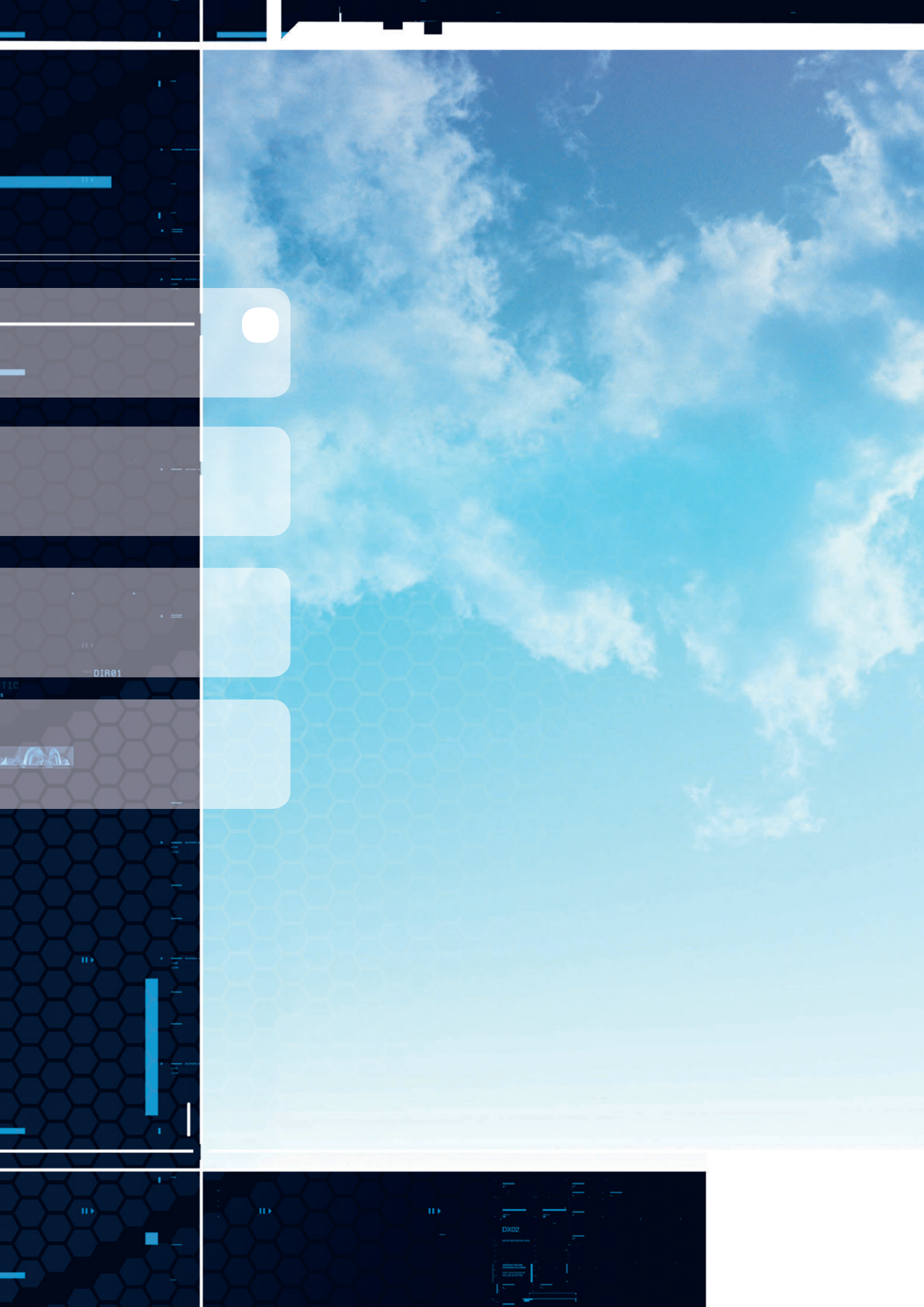


TITLE

Navigating the future

NAVIGATING THE FUTURE



Introduction

Executive summary

Demand for air travel

- Economy
- Urbanisation
- Tourism
- Network evolution
- High speed rail

Traffic forecast

Demand for passenger aircraft

- Aircraft Segments

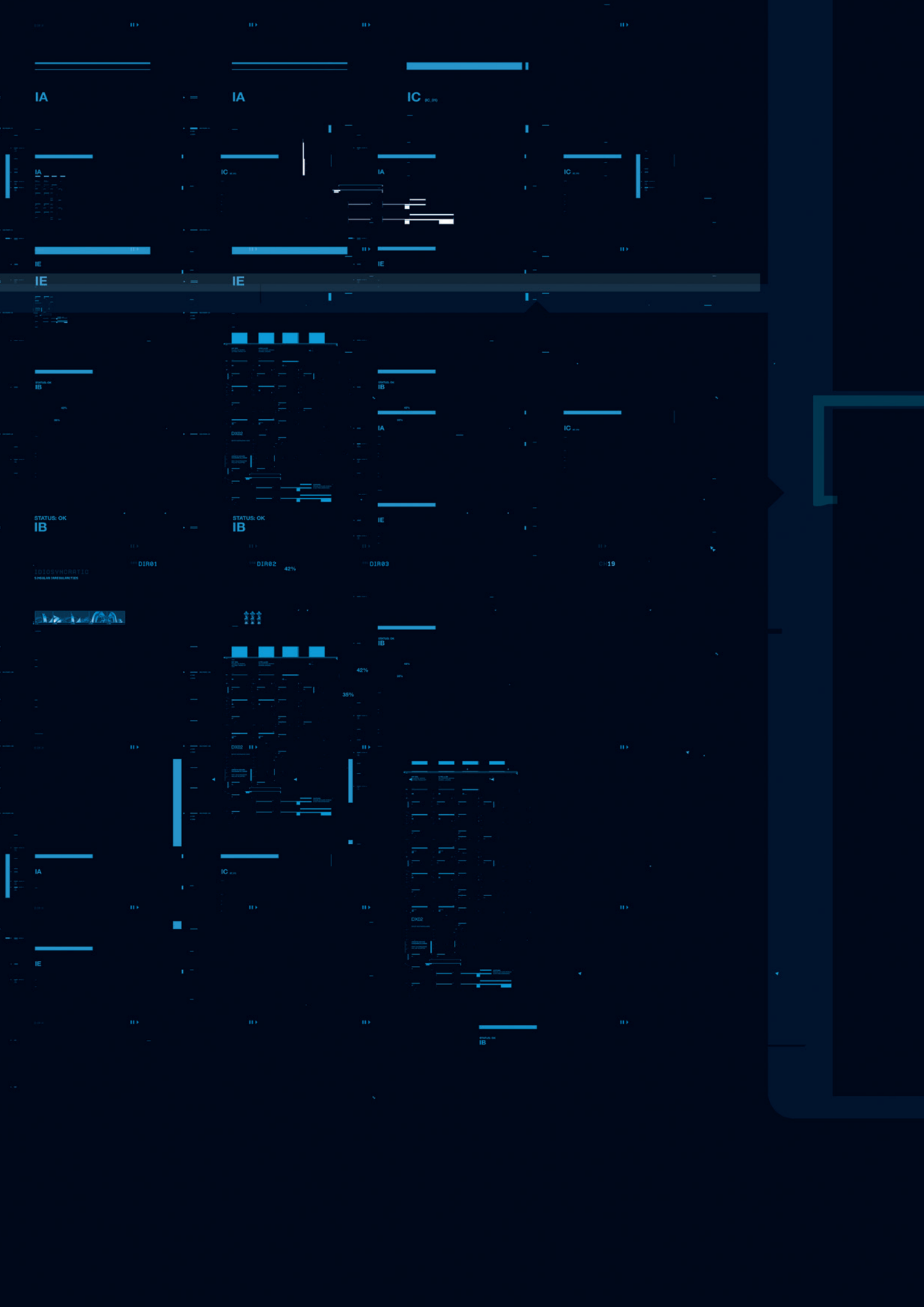
Demand by Region

- Asia-Pacific
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Summary and methodology

- Summary of results
- Passenger methodology
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INTRODUCTION

Welcome to this year's Airbus Global Market Forecast book. We hope that you will find it a useful reference. The last year has been characterised by social unrest in various parts of the world, and continued economic uncertainty in others. We have witnessed similar difficult events over the last 10 years or so. However, it is remarkable, that even allowing for some of the most difficult periods aviation has faced in its relatively short existence, including the banking crisis of 2008 / 2009 and now sovereign debt issues in Europe, aviation has still managed to grow more than 50%.

This resilience is a clear sign of the value people place on flying, and something that through the data methods we employ, we are able to reflect in our 2012 forecast. An Airbus survey conducted recently, showed that of the 10,000 people questioned worldwide, the majority believed that we would fly more in the future. In China and India this number totaled more than 80% of respondents.

This is exactly the message that Airbus forecasters get from modeling the future, using the best data and one of the most comprehensive methodologies employed in the industry today. It is useful, from time to time, to reinforce our findings with another form of empirical research.

As well as more flyers, we forecast a continuing expansion of the world's aviation network, with greater aviation connectivity and more capacity between major population centres helping to drive benefits in terms of jobs, prosperity, and economic growth.

However, like you, we are determined that this progress will not come at the expense of our environment. We will continue to strive to match and better the achievements of aviation's pioneers, moving from canvas to carbon, cables to fly-by-wire, one seat to more than 550 seats, massive improvements in efficiency in terms of operations and fuel consumption in order to meet this challenge.





