airlines managed to improve fuel efficiency and reduce other unit costs, but they still faced an increase in overall unit costs of 5%. High load factors in the passenger business allowed airlines to recover part of this cost increase. Airline cash flows of 8% to 11% of revenue approached mid-cycle levels.

The profile of airline cash flows was very different during 2011 than in 2008, when there was a similar average rise in fuel prices. In 2008, cash flows fell sharply and turned negative for some airlines. In 2011, there was a squeeze at the beginning of the year but on average cash flows, as proxied by EBITDA, were at quite comfortable mid-cycle levels of 8% to 11% of revenues in all three of the world's major regions. This, however, was down on the 2010 performance.

Asia-Pacific airlines, in aggregate, continued to see the strongest cash flows in 2011, although the weakness of cargo markets meant that they suffered a significant deterioration as the year progressed. US and European airlines, in aggregate, saw lower but stable cash flows throughout the last three guarters of the year. Investors, of course, would want to see much stronger cash flows, given the capital they have invested in the industry, but compared with the average industry experience of past cycles the 2011 financial performance is reasonably good.

Return on capital of 3.5% was less than half what investors expect.

Financial sustainability means generating profit and paying investors a normal return. Such a return is generally benchmarked as the average cost of equity and debt or the WACC (weighted average cost of capital). Debt spreads have narrowed, but the volatility of airline earnings means that equity remains expensive. On average, the airline industry cost of capital is 7% to 8%. The 2010 return on invested capital (ROIC) in the airline industry was boosted by the profits generated, rising to 4.1%. But ROIC fell back to an estimated 3.5% in 2011. That was less than half the rate required to pay investors what they could earn from investing that capital in an alternative industry with a similar risk profile.

There were some airlines that did create value for their investors in the past two years. This group of airlines includes long-haul network airlines, regional airlines, low-cost carriers, and other business models. It also encompasses airlines from most regions of the world. These airlines, though, are the exception and are few in number.

Prospects for 2012.

The threat of a catastrophic default within the Eurozone remains a possibility, and the lack of economic growth in the region means that, collectively, European airlines could suffer a loss. Although aviation at a global level is still expected to make a small profit, the incredibly thin industry margin—likely to be less than 1%—leaves airlines vulnerable to shocks.

Rising oil prices are a particular concern, with an average price of at least \$115 per barrel in 2012. If the industry as a whole is to remain profitable under such circumstances, it will be reliant on robust growth in Asia and the emerging markets in the Middle East and Latin America and on the ability of airlines in mature markets to keep tight control of costs.

Airline fleet numbers (source: Ascend)







What is the benefit of global connectivity?

Aviation safely carries some 2.8 billion passengers and 48 million metric tons of cargo and supports 56.6 million jobs and \$2.2 trillion in economic activity. As such, air transport is a vital component of modern life and integral to sustainable growth.

\$5.3 trillion

The total value of goods transported by air annually, which is 35% of all world trade.

82.2 million

The total estimated jobs to be supported by aviation in 2030.

The economic component

Global business and tourism rely on air transport. Access to international markets and the increasing globalization of production makes worldwide connections essential. The total value of goods transported by air represents 35% of world trade.

Beyond this, aviation makes a direct contribution to global GDP greater than most industries, including the pharmaceutical or automotive sectors. In 2010, the \$539 billion it contributed would have placed air transport as the 19th largest country in GDP terms, approximately equivalent to Switzerland or Poland.

And the boon of connectivity goes further than these impressive figures to touch peripheral areas, such as encouraging investment and innovation and allowing companies to attract talent across borders.

The numbers do not include tourism, which would not be able to post its impressive figures without support from the airlines. In 2011, tourism generated \$1.8 trillion in global economic activity and provided nearly 100 million jobs. Fully 51% of international tourism relies on air service, according to the World Travel and Tourism Council.

Air transport plays a major role in developing nations, generating \$490 billion in economic activity. Well over half of all the jobs aviation supports globally—35.9 million—are based in developing economies.

The industry's economic impact will continue to grow. By 2030, it is forecast that 82 million jobs and \$6.9 trillion in economic activity will have air transport at their root.



The boost to the world's economy from global aviation's increased connectivity in the last 20 years.

The social component

Increasing cross-border travel facilitates ever closer relationships, between countries and between individuals from different nations. Eased restrictions on the flow of goods and people would encourage even further integration.

Airlines facilitate a global workforce and keep family members united. For example, over nine million Lebanese live abroad. Three million people of Lebanese descent live in the United States and around a million live in the São Paulo area. Aviation brings them and their families together.

Airlines also provide a means for labour mobility, which in turn lead to remittances, whereby migrant workers are able to send money home. Remittances are an important source of revenue for developing countries. In the Philippines, more than 10% of the domestic economy relies on remittances. In Tonga and Moldova the percentage is even higher.





Aviation's global employment and GDP impact

60%

The real-term reduction in the cost of air travel since 1970.

A 2007 World Bank report conservatively estimates that overall remittances are worth twice as much as official development aid globally. Research shows that a 10% rise in remittances would lead to a 3.5% decline in the number of impoverished people worldwide. Each dollar remitted produces more than \$2 in additional economic activity.

Aviation, moreover, supplies a vital lifeline to remote communities cut off from road networks. In such isolated areas, essential services, such as health care, depend on speedy air links. For example, over 1,000 communities in Russia's far north and more than 200 communities in Alaska rely mainly on aviation.

Emergency response to natural disasters or in times of war is likewise equally reliant on aircraft speed and reliability. In 2011, the United Nations declared a famine in East Africa. Food, medicine, and other relief aid were quickly donated, and UNICEF called on the airlines to help get the donations to the region. FedEx promptly provided a Paris-Nairobi service. UPS and Virgin Atlantic Airways

\$5.0 billion

The cost of the Icelandic volcano to the world's economy due to lack of air services.

3.5x

The average aviation job is 3.5 times more productive than other jobs.

offered cargo space. British Airways carried vital materials on a scheduled flight to ease the water situation and then later dispatched a 747F on behalf of Oxfam and UNICEF. Lufthansa Cargo also donated two critical relief flights. These are only a few examples of the many instances of help from the air transport industry.

It is not just about assisting in times of trouble. Air transport is equally intrinsic to the good times. Aviation's ability to connect distant locations quickly, safely, and securely has given the world the chance to share and experience firsthand its amazing cultural heritage, including the great treasures of yesterday, such as the Terracotta Warriors, the Mask of Tutankhamen, and the works of Caravaggio.

> **\$58** billion

The annual European subsidy to rail travel (2007-09). Air travel received a \$440 million subsidy for the same period, mostly for economically unviable lifeline routes.





Making flying even safer.

Aviation had its safest year ever in 2011. Zero accidents remains the industry goal.

2.8 billion The number of people safely flown in 2011.

38 million

The number of flights in 2011 (30 million by jet, 8 million by turboprop).

0.37 losses

The global hull loss rate per million flights of Western-built jets. At 0.37 hull losses per million flights, the 2011 accident rate for Western-built jets (WBJ) was the lowest in aviation history, surpassing by 39% the previous low set in 2010. Over the last decade there has been a 61% improvement in safety for WBJ. Within this excellent overall performance, regional disparities exist. Africa, Russia and the Commonwealth of Independent States, Latin America, and the Middle East and North Africa remain significantly behind the performance of other regions. (See feature on page 21 for more on safety performance in Africa today.)

To address these concerns, the industry and governments are working together to improve safety by pursuing greater compliance with International Civil Aviation Organization (ICAO) standards, increasing participation in audit programs, tackling human factors, and encouraging greater sharing of safety information. Implementation of ICAO standards and recommended practices is the essential starting point.

IATA has been engaged with ICAO over six decades in the development of ICAO global standards, which are at the heart of the industry's excellent safety performance. The challenge is to increase compliance with ICAO standards. According to ICAO's Universal Safety Oversight Audit Program (USOAP) audit results, approximately 41% of ICAO Standards and Recommended Practices (SARPs) have not been effectively implemented on a global basis. There are potentially thousands of individual examples of non-compliance.

Less than one-third of audited countries have implemented a runway safety program, and only half of those countries require the provision of runway end safety areas in compliance with ICAO's USOAP. This can mean that even airlines with excellent safety records are sometimes penalized and added to banned lists, because their home nation is not compliant with ICAO standards.

A significant number of accidents could be prevented through the use of the latest technologies and procedures on approach. Modern aircraft have systems on board that can exploit new technologies, such as Performance-Based Navigation (PBN). PBN can deliver safety benefits by providing navigators with vertical guidance at locations where no such guidance exists.