EXECUTIVE SUMMARY

■ ■ ■ ■ ■ ■ ■ ■ ■ ■

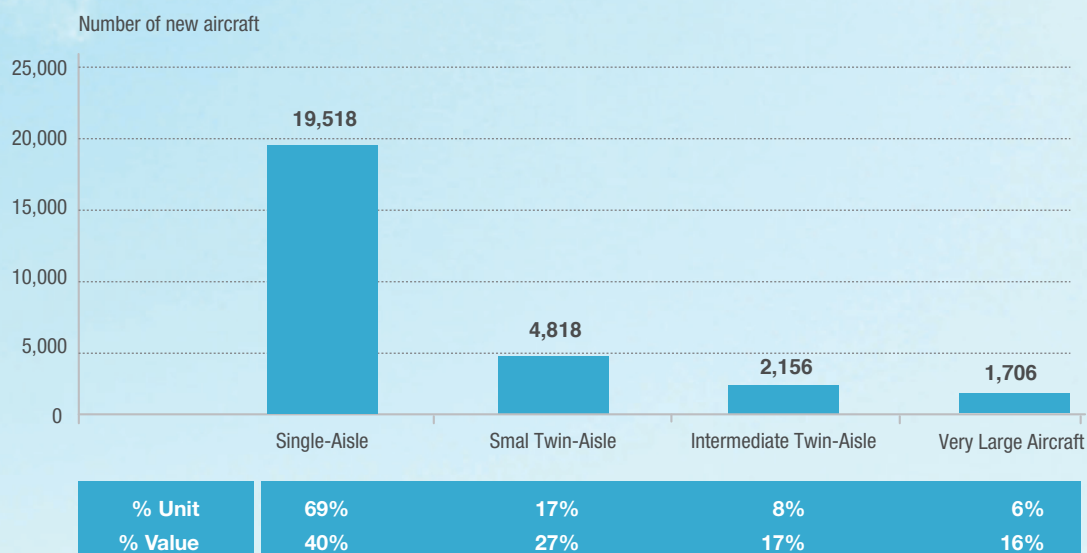
Background

The last year has been characterised by social unrest in various parts of the world, and continued economic uncertainty in others. We have witnessed similar difficult events over the last 10 years or so. However, it is remarkable, that even allowing for some of the most difficult periods aviation has faced in its relatively short existence, including the banking crisis of 2008 / 2009 and now sovereign debt issues in Europe, aviation has still managed to grow more than 50%. This resilience is a clear sign of the value people place on flying, and something that through the data and methods we employ, we are able to reflect in our 2012 forecast.

Highlights

Higher economic growth rates in emerging economies are expected to drive a large portion of the growth in air traffic. In fact, 56% of the economic growth between 2011 and 2031 will come from emerging regions. This economic growth, together with increasing urbanisation, will greatly increase the world population's propensity to travel by air. By 2031, traffic in domestic PRC will be equal to traffic in domestic US making them the two largest flows for air traffic in 2031. These two regions together will account for more than 20% of worldwide air traffic by the end of the forecast.

Single-Aisle 69% of units, Twin-Aisle 44% of value



Passenger aircraft ≥100 seats; freight aircraft ≥ 10 tonnes

The traffic

Airbus analysis has shown for example that traffic growth between advanced and emerging air transport markets will grow at an average annual rate of 5.1%, not far off the 6.6% annual growth rate forecast between emerging markets. On a worldwide basis, traffic growth is expected to average 4.7% per year. Even though emerging markets are the key and leading driver of future air transportation, the importance of advanced aviation markets cannot be underestimated.

In fact by 2031, over 60% of all traffic will involve the advanced aviation markets, primarily North America and Europe.

Like the GMF 2011, traffic carried by Middle East airlines is expected to grow at the highest rate of 7.3% per annum, accounting for 11% of all traffic carried in 2031. But the three largest regions in terms of airline domicile will continue to be Asia-Pacific, Europe and North America, accounting for 32%, 24% and 20% of traffic respectively in 2031.

Freight traffic is expected to grow slightly higher than passenger traffic at 4.9% per year. Like passenger traffic, much of the growth will come from traffic connected to emerging markets with traffic between emerging markets commanding the highest growth rates at 5.7% per year.

Top 10 countries GMF 2012

Top 10 countries 20-year new passenger aircraft deliveries and business volume (2012 – 2031)

New passenger aircraft deliveries			Business volume (bn. US\$)		
1	US	5,289	1	PRC	634.0
2	PRC	4,272	2	US	544.0
3	India	1,232	3	UAE	223.9
4	Germany	986	4	India	173.7
5	UK	979	5	Germany	138.1
6	Russia	958	6	UK	129.8
7	UAE	882	7	Russia	113.7
8	Brazil	781	8	Australia	102.1
9	Ireland	702	9	Brazil	100.1
10	Australia	652	10	Japan	98.2

► 61% of total new deliveries

► 60% of total business volume

New passenger aircraft deliveries per region

20-year new aircraft deliveries per region

	AFRICA	ASIA-PACIFIC	CIS	EUROPE	LATIN AMERICA	MIDDLE EAST	NORTH AMERICA	WORLD
2012-2021	413	4,505	492	2,815	1,004	1,007	2,580	12,816
2022-2031	544	5,113	737	2,886	1,081	899	3,271	14,531
2012-2031	957	9,618	1,229	5,701	2,085	1,906	5,851	27,347
% of 20-year total new deliveries	4%	35%	4%	21%	8%	7%	21%	100%

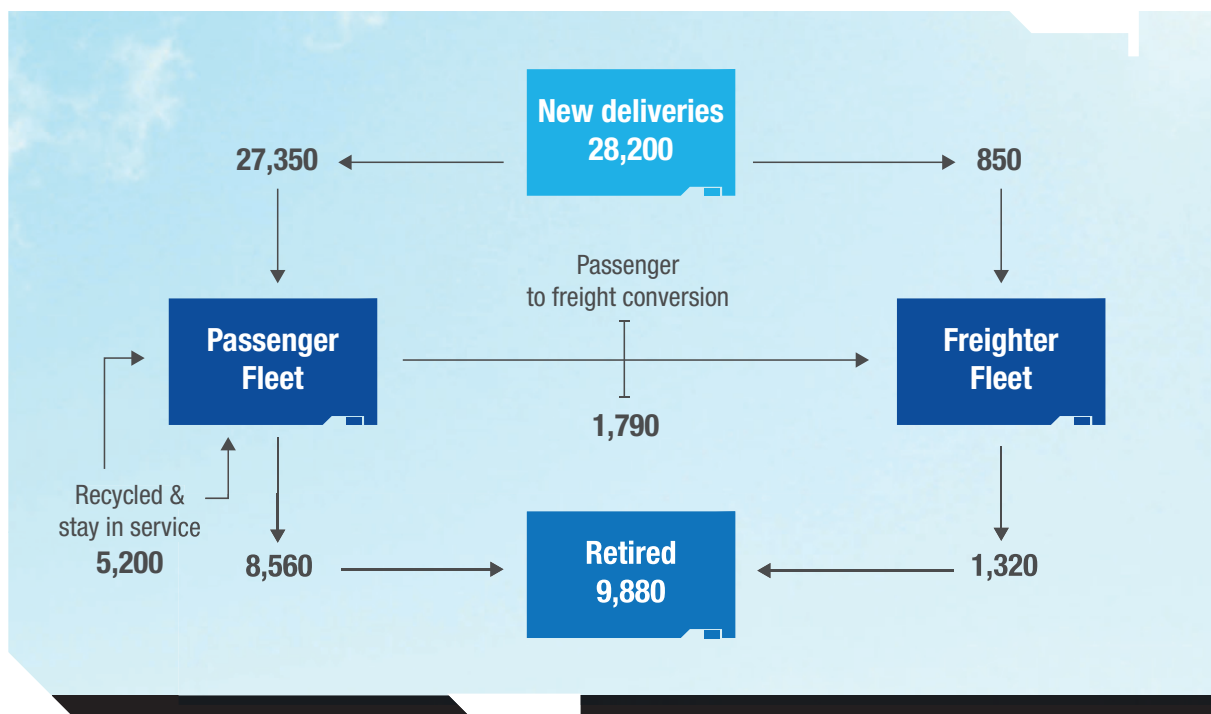
Passenger aircraft (≥ 100 seats)

Fleet and Deliveries

By 2031, the fleet of passenger and freighter aircraft, ≥ 100 seats and ≥ 10 tonnes, will be 35,490 aircraft more than doubling from the 17,170 aircraft in service today. Single-aisle passenger aircraft represent the largest segment of the new deliveries with 19,500 new deliveries over the next 20 years. The demand for Twin-Aisle aircraft will require 6,500 new passenger aircraft and nearly 500 freight aircraft. Over the next 20 years, technological advancements and future new products will help deliver capacity, cost and environmental efficiency to not only make flying better and more accessible but to also lessen the impact on the environment.

Due to the growth in traffic demand in Asia-Pacific, it is no surprise that 46% of the demand for very large passenger aircraft will be within this region. It is equally important to note that 42% of all new aircraft deliveries over 100 seats will be within North America and Europe. Much of this demand, especially in North America, is for new, more fuel efficient aircraft to replace older less eco-efficient types.

By 2031, the world's airlines will take delivery of more than 28,200 new passenger and freighter aircraft worth US\$3.96 trillion at current list prices.





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ECONOMY

ECONOMIC GROWTH, THE CORNERSTONE OF AIR TRAFFIC GROWTH



One of the key variables in forecasting air traffic growth is the growth in GDP. It is therefore no surprise that it is an area aircraft demand forecasters keep a very close eye on, particularly throughout 2012.

The world economy is showing its resilience since bottoming after the 2008 financial crisis, the worst crisis since World War II.