Compliance with the targets for implementing PBN, agreed by all ICAO contracting states at the ICAO General Assembly in 2010, is, however, slipping, even though many airlines have already equipped their aircraft and trained their crews with PBN. The implementation of PBN procedures by ANSPs is crucial to raise safety levels. A systematic investment plan to ensure the worldwide implementation of PBN must be put into action.

Adherence to new ICAO recommendations is particularly important to prevent a repeat of blanket airspace closures such as that caused by the volcanic eruption in Europe in 2010. A co-branded document, Flight Safety and Volcanic Ash, has been published by ICAO and industry partners, including IATA. It represents a watershed in the way operations are handled in airspace with known or forecast volcanic ash contamination. In essence, airlines will decide whether to fly or not, based on a risk assessment.

Western-built jet hull loss rate per million sectors 2001-2011



61% safer

The improvement in the accident rate for Westernbuilt jets, comparing 2002 performance to 2011. Audits ensure that global standards are followed.

The IATA Operational Safety Audit (IOSA) is the world's only global airline operational safety audit program. As of 1 May 2012, of the 376 airlines on the IOSA registry, 133 (35%) are non-IATA member airlines. In 2011, IOSA-registered airlines flew 64% of all commercial flights. The total accident rate for IOSA carriers continues to be better than the industry rate and was 52% better than non-IOSA operators. Since 2003, over 1,300 IOSA audits have been completed. IOSA is active in all regions of the world and is mandatory for IATA membership.

Despite the success of IOSA, airlines could do more to participate in the other safety programs that IATA has developed. Of the nine IATA audit and safety programs, IATA members participate, on average, in only three. Only 23% of IATA members participate in more than four programs. IATA's Circle of Excellence campaign aims to bring airlines into all of the interconnected audit and safety programs. The support of governments and regulators for IOSA and for the IATA Safety Audit for Ground Operators (ISAGO) is vital. IOSA is mandated by 11 governments worldwide, a figure that IATA is looking to increase.

Ground damage costs the industry billions of dollars per year. ISAGO is a globallyapproved audit for reducing ground accidents by eliminating ground hazards, for reducing aircraft ground damage and personnel injuries, and for reducing the number of redundant audits. Complementing the ISAGO program is the new IATA Ground Operations Manual (IGOM), which provides globally standardized procedures, and a new Ground Damage Database (GDDB) program, which provides performance monitoring.

Since ISAGO's inception in February 2008, and up to 1 May 2012, more than 460 audits have been conducted with over 100 ground service providers. ISAGO is supported by 65 governments and airport authorities. In early 2012, ISAGO received endorsement by all 44 members of the European Civil Aviation Conference (ECAC). The ISAGO Audit Pool includes 44 member airlines and consists of 200 ISAGO-gualified auditors.

IATA Circle of Excellence



Audits

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 De-Icing/Anti-Icing Quality Control Pool

Programs

GSIC: Global Safety Information Center FDX: Flight Data eXchange STEADES: Safety Trend Evaluation Analysis & Data Exchange System GDDB: Ground Damage Database



There is a human element to safety that is being addressed.

Pilot error in handling aircraft is a contributing factor in 20% of accidents. To assist with the rigorous training that the industry already has in place, IATA's Training and Qualification Initiative (ITQI) has developed a number of key training programs for pilots and maintenance technicians.

Crew fatigue is also a key area of focus. Led by new research in recent years, which has focused on the timing rather than just the length of crew rest periods, mitigating fatigue has become an important element in safety management. IATA and ICAO are leading the standardization process of Fatigue Risk Management Systems (FRMS), which have been adopted by a number of Civil Aviation Authorities. A joint FRMS implementation guide was produced in 2011, and IATA has led a series of regional FRMS workshops to ensure the implementation of these essential safety systems.

A Safety Management System (SMS) is a systematic approach to managing safety. It covers all operator activities, including areas such as organizational structures, accountabilities, policies, and procedures. The world's first SMS assessment standards for airlines are now included in the IOSA standards manual, thus providing the first global SMS benchmark. These standards have been validated to be in full compliance with ICAO standards. Shared safety information is key to embedding a safety culture worldwide.

Governments, regulators, and the industry have a responsibility to embed a genuine safety culture across the industry that encourages the open reporting of safety incidents in a nonpunitive atmosphere. Information sharing is an underlying principle of improved safety, and the effectiveness of a safety culture can often be measured by reporting rates alone.

Two programs have become particularly important for safety data: the IATA Global Safety Information Center (GSIC) and the Global Safety Information Exchange (GSIE). The GSIC provides IATA members with access to aggregated, de-identified information from IATA's safety databases. More than 420 organizations contribute data into six active databases, with analysis and industry trends displayed in more than 25 categories. Over 85% of IATA carriers participate in the GSIC (http://gsic.iata.org).

The GSIE agreement between IATA, ICAO, the European Commission, and the US Department of Transportation allows participating organizations to share safety information globally. IATA's contribution includes multiple forms of GSIC safety analysis, including information from the world's largest operational incident database, and the only global database of airline audit results through IOSA.

Runway excursions continue to be the leading cause of accidents and are being addressed with a three-year series of regional runway safety seminars. In addition, the Flight Data eXchange (FDX) database aims to address runway excursion risks by capturing aircraft performance data at over 700 airports worldwide. A new Operational Data Management (ODM) initiative will further integrate operational data with existing safety information.

IATA released a number of documents in 2011 to assist in safety efforts. These included the second edition of the Runway Excursion Risk Reduction Toolkit, in partnership with ICAO and more than a dozen international safety organizations. Also published were implementation material for competency-based training and qualification schemes for engineering and maintenance and the first joint EUROCONTROL-IATA safety bulletin.

All these programs are aligned in IATA's well-established six-point safety program to systematically tackle the causes of accidents. This focuses on (1) safety data management and analysis (2) auditing (3) safety management systems (4) infrastructure safety (5) operations and (6) maintenance. The tools and projects developed under the six-point program are in line with ICAO requirements and are being increasingly adopted by governments and regulatory authorities worldwide. IATA welcomes the opportunity to work with aviation regulators to help raise the bar for aviation safety around the world.

20% of accidents count pilot handling as a factor.

1 in 5

FEATURE

How safe can we be?



In 2011, aviation was safer than ever. Even so, safety programs are being strengthened. The ultimate goal remains zero accidents.

The regional breakdown of 2011 safety figures show that some regions are in need of more help than others. Africa is the region most in need of improvement, and aviation safety work on the continent typifies industry efforts on the global stage.

Although Africa continues to post the worst safety statistics, 2011 saw a 56% improvement in the region over the previous year. IOSA has made a big difference. IATA committed \$3 million to its Partnership for Safety program in Africa to help the continent's carriers achieve IOSA recognition. The accident rate for African airlines that are on the IOSA registry was almost equivalent to the world average, and was 80% better than that for non-IOSA carriers in Africa (1.84 accidents per million flights versus 9.31 accidents per million flights). Indeed, no IOSA-certified carrier was involved in a Westernbuilt jet accident in 2011 in Africa.

The IATA-funded

Implementation Program for Safe Operations in Africa (IPSOA) has also been extremely influential. IPSOA provided airlines with flight data analysis tools, backed up by regional seminars to ensure the data was used accurately. This was effective in preventing the unstable approaches that are a precursor to runway excursions, which are the largest cause of accidents. Deviations from optimal flight trajectories were reduced 56%. This program ended in 2011, and is being replaced on a global basis with the Global Safety Information

Center (GSIC) Flight Data eXchange (FDX) program, which will provide performance assessments at every commercial runway worldwide.

The African safety action plan is working. Greater participation in industry programs will help improve the region's safety statistics. Nigeria, Madagascar, and Egypt have all approved IOSA at the national level. Poor safety oversight in Africa remains an issue, however, and more African nations must adopt IOSA as the global standard to follow.

An example of leadership on the continent, Nigeria is in the process of implementing Performance-Based Navigation across 24 airports. But elsewhere a general lack of investment in African aviation infrastructure is holding back overall safety improvements. Infrastructure built through consultation with all aviation stakeholders and predicated on global standards will help cut accident rates even further.

The African Safety Summit, meanwhile, expands the reach of industry efforts to improve safety on the continent. All African airlines and civil aviation authorities are invited to attend to learn best practices and to help drive a safety culture in the region. The summit has two ambitious goals for 2015: to reduce Africa's overall accident rate to the global average and to remove African carriers from the European list of banned airlines. IATA does not support banned lists, preferring to work with airlines to adopt global standards in safety.

Achieving convenient and effective security.

Governments and the industry must continue to work together to replace inflexible security measures with harmonized and responsive security systems based on data and risk management.

39 countries

another 32 countries in the pipeline.



Require access to PNR data with another 29 countries to follow suit (mostly in the EU). The safety and security of passengers is always the number one concern for airlines. Since 2001, flying has become much more secure, but this has come at the cost of greater passenger inconvenience. With around 700 million extra passengers expected to fly by 2015, fundamental improvements to the security system are needed to further strengthen security and deliver a better customer experience. Through a closer relationship with authorities, the industry is helping to shape and harmonize the security regulatory framework.

Through the concerted efforts of IATA and its industry partners, many regulatory authorities are including the industry in their security deliberations at a much earlier stage than was previously the case. Since 9/11, aviation has been subjected to a large number of security regulations, many implemented unilaterally. Aviation is a global business, however, and aviation-related regulations must, as much as possible, be agreed upon and implemented globally. The security regulatory framework should be designed to recognize the unique challenges facing aviation and should follow a risk-based, data-driven approach.

For some years, governments worldwide have been making use of Advanced Passenger Information (API) and Passenger Name Record (PNR) programs to aid border security. Information of this kind is a crucial tool in the fight against terrorism and illegal activity. Previously, the standards for the transmission of such data were not always harmonized. In 2011, several data-alignment initiatives were successfully concluded to round out the tools available to countries. ICAO has updated its passenger data blueprint based on these agreements, and IATA has led efforts to create new PNR message standards and to standardize the use of Extensible Markup Language (XML).

Other IATA efforts resulted in India committing to a single window for the receipt of passenger data and adopting the United Nations EDI directories for administration, commerce, and transport (UN/EDIFACT) message standard. Globally, paper is being removed from security processes by regulators. During 2011, IATA worked with its industry partners to convince the US Customs Border Patrol to eliminate two widely used paper-based forms: I-92 and I-94W.

"IATA is promoting a checkpoint of the future, which I strongly endorse."

John S. Pistole, US TSA Administrator, interview on C-SPAN 10 August 2011.

Security regulations must avoid duplication.

In 2011, five European countries embraced the concept of one-stop security, which enables passengers to connect between flights without needing to go through the security process a second time. This streamlined procedures for the millions of passengers traveling from the United States to Europe. IATA continues to be a relentless champion of such security efficiency measures.

The government of Israel was convinced to suspend a costly and ill-conceived security messaging program to be used between air traffic controllers and pilots. Also, the US government and European Commission were persuaded to collaborate on developing a system for the mutual recognition of their cargo security programs. The Checkpoint of the Future—based on the latest technology with risk-based, data-driven measures—offers a new vision for passenger security.

Despite the successful work with governments to date, much remains to be done. To accommodate growing passenger numbers and evolving security threats, the entire checkpoint process has to be addressed. In 2011, IATA unveiled the first conceptual example of a passenger Checkpoint of the Future (CoF).

The CoF is designed to enhance security, reduce lines, eliminate the unpacking and packing of carry-on bags, and minimize the intrusive searches that characterize the air travel experience today. Year-end 2011 witnessed nations like the United States and Canada implementing trial programs of risk-based security measures at checkpoints that align with the IATA vision. (See page 24 for more on the CoF.) New cargo security measures must preserve the speed and flexibility of air freight and focus on a supply chain approach.

In 2010, the discovery of explosives disguised as printer cartridges on board cargo aircraft was a major issue for cargo security. Throughout 2011, numerous reactive, emergency measures—including calls for the 100% physical screening of all cargo, demands for electronic cargo data, and myriad other proposed screening measures—confronted the industry.

IATA promoted a strategy aimed at providing data for managing risk, securing the supply chain upstream, and incorporating new technology. This practical approach helped to blunt or alter numerous poorly-prepared regulations and facilitated cooperation with the US government and the European Commission in formulating test programs for cargo data collection. In addition, the Global Air Cargo Advisory Group, a panindustry alliance of airlines, freight forwarders, and shippers, spoke with one voice on cargo security issues. It pushed, for example, for the adoption of an electronic version of the standard security declaration.

IATA's Secure Freight initiative helps regulatory authorities implement a quality assurance process that secures cargo upstream at the start of the supply chain and then protects cargo from interference until it reaches its destination. A successful trial program in Malaysia was followed in 2011 by test programs in Kenya and Mexico. Further trials are expected in Chile and the United Arab Emirates in 2012. Secure Freight helps countries enhance their regulatory and operational frameworks and their infrastructure to achieve compliance with ICAO Annex 17 standards.

3.5 billion (2015)

Anticipated passenger security throughput 2011-2015 (Source: IATA passenger forecast)



Do I need to take my shoes off?

There is little doubt that air transport is far more secure following the tragic events of 9/11. Still, from a passenger viewpoint, the security process has too often become intrusive, intimidating, and inconsistent. Long lines, pat downs, and constant packing and unpacking blight many a journey. From processing an average of 350 passengers per hour prior to 9/11, security checkpoints have slowed to a throughput of just 149 passengers per hour. Given that traffic numbers are growing-2.8 billion people took to the skies in 2011-the problem will only worsen.

The slowdown is unnecessary and partly a result of the patchwork approach to security by governments. IATA's Checkpoint of the Future (CoF) looks to resolve these issues while strengthening the global security system. It is a riskbased, data-driven concept that will differentiate screening through the analysis of passenger information. Resources can then be focused where the risk is greatest.

The principles behind this idea have been widely welcomed. They have been endorsed by the European Commission, the Chinese government, and the US Department of Homeland Security (DHS). And Interpol and 16 countries have signed a statement of principles for nextgeneration screening. Acceptance, however, is the easy part. The challenge ahead is to implement these ideas and principles before security lines become even more onerous.

Technically, a lot has already been achieved. X-ray scanners, for example, are constantly being improved, and other detection methods have come into force. Moreover, innovation and competition in the market are fast giving rise to technology that will perform to high standards on moving passengers. Two components will be tested by the end of 2012, and a first version of the CoF should be operational by the end of 2014.

The complete technology suite is still a few years away, but risk assessment using passenger data is a step that is already being implemented in some countries. The big question is how to correctly use and harmonize this data around the world. As such, emphasis is being placed on how existing Known Traveler programs can be leveraged. There are a number of such programs in the world, such as the US DHS's Global Entry, with most focused on expediting customs and immigration clearance. The **US** Transportation Security Administration's PreCheck





and Canada's Nexus are the only two programs designed to facilitate a smoother security checkpoint process.

Perhaps more important than where programs are in place to collect data is how the data from those programs is being used and what, specifically, constitutes a data set. An ICAO Technical Advisory Group, comprising 19 states and industry partners, met to discuss this issue and many others in late 2011. The follow-up to this meeting is ongoing. Global harmonization—achieved through the mutual recognition of multiple programs rather than through a single scheme—is possible only if consistent data set parameters and risk assessment methodologies are applied.



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YOU

HAVE

WAIT

FOR GOOD SECURITY.

SHOULDN'T

Getting a fairer deal from governments.

Aviation creates jobs and drives economic growth. Its competitiveness and connectivity should inform governments' tax and regulatory policies.

Many governments continue to treat aviation as a cash cow. Industry taxation grew \$2.7 billion in 2011. The major contributors to industry taxation included disappointing increases in the UK Air Passenger Duty and in the Indian service tax on air tickets. Germany's new transportation tax came into effect in January 2011, and Austria began collecting a similar levy from 1 April 2011. The German government, though, announced a 6.27% reduction in its air transportation tax in early 2012 to offset the inclusion of aviation in the European Union Emissions Trading Scheme (EU ETS), but the Austrian government has yet to follow suit.

There were some positive developments during the year. The Irish government reduced

its air travel tax, and the new Danish government abandoned plans to introduce a levy on air transport outlined in its election manifesto. In the US, IATA worked with national industry stakeholders to oppose successfully plans for the increased taxation of air transport to finance the federal government's debt reduction strategy.



Sales taxes and the imposition of a value-added tax (VAT) on tickets for international air transport continue to be of great concern to the airline industry. The European Commission's Green Paper on the future of VAT raises the possibility that international air passenger travel will no longer be exempt from VAT in the EU. IATA will continue to make the case for aviation to remain exempt from any modifications to intra-EU VAT legislation.

In addition to its campaigns against national taxes, IATA is proactively opposing broader taxation initiatives. These include solidarity taxes, the least developed country (LDC) adaptation levy, environmental and carbon taxes, tourism taxes, and many other taxes that single out and penalize the aviation industry. IATA believes that such discriminatory taxes are counterproductive.

Although it is accepted that many governments need to finance their deficits, targeting aviation as a revenue source is a mistake, as it reduces aviation's ability to drive economic growth. (For more on this, see the feature on the benefits of aviation on page 14.)





In UK, India, Austria, South Africa, Seychelles, Grenada, and Jamaica.

Taxes DOWN **\$58** million

In Ireland, Bahamas, Indonesia, and Sri Lanka. If governments regulate in isolation, they will compromise the benefits of aviation.