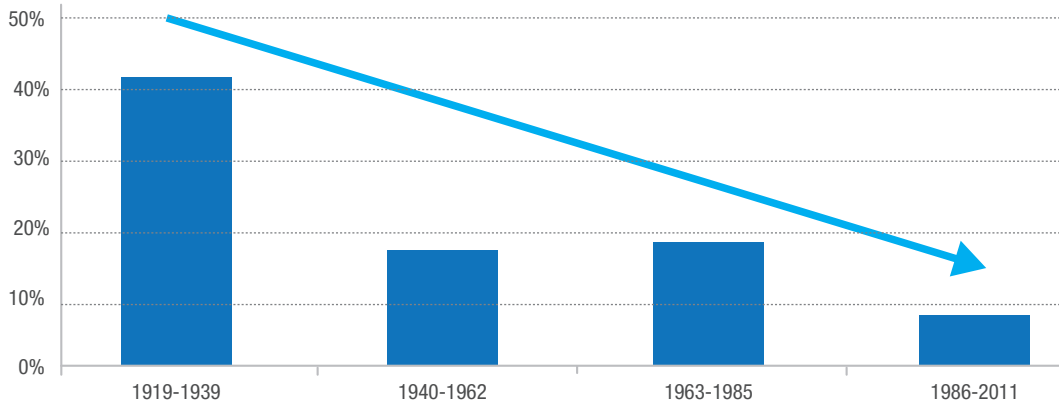
Since this time, some significant progress has been made with improved world governance, in particular through the emergence of enlarged international forums (G20, WEF).

As a result, the time spent in recession at world level has decreased over time, from more than 40 % from 1919 up to 1939, down to less than 10 % from 1986 up to 2011.



Cycles are not what they used to be

% of time spent in recession at world level



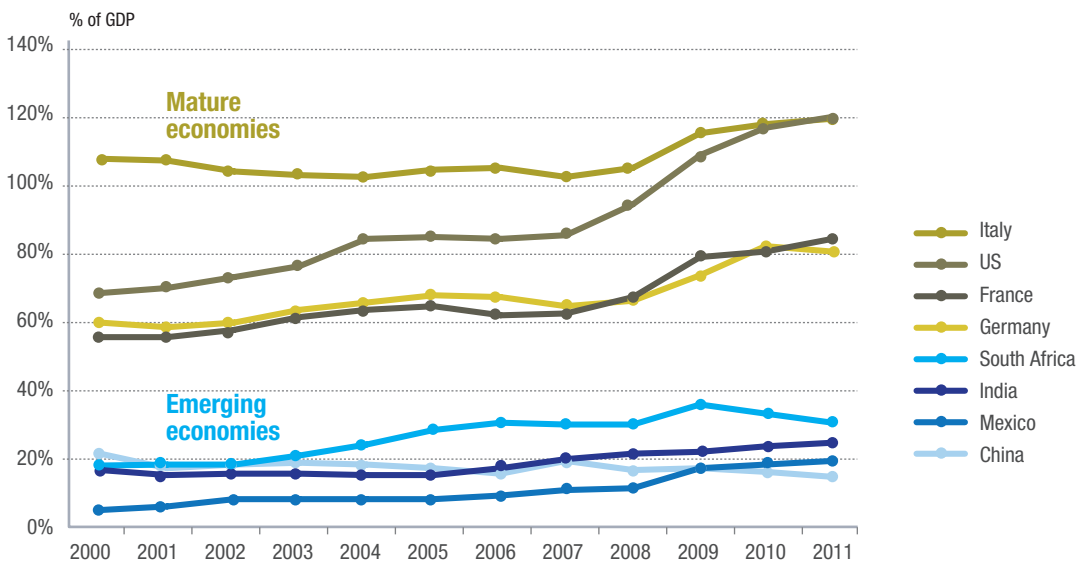
Source: IHS Global Insight, Airbus

At the time of writing, inflationary pressure is easing thanks to more reactive and coordinated monetary policies. With decreasing inflationary tensions and, on the contrary, a growing need to sustain the economy, Central Banks monetary policies are easing (remaining accommodating in western economies with record low policy rates).

Having been faster to implement structural reforms and debt deleveraging measures, emerging countries have rebounded faster and stronger to pursue their development growth, increasingly adopting some Western consumption patterns including air travel.

In contrast to mature economies, emerging economies have kept their debt at relatively low levels

Sovereign debt level as a % of GDP

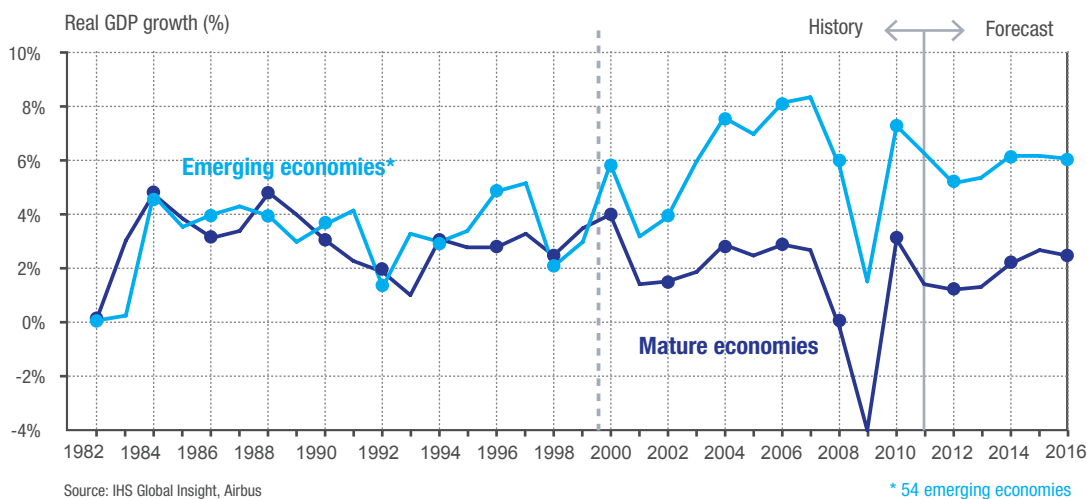


Source: IHS Global Insight, Airbus

On their way to converge and eventually catch up with more mature advanced economies, emerging economies are clearly driving world growth, as

shown in the two-speed growth pattern started since the beginning of the century and reinforced during 2008 financial crisis.

A two-speed world



According to third party forecasts used by Airbus in its projections, the world economy is expected to grow at a yearly average rate of 3.1% over the next 20 years, which, as in the past, will not be linear. Fast growing emerging

countries (5.3 % yearly average growth rate over the next 20 years) will compensate for the lower growth of the more mature, advanced economies, (2.1 % yearly average growth rate over the next 20 years).