Aviation is a global business and requires globally harmonized rules in which to operate safely and efficiently. Unfortunately, many of the standards and regulations laid down by individual countries are not consistent with each other, leading to increased costs and passenger inconvenience. Efficiency and the ability of aviation to increase its connectivity also suffer as a result of individual government policies.

For example, in Latin America airlines have pursued a successful business model of cross-border diversification that has allowed them to generate benefits for the business and for passengers. Airline consolidation however, has exposed uncoordinated regulatory structures that represent barriers to efficient growth and reflect a highly fragmented region.

A positive development is a potential change to the Brazilian Aeronautical Code under discussion by the national congress that seeks to raise the limit to foreign ownership of Brazilian airlines from 20% to 49%. If approved, this will represent an important step towards attracting capital and investment in the region.

Aside from issues around ownership rules for airlines and the regulatory framework for airport charges, two of the most important areas for harmonization are passenger rights in the case of delays or denied boarding and slot management at airports. Passenger compensation rights in the United States and Europe are an example of unintended consequences.

Despite airlines operating in highly competitive markets where customer care quality is a major factor in passenger loyalty, regulatory authorities continue to legislate on delay compensation. Many of these regulations lead to market distortion and uncertainty for passengers. In Europe, a number of legal challenges have begun to determine the boundaries of airline responsibility in the case of denied boarding. And in the United States there has been considerable debate over the new tarmac delay rule, which some estimates show will cost the US economy over \$30 billion and fail to tackle the underlying causes of delays. (See page 29 for more on passenger rights legislation.)

Governments are also creating unnecessary confusion over slot guidelines.

IATA's Worldwide Slot

Guidelines (WSG) are the accepted standard for the management of airport slots and must be globally implemented. The European Commission proposal for a new slot regulation departs from international standards.

IATA is working toward the global adoption of a standard slot management process for the benefit of the whole industry. The WSG provide the guiding principles, policy, and procedures of slot management and are a proven process for optimizing the utilization of scarce airport capacity. Any departure from such an international standard negatively affects the airlines, the airports, and ultimately the passenger. The European Commission's proposal to move from the usual 80-20 "use it or lose it" slot rule to an 85-15 rule in the mistaken belief that this will improve airport slot utilization is a case in point.

The 80-20 rule achieves utilization rates at the most congested airports in excess of 95%. If the new proposals are adopted, the result could be an increase in empty flights to protect slots, which as well as being financially and environmentally damaging does not achieve the objective of a more efficient use of capacity

IATA will advocate against these changes in 2012. They are enormously detrimental to the global process and could provoke international retaliation. IATA will also continue to discuss how best to manage congestion at New York–area airports with the United States Federal Aviation Administration. The key to managing capacity is building more airports and runways.

Slot management issues are a distraction from the main reason for a lack of capacity in the aviation system, which is that there are not enough runways and terminals to cope with demand. IATA continually works with businesses and trade unions to promote the benefits of responsible, sustainable growth at constrained airports. Examples include campaigning for a third runway at London Heathrow and at Hong Kong International Airport. The best use of existing infrastructure is also vital. IATA has worked closely with aviation stakeholders in Germany to communicate the economic consequences of the decision to ban night flights at Frankfurt airport.

What is right for the passenger?

On 23 August 2011, new rules on passenger rights came into effect in the United States. They impose a substantial fine on international airlines for tarmac delays of four hours or more and raise passenger compensation. Further regulations came into effect in the United States in January 2012 that refine how airlines interact with their customers. These regulations will not fix the root causes of the problems and could have unintended consequences. No airline wants to disappoint passengers. Market forces and not regulations are the best guarantee of strong customer service. Passengers only have to walk a few steps at a typical airport if they want to change carriers. A competitive market soon weeds out poor service.

Delays or canceled flights adversely affect airlines. They put crews and aircraft out of position and damage airlines' reputations. Airlines have to either increase passenger fares to cover the cost of delays or accept the cost as a part of doing business. Both options are unwelcome in a competitive market, so it is in airlines' interests to avoid delays whenever possible.

Moreover, the new US rules on passenger rights provide incentive for carriers to cancel should a delay be expected. The US Government Accountability Office estimates that the number of flight cancellations has increased by more than 5,000 since the first set of tarmac delay rules, applicable to domestic flights, took effect in April 2010. That is of no benefit to consumers.

The tarmac delay rules share something in common with its European counterpart, Regulation 261. Delays and cancellations are seen purely as an airline problem. So airlines are penalized for bad weather and volcanic eruptions even though no amount of fine can rectify the vagaries of Mother Nature. Similarly, air traffic management inefficiency and a lack of infrastructure capacity are out of airline control, and yet carriers are held accountable.

The European Commission is reviewing Regulation 261. Its lopsided framework was exposed by the Icelandic volcano eruption in 2010 when the draconian compensation measures imposed were clearly an unintended consequence of poor regulation. IATA has made its views known to the review body, and a report from that body is imminent.

Unfortunately, in the United States regulators are retreating further from the free market principles by which they were guided during the first three decades of airline deregulation. In their place is micromanagement regulating how airlines may compete in response to the demands of the marketplace. This discourages creativity and adds costs. Of particular concern is that the Department of Transportation is considering issuing a third passenger rights rule that could mandate that airlines distribute their products through specific channels such as the global distribution systems.

IN FACT, SMALL IS BEAUTIFUL. AND WE'RE CUTTING OUR CARBON EMISSIONS 50% BY 2050.

1. ALL



Managing aviation's emissions.

Aviation is committed to sustainable development the balancing of economic growth, social progress, and environmental stewardship.

Aviation's commitment and action to improve environmental sustainability is essential if the industry is to continue to grow. The industry is united and working in partnership on a comprehensive environmental strategy with tough targets. But the industry still needs governments to step forward with practical policies, particularly on biofuels, infrastructure, and global economic measures. Aviation remains the only industry sector to have committed to tough global targets for carbon reduction.

To address the challenge of reducing carbon emissions, in 2009 the aviation industry agreed to focus on delivering three sequential goals:

- Improve fuel efficiency an average of 1.5% annually to 2020
- Cap net carbon emissions with carbon-neutral growth from 2020
- Achieve a 50% reduction in net carbon emissions by 2050 compared with 2005

The targets will be met through a four-pillar strategy, coordinated and agreed to across all the main aviation sectors: airlines, airports, ANSPs, and aircraft manufacturers. The pillars comprise new technology, more efficient operations, better infrastructure, and positive economic measures. Government support for issues such as biofuels and infrastructure improvements is essential.

In a declaration at the 2012 Aviation Environment Summit in Geneva, the industry reaffirmed its commitment to the sequential targets and issued a call to action for governments around the globe to assist in helping aviation meet its sustainable development goals.

Just five years ago, aviation biofuels were only a theoretical possibility. The industry invested in a comprehensive and successful testing process. Since the first biofuel test flight in 2008 more than 1,500 commercial flights using biofuels have taken place. With the ability to cut carbon emissions up to 80% over the fuel lifecycle compared with jet kerosene, sustainable aviation biofuels are destined to play a significant role in reducing aviation's emissions.

But there remain substantial obstacles for airlines looking to obtain sufficient quantities of sustainable biofuels at commercially viable prices. Governments have a vital role to play in creating a framework in which investment in largescale production can occur. (See page 34 for more on the industry's efforts to develop sustainable biofuels.)

Technology and infrastructure particularly airspace efficiency improvements—are another vital part of aviation's sustainability strategy. Airlines are investing billions in the latest generation of aircraft, which are some 20% more fuel efficient than their predecessors. IATA is supporting ICAO's progress on developing a carbon standard for new aircraft.

New air navigation procedures, such as Continuous Descent Approaches and PBN, will also cut emissions and noise, but they require more investment from ANSPs. In addition, more ambitious airspace efficiency programs, such as NextGen in the United States and the Single European Sky (SES), require significant investment and political will to succeed.

Airlines, meanwhile, continue to adopt fuel efficiency measures. Through its Green Teams, IATA is playing a pivotal role in these efforts. On average, a gap analysis by a Green Team has saved 5% from an airline fuel bill. Flight operations and flight dispatch often form the greater part of the savings. Guidance material, regional seminars, and training are also on offer from IATA to assist airlines in their drive for fuel efficiency.

Airlines emitted 676 million metric tons of carbon in 2011.



Global man-made emissions amounted to 34 billion metric tons in 2011.





Aviation emissions are less than 2% of global man-made emissions. Positive economic measures are necessary, but they must be coordinated through ICAO.

The European Union Emissions Trading Scheme (EU ETS) is a tax that will have almost no effect on aviation's carbon emissions, will distort competition, and is a challenge to national sovereignty.