The world of 2031 will be very different from today

Country ranking by GDP

1991

- 1 - US
- 2 - Japan
- 3 - Germany
- 4 - France
- 5 - UK
- 6 - Italy
- 7 - Russia
- 8 - Spain
- 9 - Canada
- 10 - Brazil
- 11 - Mexico
- 12 - China**

2011

- 1 - US
- 2 - Japan
- 3 - China**
- 4 - Germany
- 5 - UK
- 6 - France
- 7 - Italy
- 8 - India**
- 9 - Canada
- 10 - Spain
- 11 - Brazil
- 12 - South Korea

2031

- 1 - US
- 2 - China**
- 3 - India**
- 4 - Japan
- 5 - Germany
- 6 - UK
- 7 - France
- 8 - Brazil
- 9 - Italy
- 10 - Canada
- 11 - Mexico
- 12 - South Korea

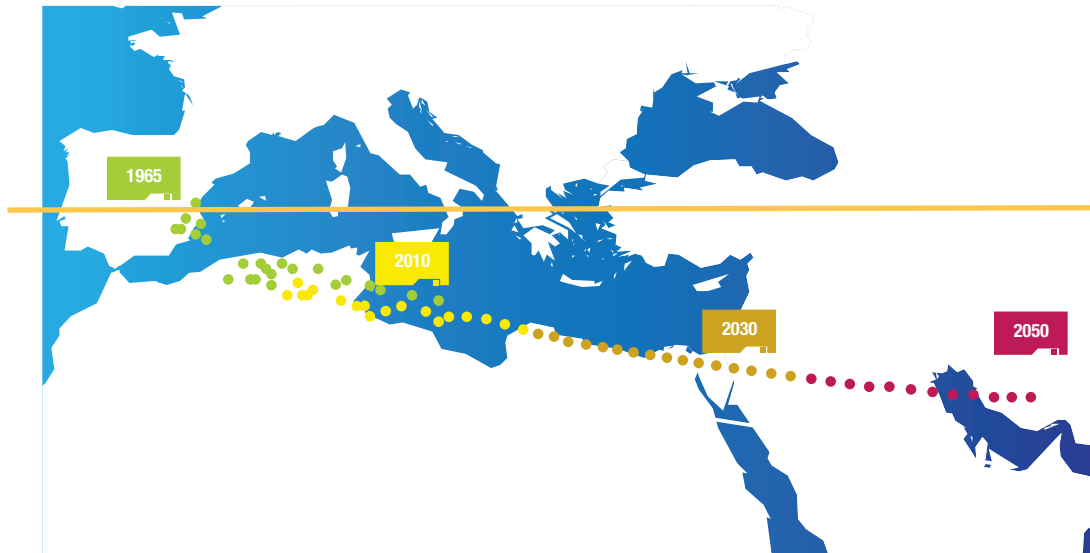
Source: IHS Global Insight, Airbus

As a result, the economic world of 2031 will be very different from today. For instance, China, currently the 3rd largest world economy, will soon surpass Japan. India, currently the 8th largest world economy is expected to become the 3rd largest world economy by 2025.

Beyond the BRICS, emerging countries are

poised to include in the next 20 years fast growing economies such as Nigeria, Mexico, Colombia, Vietnam or Indonesia, which have a combined population of nearly 2 billion people. As a consequence, the world GDP economic centre of gravity currently located somewhere in Tunisia is expected to gradually move to the East as well as to the South.

World GDP economic centre of gravity



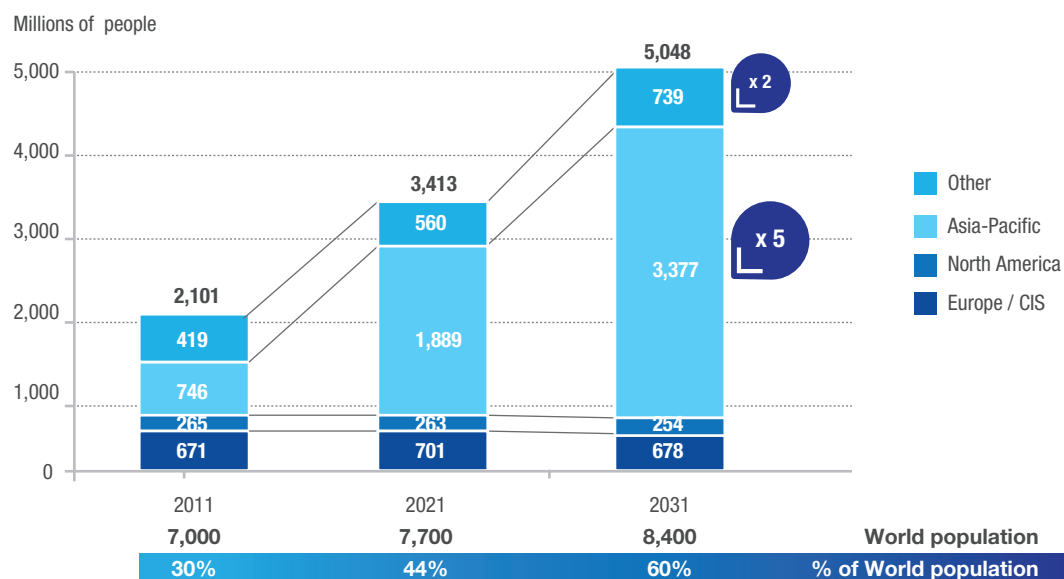
Note: Green indicates earlier years, red indicates later years. Orange line highlight the latitudes of Washington and Beijing (for reference)

Source: IHS Global Insight, Airbus

According to a recent study from the OECD Development Centre, the World “Global middle class” (households with daily expenditures between US\$10 and US\$100 per person at PPP) is expected to reach 5 billion people by 2031, up from 2.1 billion people in 2011.

Emerging economies, in particular in Asia-Pacific, will account for most of the growth of this “Global middle class”, potentially fuelling the need for increased mobility. By 2031, it is estimated that 60% of the world population could be part of this “Global middle class” segmentation.

As world population grows, so does the global middle class

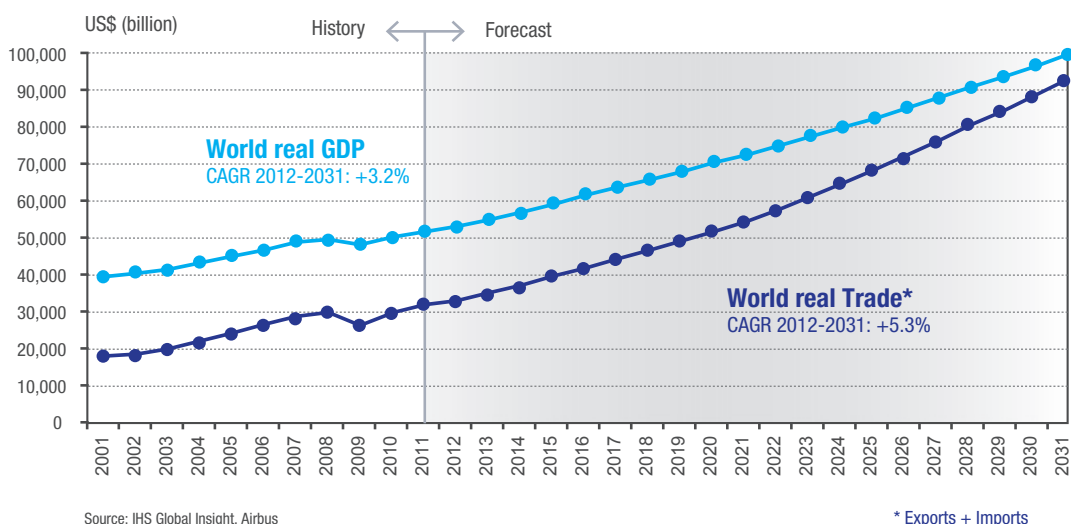


* Households with daily expenditures between \$10 and \$100 per person (at PPP)
Source: Kharas and Gertz, Airbus

World trade suffered a sharp decline in 2009, but bounced back robustly in 2010 and 2011, and is estimated to have ended 2011 well above its 2008 peak.