The controversy over the EU's incorporation of aviation into its emissions trading scheme is a distraction from the efforts to agree on a global, market-based emissions solution at ICAO. Moreover, it threatens the fragile global economy if nations respond with a trade war.

Europe deserves credit for highlighting environmental concerns on the international agenda, but its unilateral scheme is widely seen as an attack on national sovereignty. The EU ETS also fails to meet the guidelines for market-based measures that were adopted at the 2010 ICAO Assembly. These guidelines include avoiding the double counting of emissions, ensuring that the money raised from any measures is spent on directly reducing aviation emissions, and preventing market distortion.

The answer is for a global emissions reduction framework to be agreed to at ICAO in line with the principles of transparency, equitability, and simplicity and to achieve genuine emissions reductions by airlines.

It was agreed at the 2010 ICAO Assembly that proposals for a global, market-based scheme would be brought forward in time for discussion at the next ICAO Assembly in 2013. To meet this expectation, environmental working groups within ICAO are developing options for countries to consider by the end of 2012. IATA, Airports Council International, the International Coordinating Council of Aerospace Industries Associations, and the **Civil Air Navigation Services** Organization, as observers to ICAO, are able to give technical support to the working groups, but all decision making rests with the member countries.

In parallel with discussions at ICAO, the United Nations Framework Convention on Climate Change process continues to seek a comprehensive global agreement on carbon reduction. The annual Conference of Parties (COP) meetings have a wide-ranging agenda, including debates on a climate change adaptation and mitigation fund. Some progress was made at COP17 in Durban in December 2011. COP18 will be held in 2012 in Qatar.

The aviation industry keeps a watching brief on these discussions and is ready to offer technical advice when requested. Similarly, the industry has been invited to observe the discussions at the Rio+20 meeting, which will mark the 20th anniversary of the original Rio Earth Summit. The meeting will be used to add impetus toward sustainable development.

Emissions reduction roadmap



Voluntary carbon offsetting provides an option for passengers to limit the impact of climate change.

Through carbon offsetting, passengers can neutralize their portion of an aircraft's carbon emissions on a particular journey by investing in carbon reduction projects. IATA has introduced an industry-wide carbon offset program that builds on the lessons learned by individual IATA member airlines and that addresses the challenges raised.

The IATA offset scheme, used by 19 airlines, is designed to help partner airlines introduce an offsetting option to their customers. It brings standardization to the carbon offsetting process and supports an overall cooperative approach to managing the industry's impact on the global climate. The IATA scheme is also an option for companies looking to reduce the carbon footprint of their business travel.

Communication is critical.

IATA is committed to communicating aviation's role in the environmental debate. As such, it supports the Air Transport Action Group (ATAG), a panindustry body for promoting aviation's role in sustainable development. ATAG's dedicated environmental website, www. enviro.aero, has been viewed by well over two million people since its launch.

ATAG's role in promoting aviation's contribution to sustainable development saw it release a new study exploring the social and economic value of the industry. The Aviation Benefits Beyond Borders report, which builds on the work of the Oxford Economics Benefits of Aviation reports commissioned by IATA, gives aviation a strong voice in debates around future economic growth opportunities. (There is more on the benefits of aviation on page 14.)

Can aviation biofuels work?

Biofuels are integral to the sustainable growth of aviation. But the fledgling industry needs government policies that promote capital investment in biofuels. This would help to ensure that biofuels are available at a competitive price and in the required quantity.

Reducing the risk from investing in biofuels is essential. Although there is already good evidence that biofuels are dropping in price even as conventional jet fuel becomes more expensive, the trend toward less-costly biofuels needs to be accelerated. Governments can furnish a welcome boost by providing a level playing field for biofuels with the heavily subsidized biodiesel sector and by prioritizing aviation in energy policy. Other forms of transport have alternative forms of energy available. Automotive vehicles, for example, can benefit from advances in electric power.

Governments also need to ensure that loans and tax incentives are available to help support the research and development of biofuels and to ensure that biofuel production infrastructure gets built. Funding academic research into the choice and properties of biomass would go a long way to deciding which biomasses to pursue. A number of good biomass options exist, from urban waste to algae, with some more suited to certain climates and geographical locations than others. Ultimately, it is expected that aviation will utilize biofuels derived from a range of feedstocks.

The harmonization and mutual recognition of biofuels standards is another area in need of government input. What is recognized by one country as a sustainable biofuel should count the same way in other locations. The Roundtable for Sustainable Biofuels has already issued guidelines for sustainability criteria. Nevertheless, a plethora of regulations remains worldwide.

Agreed-upon sustainability criteria would improve coordination between regulatory standards and move governments toward mutual recognition. It would also lower investment risks thanks to increased transparency. Aviation's global nature, including common global equipment and worldwide fuel purchasing and sustainability requirements, makes global standards essential to progress on biofuels.

Advancing biofuels usage is not just about government cooperation. Equally important for the progress of the biofuels industry will be a collaborative supply chain. Understanding how to tackle production costs is the type of challenge that brings together many parties that traditionally haven't worked together. These include airlines, academics, farmers and agricultural associations, oil refineries, regulators, and environmental groups. Government departments for transport, enterprise, agriculture, and the environment will also need to get involved.

The rewards are there for aviation, for government, and for all other stakeholders. Biofuels could well become a vibrant new industry, providing jobs, inspiring innovation, and assuring an important new fuel source. Around 80% of civil aviation is concentrated at just 190 airports worldwide. Any positive action on aviation biofuels would offer the opportunity to significantly decarbonize an entire industry sector.

Governments must give the industry the encouragement it needs through a set of legal, fiscal, and policy responses that ensure this exciting new energy stream becomes commercialized as quickly as possible.

The fossil fuel emission path



Hypothetical biofuel emission cycle








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StB continues to reduce costs, improve the passenger experience, and create revenue opportunities for airlines.

Since 2004, the industry has completed StB projects on e-ticketing, common-use self-service kiosks, barcoded boarding passes, and automated baggage rules.

To help assess the industry's needs in meeting the twin challenges of profitability and customer satisfaction, an StB White Paper was produced in 2011 that presented five goals that will form the basis of future StB projects. The goals describe a future where

- Airline products can be sold through all channels, identifying customers and personalizing offers and prices
- Passenger data is provided by passengers and validated by governments
- Passengers can access real-time information on flight status, wait times, and baggage delivery on any device in any location
- The customer ground experience is hassle free
- A seamless end-to-end customer journey is possible through the interoperability of travel partners

In line with these objectives, two initiatives are under way in distribution capability and passenger facilitation. The passenger facilitation work in 2012 focuses on trials in automated border control. The aim is to reduce congestion around security and customs clearance. A new distribution capability also has the potential to generate important opportunities for airlines. Industry distribution systems are not keeping up with the pace of change.

IATA is undertaking distribution capability work in 2012 that focuses on establishing XMLbased messaging standards. This will allow travel agents to propose to customers the same dynamic airline offers that are available on other channels. (See page 39 for more on the distribution challenge.)

In addition to the project to tackle the distribution challenge, there are four active StB projects: e-freight, IATA e-services, Fast Travel, and the Baggage Improvement Program.

15% global penetration

Global e-air waybill penetration target for 2012.



Current e-air waybill penetration (April 2012).



Average cost to airlines per baggage item lost.



E-freight improves the efficiency, speed, and security of the air cargo supply chain. Its implementation will be a game-changer.

E-freight is about building a paper-free air cargo supply chain. Each international air freight item can require more than 30 paper documents, increasing the cost of air freight and lengthening transport times. E-freight engages the entire cargo supply chain to put in place standards that remove paper documents from the process of shipping air cargo, from origin to destination. The documents are replaced with the exchange of electronic data.

The first phase of the project focused on building an e-freight network. In 2011, the attention turned to building up e-freight volume over this network with a target of achieving 10% e-freight penetration on live e-freight trade lanes. This target was exceeded with the achievement of 11.1% efreight penetration. The Global Air Cargo Advisory Group (GACAG), a unified voice for the cargo industry that includes IATA; FIATA (International Federation of Freight Forwarders Associations); TIACA (the International Air Cargo Association); and the Global Shippers Forum, is taking the lead in supporting e-freight adoption across the industry.

In 2012, IATA is focusing on mobilizing airlines to adopt the e-Air Waybill (e-AWB), a catalyst for achieving e-freight. The IATA Board of Governors has set a 2012 target of 15% e-AWB global penetration. IATA e-services mark the final step on the path to paperless travel.

IATA's vision for a seamless travel experience for passengers involves three steps that will remove paper documents from the passenger's journey. Step 1, e-ticketing, was completed in 2008. Step 2, bar-coded boarding passes (BCBP), through which IATA has enabled mobile phone boarding passes, was completed in 2010. Step 3 is the ongoing IATA e-services project.