In the next 20 years, the trade landscape will undergo fundamental change with the emerging economies making up a significant share of the global output.

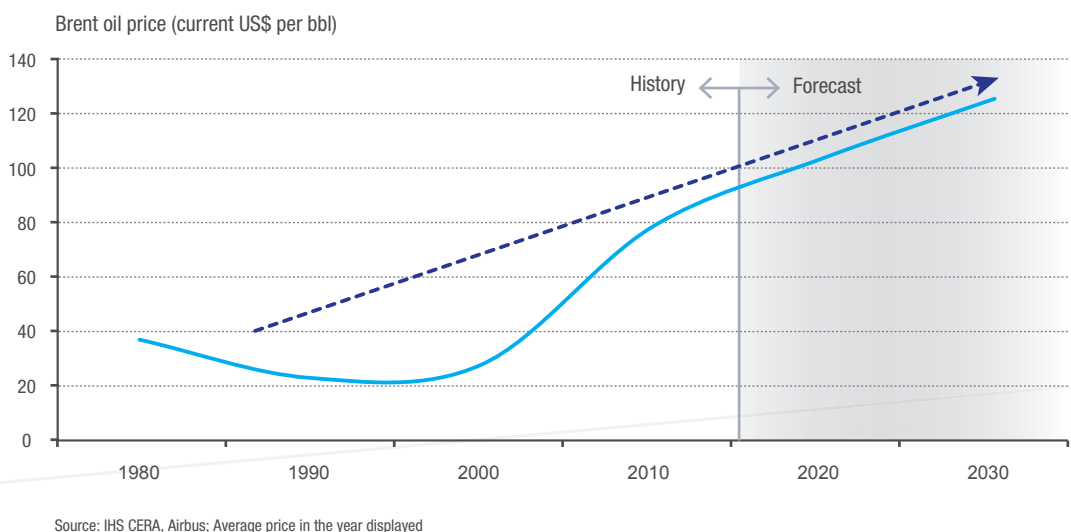
Globalisation expected to generate growing world trade



As a new proof of increasing globalisation, world trade is expected to increase much faster than the overall world economy (+5.3% yearly average growth to compare with +3.2%).

In addition, with growing volumes of consumer final goods exchanged at world level, it is expected that raw materials trading will represent a greater share of world trade. In particular, oil will continue to represent a significant share of commodities traded because of increasing volumes as well as expected growing prices in the mid-to-long term.

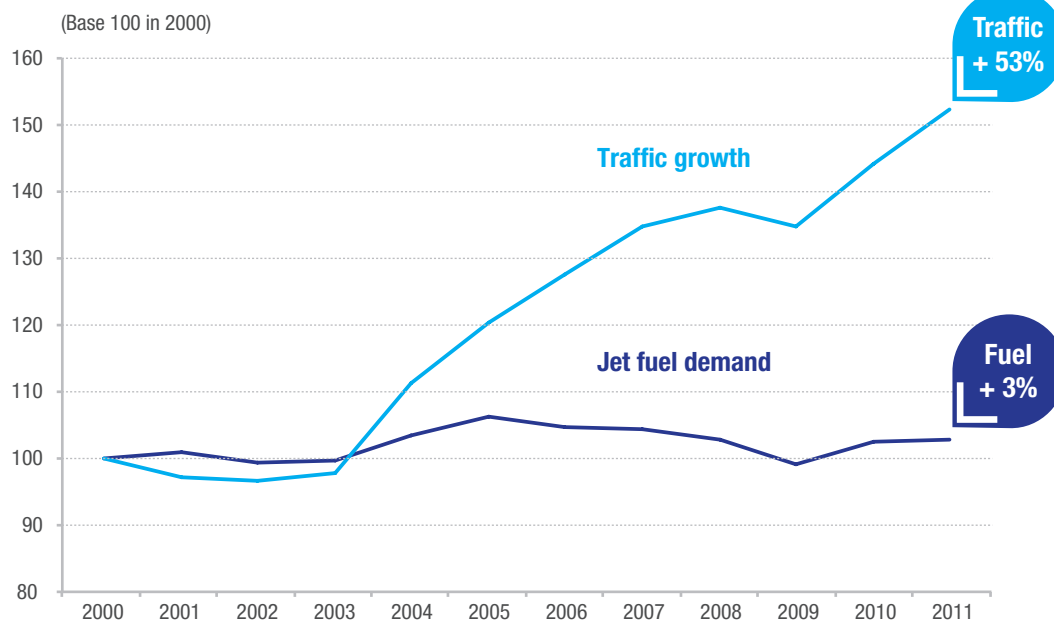
High oil prices here for the long-term



Airlines have achieved tremendous fuel efficiency improvements over the last decade as illustrated by the 53 % growth in passenger air travel since 2000 with a relatively flat growth in fuel demand.

Since 2000, air travel has grown 53%, with relatively flat growth in fuel demand

Evolution of RPKs and jet fuel demand



Source: IHS CERA, ICAO, Airbus

This has been achieved thanks to improved operations of more fuel efficient aircraft, with new generation aircraft progressively replacing old and mid-generation aircraft. This contrasts

with short-term fuel hedging policies whose benefits could be erased in the current volatile price environment, the best long-term hedging policy is to operate new fuel efficient aircraft.