E-services focus on a range of paper miscellaneous documents, such as excess baggage tickets or lounge access, which stand in the way of an entirely smooth and seamless experience for passengers. Airline electronic versions of these documents don't always provide the flexibility that interline passengers need.

24 hours

Estimated cycle-time saving per consignment from the e-freight initiative.

\$0.88

Fast Travel initiative estimated saving per passenger. The e-services project is mobilizing the industry to globally adopt IATA's electronic miscellaneous document (EMD) standard.

IATA's EMD standard fosters a paperless environment that enables the marketing of a range of optional services, from additional legroom while flying to a car service when you reach your destination. With the EMD, these services can be provided by alliance and interline partners. Additionally, the IATA EMD standard means that airlines and travel agents can sell these services quickly and effectively. Airlines will also benefit from lower costs due to simplified revenue accounting and backoffice processing and be able to track and attribute revenues faster. Almost 50 airlines implemented EMD capability in 2011.

In 2012, the e-services project's aim is to reach 75% EMD industry capability. By the end of 2013, the target is to achieve 100% usage of the EMD standard in IATA distribution systems. IATA's Fast Travel projects are making possible the seamless, self-service travel experience that customers want.

Passengers' demands for self-service options across their journey, from boarding pass to baggage collection, are increasing. IATA's Fast Travel initiative meets this expectation through six specific projects: check-in, document scanning, bags ready-to-go, flight rebooking, self-boarding, and bag recovery.

In 2012, the industry has ambitious plans to expand globally the self-service offering, with a year-end target of 100 airline and airport pairs offering at least three of the six solutions to passengers. To achieve this target, airport, airline, and ground handler coordination is crucial, as the implementation of some of the Fast Travel projects is often fragmented across the passenger value chain. The Baggage Improvement Program (BIP) will help the industry cut mishandling in half.

Mishandled baggage is a consistent element of passenger dissatisfaction with the air travel experience and costs the industry more than \$2.9 billion per annum. The BIP program focuses on 200 airports responsible for 85% of mishandled baggage claims.

By the time the project closes at the end of 2012, 80 of these airports will have received diagnostic visits from the BIP team, in coordination with airline and airport sponsors that benefit from customized solutions. The remaining 120 will be part of the self-help program, which allows airports and airlines to use the BIP toolkit to reduce mishandling, lower costs, provide better service, and benchmark performance against the industry.

Through the work of the BIP so far, mishandling has been cut an average of 35% industry-wide.



What's on offer?

\$32.5 billion

The size of the airline ancillary sales market in 2011.

43.8% increase

Ancillary sales jumped 43.8% on 2010.



60% of air tickets are sold through travel agents. Unbundling the product has become increasingly popular with carriers. It involves breaking down the journey into separate components to allow customers to pick and choose options. Some customers might prefer lounge access with an economy fare, while others may want to ensure a seat with extra legroom.

There is a problem, however. While airlines have shown great innovation in their product offering, the global distribution systems (GDSs) have added little to the functionality of their IT infrastructure. The travel agent's terminal cannot effectively differentiate the variety of airline products available today.

Over half of airline tickets worldwide are still sold via GDSs, meaning that airline revenue from ancillary services is unnecessarily restricted. In 2011, ancillary revenues were worth around \$32.5 billion to the industry, according to an Amadeus and IdeaWorks report. This represented a 43.8% increase on 2010, but it could be so much more. Part of the solution is the IATA electronic miscellaneous document (EMD), a single form that allows airlines to sell whatever they choose through multiple channels. An EMD doesn't just move a paper document online, it transforms the process around ancillary services, enhancing customer convenience and reducing airlines' costs.

The EMD brings far greater efficiency to the distribution setup. But to sell the bespoke journey the customer is clearly demanding, the whole distribution technology platform needs to be revolutionized.

IATA is working to establish industry standards that will enable airlines to offer their entire product range to all customers, through all intermediaries, in a manner consistent with an airline's brand and proposition. The choice that consumers value across a spectrum of goods, from computers to automobiles, must also be available for travel services.

Overregulation should not distract from this goal. In the United States, for example, a proposed regulation will mandate that airlines use GDSs to sell all their ancillary products. But pushing consumers toward a handful of suppliers is not the way forward. If customers are to be better informed and offered greater choice, then aviation must have the freedom to develop open channels that are available to all airlines and all passengers.

Airlines will then be able to tailor products according to an individual's buying habits, just as online retailers, such as Amazon, welcome customers by name and display personalized recommendations.

IATA is defining the business case for this global, industrystandard platform and will publish an implementation roadmap by year-end 2012. All stakeholders, including GDSs, are involved in the project.

DON'T FENCE US IN! Aviation could be supporting 82 million jobs by 2030.





Paying the right price.

Airport and ANSP charges cost the equivalent of 11% of airlines' annual revenues and threaten the benefits strong air transport growth would bring.



The amount of infrastructure-related charges airlines and passengers pay every year.

11% of revenues

These charges cost the equivalent of 11% of airlines' annual revenues.



As governments look to raise more tax revenue to stimulate their economies or reduce their deficits, the pressure to raise aviation infrastructure charges in 2012 is increasing. Airlines and their passengers already pay over \$64 billion a year in infrastructure-related charges. Cost reductions and even freezes in infrastructure charges are vital to the battle for the financial sustainability of airlines. Governments also need to understand the link between increased charges and reduced aviation connectivity, which, in turn, leads to longer-term economic underperformance.

Industry-wide policy change is essential to build a stronger framework for cost-efficiency. The ICAO principles of transparency, cost-related charges, meaningful airline consultation, equitable charge structures for all airlines, improvements in productivity, and cost efficiency must be applied when determining infrastructure charges. Airports must balance the need for responsible investment with competitive charges.

In 2012, the Brazilian government accepted extremely high bids for the privatization of the Brasilia, São Paulo Guarulhos and Viracopos airports. IATA is endeavoring to ensure that the concessionaires' performance is measured by levels of service and cost-effectiveness, not simply financial gain. IATA is trying to work with the concessionaires to find ways to recoup their large investments through greater traffic volumes and improved efficiency, not higher airport charges. Excessive airport charges discourage growth and ultimately damage job creation and economic opportunities.

In India, IATA continues to arque that Delhi's 346% increase in charges will make it the most expensive destination in Asia, jeopardizing its aspiration to become an international hub. Amid signs of possible increases at the country's other major airports and a rise in the Indian service tax on air transport services, IATA is engaging with the government and air transport stakeholders to emphasize the adverse effects of the growing cost burden on the Indian air transport sector.

In South Africa, IATA helped to resolve the dispute between the airport authority and the aviation regulator over charges increases. This resulted in original plans for a 190% price increase over two years being modified to a 161% increase over five years. Clearly, the regulatory system is not working, so IATA remains active in this debate, seeking to strengthen regulatory effectiveness so that charges reductions can be delivered in the near future.

Meanwhile, in some good news, the bill to reauthorize the Federal Aviation Administration in the United States made no reference to the proposed raise in the cap on Passenger Facility Charges, from \$4.50 to \$7.00. And in Canada, the need to resolve the long-standing Crown Rents issue remains with the government.

In Europe, the adoption of the EC Airport Charges Directive has produced little improvement in the effectiveness of consultation or the ability of airline customers to play a more influential role in the setting of airport tariffs. Some EU member countries have also been slow to incorporate the directive's provisions into national law.



IATA works with industry partners and governments to reduce the charges and taxes levied on aviation infrastructure around the world. Broader savings campaigns are presented both as a total of removed or modified proposed taxes and charges, as well as "real reductions" resulting in cost savings to airlines' bottom line.

- Delivered \$4.5 billion in cost savings by working with airports, ANSPs, governments, and fuel suppliers, of which nearly \$2.3 billion were real reductions. But cost increases, unfortunately, grew by almost \$2.4 billion.
- Secured savings of \$2.7 billion in airport charges, of which \$717 million represented real cost reductions.
- Achieved savings of \$608 million in air navigation service charges, including \$370 million in real cost reductions.
- Realized savings of \$1.2 billion through IATA campaigns on fuel fees and taxes.
- Saved \$47 million when the US Department of Agriculture shifted the costs of its Animal and Plant Health Inspection Service user fees.



Weak targets and even weaker resolve is undermining progress toward a Single European Sky (SES).

The same cost pressures that are pushing on airport charges are also affecting ANSPs. IATA continues to campaign for reductions in air navigation charges. It also calls for fairer pricing regimes to incentivize efficiency improvements in air traffic management.

IATA's close work with the European Commission on a more unified European airspace has helped to finalize the SES performance and charging scheme regulations, resulting in an end to the full cost recovery mechanism and a fairer scheme based on sharing risk in traffic volumes between airlines and ANSPs.

The success of the SES Performance Scheme is at risk, however. Despite the fact that countries agreed in 2010 to cost reductions at an EU-wide level of 3.5% per year from 2012 through 2014, their National Performance Plans submitted in December 2011 indicate a shortfall of 1.7%, or \$171.8 million (€133 million) in 2014. Moreover, the plans also fail to comply with the delay targets set at an EU-wide level. This is the first reference period under the Single European Sky Performance Scheme legislation, and its success or failure will set a precedent for all future reference periods. If the shortfalls are not remedied by the Commission, the Performance Scheme will lose its credibility.

In a related matter, all EU Member States need to join Functional Airspace Blocks (FABs) by 4 December 2012, according to the SES Il legislation. Although little was done in 2011 to achieve this goal—only Denmark and Sweden made progress during this period—evidence from early 2012 suggests that more states are working toward FAB implementation. However, IATA has already noted significant missed opportunities for cost efficiencies, as ANSPs are still aiming to keep separate operations rather than work under a single FAB.

Meeting the SES targets is critical to European competitiveness—ensuring airspace capacity, improving safety, cutting emissions, and halving costs. IATA will continue to press for tougher action by the European Commission and for more challenging performance targets from 2015. The regulatory oversight of activities related to the jet fuel supply chain and refueling services must be strengthened.

Monopolistic fuel suppliers and a lack of cost transparency holds aviation back in several key markets. Campaigns continue for the improved transparency of costs and formula prices based on international standards in Angola, Brazil, China, the Republic of Congo, the Dominican Republic, Kazakhstan, Mexico, Qatar, the Russian Federation, and the Ukraine. IATA is also working to ensure that regulations introduced in the Russian Federation to favor open markets result in a gradual shift away from the monopolistic fuel supply situation at the federation's airports.

Fuel supply reliability remains an area of IATA activity. In 2011, this included airportspecific improvements, such as in jet fuel tankage and supply capacity, at London Heathrow, Nice, and various African locations.





The Single European Sky needs every European nation to cooperate for airspace reform and efficiency improvement. But only Denmark and Sweden are on schedule to establish a functional airspace block by the end of 2012.



Why does economic regulation matter?

To privatize or not is the decision of governments. But when it comes to critical infrastructure, such as airports, a regulator is needed to balance the profit incentive with the need for cost-efficient services and sufficient capacity. The regulator must have the strength to enforce transparent and fair charges.

Too often, airport regulators lack teeth. The list of airports taking advantage of lax regulation and abusing their monopoly position increases as privatization progresses. BAA raised its user charges 86% from 2007 to 2012. Macquarie Airports, driven by the banking mentality of its parent company, often posts near 50% returns. Other examples exist around the world, from New Zealand to South Africa. The public-private partnerships seen in India show what can be done—and what cannot be accepted. A single till principle has been endorsed that says that all revenues, including commercial income, must be considered when deciding user-charge levels. IATA fully supports this approach. Moreover, the new terminal at Delhi was constructed in just 36 months to provide much needed extra capacity.

Yet there is a flipside to this. Delhi applied for a mammoth 780% price hike in 2011. The Indian regulatory authority approved an increase of 346% over two years that will make Delhi the most expensive airport in Asia. The lesson to learn is that excessive concession fees can cause damage. The 46% of revenues to be paid to the Airports Authority of India certainly exacerbates the problem. All eyes, meanwhile, are on Brazil, with the soccer World Cup and the Olympics on the horizon. To achieve the fast implementation of much needed infrastructure upgrades, the Brazilian government auctioned the concession rights to three airports earlier this year, including São Paulo Guarulhos, the country's main hub. The auction surpassed the government's expectations. The winning bids for Guarulhos, Viracopos, and Brasilia airports reached \$13.4 billion-five times the government's stipulated minimum. How charges are tackled, and the quality and extent of infrastructure improvement, will need to be followed closely. The government being both regulator and shareholder is not the most promising business model.

And yet a successful privatization model is easy to envisage. There needs to be a service level agreement that specifies deliverables, including reinvestment levels and the waiting time for check-in and baggage delivery. These deliverables should be benchmarked against best practice, especially as traffic levels rise. Failure to meet agreed targets should incur substantial penalties, and repeated failure should mean the withdrawal of the concession. The long-term interests of airport investors and of local communities and airline customers are best served by a regulatory model that supports sustainable growth. That calls for a competitive charging structure and a development strategy that ensures the availability of efficient, quality infrastructure.









Providing trusted financial services.

IATA, the industry's financial hub, safeguards reliable standards and account settlement that enable passengers and travel agents, shippers and forwarders to access airline products and services anywhere in the world, in a single currency. IATA processed \$367 billion in its passenger and cargo financial systems in 2011. It handles the industry's money safely and efficiently.

IATA's passenger and cargo agency programs connect travel agents and freight forwarders with airlines, enabling a key distribution channel for the industry. The Billing and Settlement Plan (BSP) and the Cargo Accounts Settlement Systems (CASS), major components of these programs, provide an efficient, reliable, and cost-effective means of simplifying the selling, reporting, and remitting procedures of airline tickets and air waybills. They allow a global industry to distribute global products in a global marketplace.

In an era of alliances and interline agreements, settling between airlines and other third parties can be a complicated process. The IATA Clearing House (ICH) facilitates the offsetting of billings between over 350 airlines and around 80 associated companies in each weekly settlement. In addition, it reduces industry financial risk by minimizing the time and money involved in outstanding intercompany debts.

The IATA Currency Clearance Service (ICCS) helps airlines efficiently manage the repatriation of their worldwide sales funds at optimal market exchange rates so that airlines do not need to actively manage the repatriation process. IATA's Settlement Systems (ISS) are evolving to improve control.

In 2010, the IATA Board of Governors decided on a package of measures to further strengthen the industry's settlement systems to ensure consistency based on a global standard.

Called the Strengthening ISS (SISS) program, these reforms focus on standardization. simplification, and centralization. SISS is the culmination of a process that started in the 1990s when independently run **BSP/CASS** operations were incorporated into IATA's system. Gradually, IATA has standardized the procedures and rules, and SISS will finally put in place one operating methodology for managing the industry's money. That means one global ISS standard operating procedure, one structure consisting of professional teams regionalized in hubs, and one tool in the form of an integrated IT system supporting the standard operating procedure and the structure.

Following the successful migration of the remittance and settlement functions to five regional hubs (Amman, Beijing, Madrid, Miami, and Singapore), work has now begun on migrating the remaining ISS activities, including agency management and customer service, from IATA local offices to these same regional hubs. These migrations will take place on a countryby-country basis, beginning in the third quarter of 2012 until completion in mid-2014.

The migration of the settlement activities strengthens the safeguards and security of the industry's money while enabling the country offices to focus more fully on customer relationships, risk management, local governance issues, and stakeholder groups. These groups include the Passenger Agency Joint Councils, Cargo Agents Liaison Working Groups, and Airline Local Customer Advisory Groups. IATA country offices will perform all other non-settlement system activities, such as the Simplifying the Business program, member and government relations, and IATA products and services. The latter includes manuals; training and consulting; and safety, operations, and infrastructure.



Simplified Interline Settlement (SIS) is the biggest change in billing and settlement since 1947.

The newly developed SIS

web interface is an electronic invoicing system that optimizes interline billing and settlement processes. In SIS, electronic billing files submitted by members are automatically processed and sent to the relevant ICH for automated settlement. and the output files are then created and submitted to the partners. In this way, paper no longer circulates among the billing partners and, thanks to the new billing standards, account posting and reconciliation can be automated.

In the first three months of its operation in the fourth quarter of 2011, SIS processed \$1.68 billion in settlements, up to 24% of the ICH settlement value, each week. 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 new service. IATA works with governments to repatriate funds from restricted markets.

According to the preliminary 2011 Remittance of Foreign Balances (RFB) survey results, \$531 million of members' funds remains delayed or blocked in 14 countries. This is an increase of \$15 million over the 2010 year-end figure. Of this total, \$339 million is in Venezuela, representing 64% of the total. Some progress was made with the Venezuela Central Bank in 2011; average delays were reduced to less than five months, down from 10 months in 2009. Other markets where airline funds are withheld or delayed include Sudan, Iran, Eritrea, and Algeria.

IATA helps airlines to access funds from these restrictively regulated markets and countries. Based on the results of the annual RFB, IATA works with airlines to lobby local governments and authorities with a view to speeding up the repatriation process. Airline infrastructure charges are reduced through the IATA Enhancement and Financing (E&F) Service.