URBANISATION



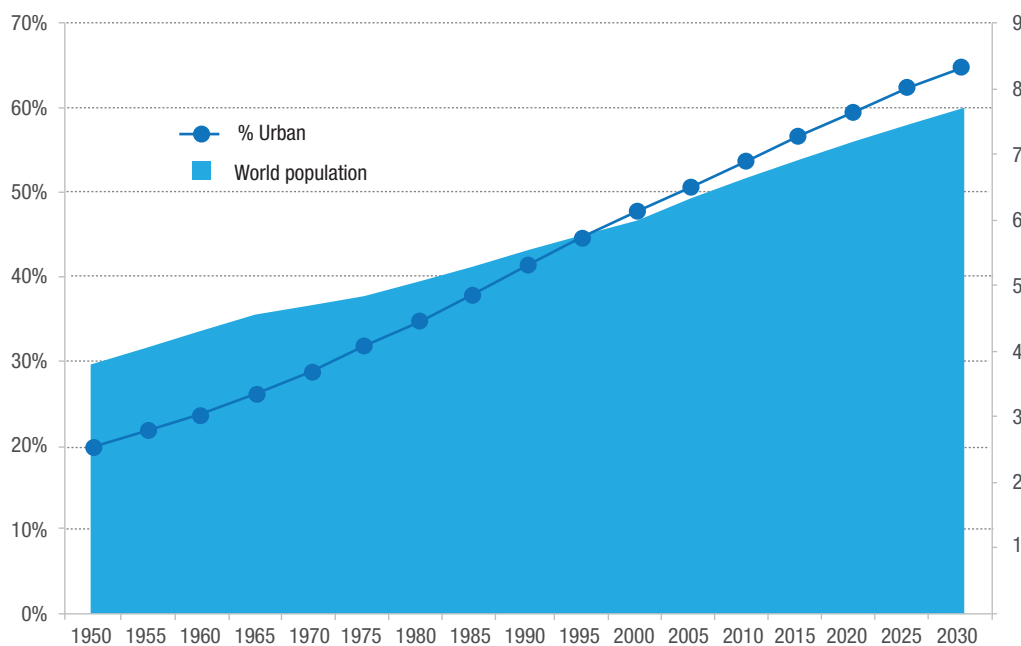
The world is becoming increasingly urbanised

Over the past 60 years, the world has become more and more urbanised. According to the Department of Economic and Social Affairs of the United Nations, in 1950, less than one third of the world's population lived in urban areas.

In 2010, this share has increased to more than half of the world population. While the world total population will increase from 7 to 8.3 billion people in 2030, the urbanisation growth rate is expected to be 2 % per year, representing 60 % of the world population or 5 billion people in 2030.

The world is more and more urbanised

World urbanisation rate (share of World population, left axis) and World population (billions, right axis)



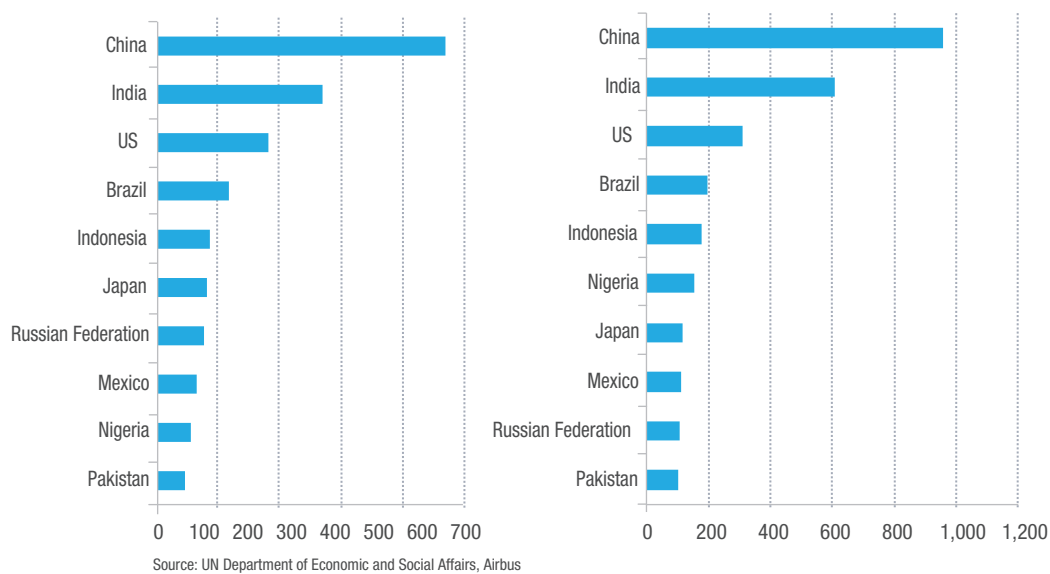
Source : UN Department of Economic and Social Affairs, Airbus

Today, the countries with the largest urban populations are expected to retain their lead in 2030. These countries include China, India, US and Brazil.

Asia-Pacific countries will contribute 53 % of the growth to the world's urbanised population, followed by Africa (23 %), Latin America (8 %) and Middle East (8 %).

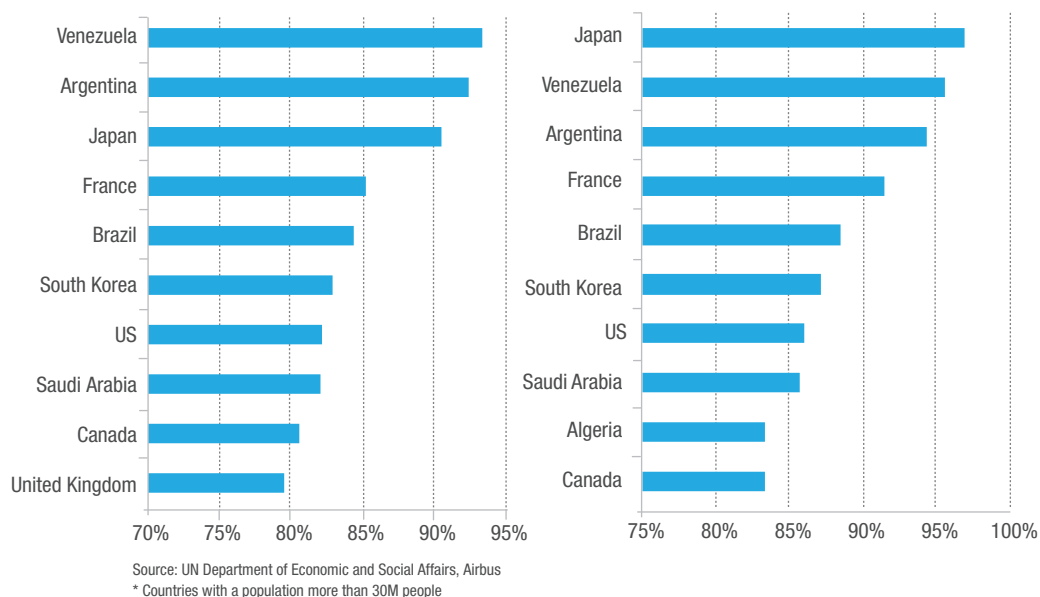
China, India and the US will have the largest urban population in 2030

Urban population (in millions) by country in 2010 (left graph) and 2030 (right graph) – Top ten countries



Many countries urbanised at more than 80 % in 2030

Urbanisation (share of total population) by country* in 2010 (left graph) and 2030 (right graph) – Top ten countries