The IATA E&F Service offers ANSPs and airport authorities the opportunity to improve the efficiency and quality of their user charges invoicing and collection process. The service helps users to strengthen their cash flow and benefit from economies of scale. E&F can also help airports and ANSPs to secure cost-effective financing for investments in civil aviation infrastructure.

Most of the invoices produced by E&F can be submitted electronically to the airlines and settled through the IATA settlement systems. Airlines, airports, and ANSPs benefit from the service through standardized invoicing and highly secure and efficient settlement processes.

In 2011, IATA's E&F Service processed more than \$2.1 billion in 48 countries.





Creating products that build better businesses.

To cover the cost of its work on behalf of member airlines, IATA generates revenue through a wide range of value-added aviation solutions in areas such as expert consultation, training, and business intelligence. IATA's global reach and indepth involvement across every activity of the airline business gives it an unrivaled ability to tailor products and solutions to aviation businesses looking to gain a competitive edge. IATA is both a trade association and a business partner. Through its services, products, and training programs, IATA helps drive innovation and value for the aviation industry.



IATA's Business Intelligence Services (BIS) provide an unmatched portfolio of tools for airlines and the supply chain.

In 2011, the BIS's flagship product PaxIS substantially increased its scope and coverage. IATA signed an agreement with the Airline Reporting Corporation (ARC) to build and share a global database of ticket data, which, under the Direct Data Service project banner, now has 44 carriers enrolled. The new database will improve upon PaxIS by offering access to 90% of global travel agent sales. In 2012, airline direct sales will be brought online as the new service builds its list of participants.

AirportIS is used by airports around the globe for marketing and air service development. It also gives industry third parties a strategic window into global passenger streams and travel patterns. As an example, in 2011 a hospital in Canada used AirportIS to create a global air passenger flow that fed its model of how viruses spread globally. Also, players from the financial industry purchased data products to enhance their analytical abilities. Government agencies promoting tourism

and tourism boards are on the AirportIS customer list too. These organizations use the data to strengthen their understanding of the competitive environment and to identify trends in international tourism. AirportIS gives them a solid base for decisions in terms of marketing strategies and resource allocation.

The CargoIS database is sourced from IATA's global billing system, CASS, where airlines and freight forwarders settle \$33 billion worth of airfreight charges. CargoIS is the only business intelligence tool that reflects real transactional data. In 2011, CargoIS was used for the first time by freight forwarders, airports, and manufacturers. This was in addition to the hundreds of airlines that already use the system-a group that represents 75% of the world's air cargo volumes.

Airs@t, IATA's online airline customer satisfaction benchmark survey, has already established itself as IATA's fastest-growing service. In 2011, nearly 50,000 international passengers flying through 27 of the world's busiest airports participated in Airs@t. Airlines benefited from Airs@t by comparing their performance with that of their competitors across 65 customer touch points. By collecting competitive passenger feedback, Airs@t clients are able to analyze the complete passenger travel experience, from reservation and check-in to in-flight services, entertainment systems, and baggage delivery.

Extract from Airs@t data

Figures collected from business- and economy-class passengers during the period January-December 2011, flying on long haul flights on the following Airs@t routes: a) Europe-North America (transatlantic), b) Asia-North America (transpacific) and c) Europe-Middle East-Asia. Total number of surveyed passengers, 43,000+. Airs@t results highlight service areas of strength or where a carrier's product portfolio requires attention. In conjunction with IATA's data products, carriers can analytically determine where improvements will have a materially positive impact on revenue generation and their brand positioning. In 2011, Airs@t coverage expanded beyond transatlantic and Europe and Middle East-Asia routes to cover transpacific and intra-European flights. IATA Consulting delivers efficient solutions that promote sustainable growth.

IATA Consulting delivers solutions for airlines, airports, and civil aviation clients. The IATA Consulting team brings decades of hands-on experience and knowledge of industry-wide best practices to customers in each of these focus areas. The team draws on its wealth of strategic planning, commercial, operational, and regulatory expertise to find solutions for a diverse customer base. In so doing, the team is able to support IATA's strategic objectives for the broader aviation industry.

Three examples highlight some of the work IATA performed in 2011. First, a member airline in Asia needed an integrated operations control command post at its home base while undergoing a network rationalization and introducing a new passenger facility. The project established a world-class integrated operations control center, which prompted the best on-time performance the carrier had achieved in years. Second, an emerging state carrier in Southern Africa commissioned a comprehensive review of its strategic business plan. Recommendations included fleet rationalization and a new network plan that included a hub strategy versus point to point. The results were presented to the country's President, who approved the strategic changes. The IATA team is now on site helping the carrier implement the plan.

Third, a leading Gulf airline undertook a detailed evaluation of manpower levels and work practices to rationalize home-base ground operations. Despite restrictive employment laws, the team delivered a packaged plan that produced substantial savings. The IATA Training and Development Institute (ITDI) provides training for 65,000 aviation professionals every year.

Skilled people are the backbone of successful aviation businesses. The ITDI is focused on meeting the air transport industry's need for certified, high-quality training. IATA is a leader in innovative learning technologies, such as mobile learning, that reach out to as many students as possible with an affordable offering.

In 2011, the ITDI partnered with some of the world's leading educational institutions (Harvard University, University of Geneva, Nanyang Technological University, and Stanford University) to augment general management offerings and to ensure that courses are delivered using the most innovative learning techniques. Combining the widest possible range of course material with a strong geographical and cultural reach, the ITDI provides rewarding opportunities for every phase of an aviation professional's career.

To expand online learning, IATA chose Harvard Business Publishing as a premier leadership development partner. The Harvard ManageMentor online modular e-learning tool was incorporated into the training curriculum and is offered in English, Spanish, and Mandarin.



IATA's data and corporate publishing helps airlines with regulatory compliance.

Timatic, the industry's leading solution for passenger travel document compliance, continued to expand its offerings in 2011. Timatic AutoCheck was adopted by Star Alliance on behalf of its members to provide the Travel Document Compliance data and rules engine to power Star's integrated Auto Document Check.

Also in 2011, IBM completed the integration of Timatic AutoCheck capability into its common-use check-in kiosk offering. By automating the document checking process in line with IATA's StB recommended practice, airlines may, on average, save \$1 for every two international passengers flown, through reduced immigration fines, more efficient passenger processing, and increased penetration of passenger selfservice check-in solutions.

The air transport industry relies on IATA as its authoritative source for regulations, best practices, conference resolutions, and a wealth of data. The latter includes data on most aspects of airline operations, including safety, security, operations, taxes, and finance. This knowledge base of missioncritical information is presented in over 250 electronic and print publications and in electronic data format where applicable. Strategic Partnerships offer the aviation supply chain a stake in shaping the industry's future.

The Strategic Partnerships Program is a platform for aviation solution providers to conduct business and meet key industry stakeholders, as well as maintain existing relationships. Strategic Partners gain a unique insight into airlines' priorities and have the opportunity to be recognized for working with IATA in serving the air transport industry.

IATA's Strategic Partnerships Program membership includes over 340 of the world's leading aviation suppliers. These partners participate in the development of global standards and address industry priorities in areas such as operations, passenger experience, cargo, alternative fuels, and the environment. More than 100 work groups and task forces are open to Strategic Partners. The Simplify the Business Think Tank, in which airlines and industry suppliers together mapped out their vision of the future for passenger travel, was launched in 2011. The project served as an example of a successful business initiative developed in collaboration with the Strategic Partners.

IATA provides the means for all aviation stakeholders to come together in high-quality conferences, symposiums, and meetings.

In 2011, more participants than ever joined IATA's events to network and gain essential insight on the future of commercial aviation. IATA's events cover many areas, including airline schedules, air cargo, aviation law, aviation security, commercial strategy, ground handling, revenue accounting, and, most recently, the travel value chain.

Where possible, IATA events combine conference and governance issues. During industry meetings, delegates shape standards and processes by defining and passing resolutions or recommended practices. In addition, they gain valuable insights into the latest commercial, regulatory, or operational trends and developments. IATA events offer the chance for aviation professionals to refresh their network while experiencing the conference tracks taking place in sequence with their industry meetings.

The first World Passenger Symposium in 2011 attracted nearly 600 delegates. This conference's outcome influenced the recommendations that were submitted to the IATA Board of airline CEOs, which defined IATA's priorities for 2012. In November 2011, the first Global Aviation Human Capital summit was held in Singapore. Over 150 delegates from airlines, airports, and aviation authorities heard and shared trends and best practices in people management, training, and development.

On the air cargo calendar, the annual World Cargo Symposium (WCS) has evolved into a premier global event, with almost 1,000 attendees. In March 2012, the sixth edition of the WCS combined highlevel discussions with detailed technical sessions, appealing to all parts of the air freight supply chain.



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It's a little hard to find somewhere we <u>don't</u> go.

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