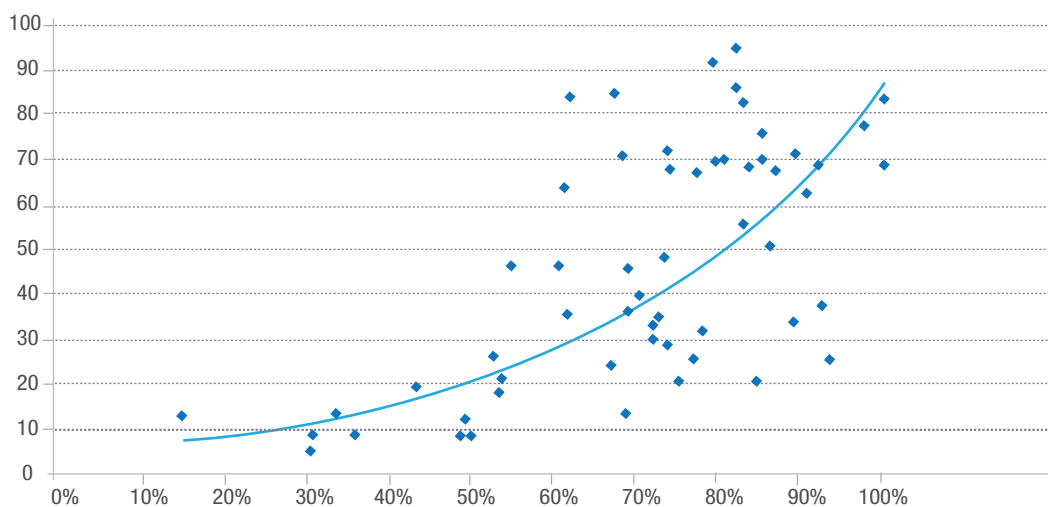
Urbanisation drives wealth

The urbanisation rate and the level of economic development in a country are correlated. People looking for employment opportunities and/or better living conditions will move to big urban economic centres. On the other hand, large urban

areas create economies of scale/agglomeration, lower transportation costs, favour technological development, a greater division of labour, enabling better dissemination of information, skills, goods and services.

Productivity and urbanisation are correlated

GDP per worker (thousands \$US at PPP)
vs. urbanisation (share of total population) in 2010



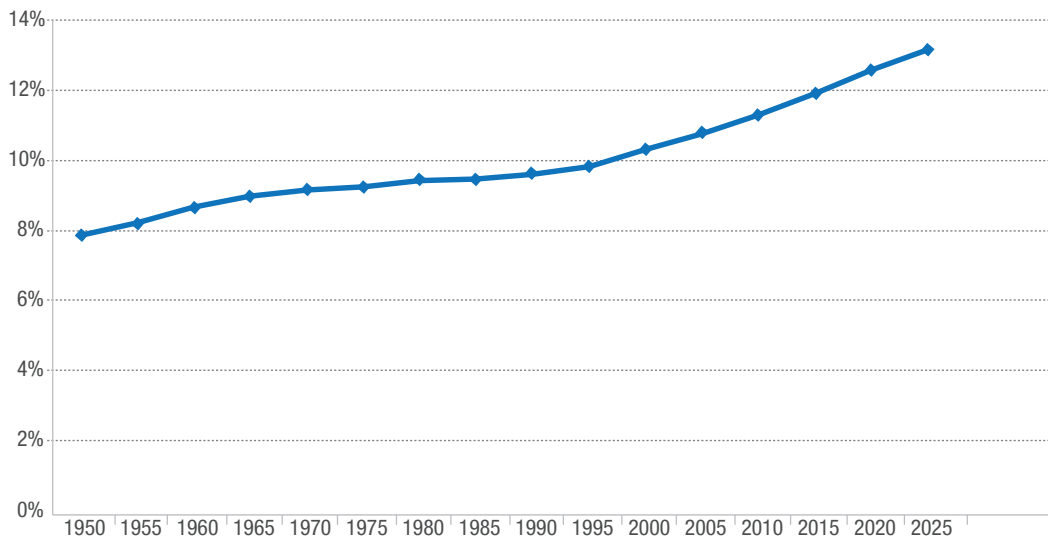
Source: EIU, UN Department of Economic and Social Affairs, Airbus

Attracting large multinational corporations and favouring international trade, cities have become a major driver of globalisation. The world will have more and more large urban centres. In 2025, the 90 largest cities will represent 1 billion

people, one eighth of the world's population. The largest 500 cities will represent 2 billion people, one quarter of the world's population. The share of the world's population in just the top 100 cities will equal of more than 13 % in 2025.

People will be concentrated in the biggest cities

Share of World population in the top 100 populated cities

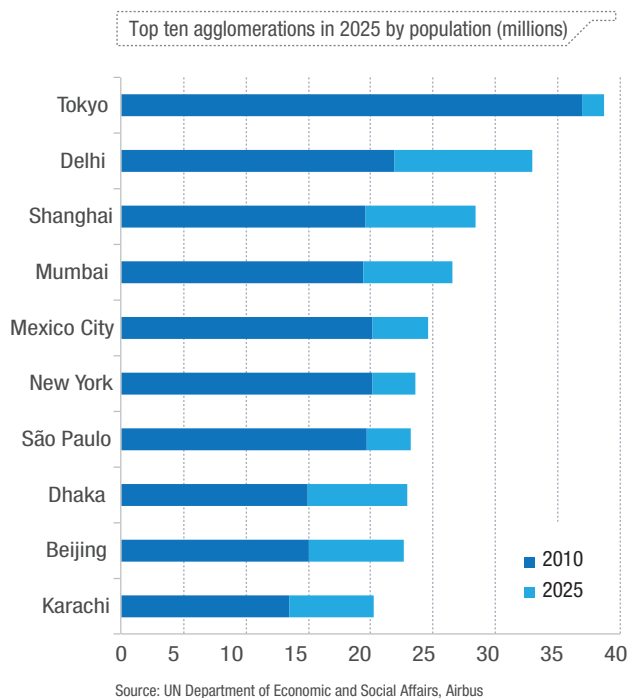


Source: UN Department of Economic and Social Affairs, Airbus

From 1985 to 2010 the number of urban agglomerations with more than 5 million inhabitants has grown from 27 to 61. By 2025, this number will reach 96 urban agglomerations. Today, 62% of these urban agglomerations, with more than 5 million inhabitants, are in Asia-Pacific, with 56% expected in 2025. The fastest growing region, in terms of both number of agglomerations and populations in cities over 5

million inhabitants is Africa; growing from just over 30 million inhabitants in 3 cities with over 5 million to more than 106 million in 12 agglomerations. The ranking of the top ten urban agglomerations is expected to remain relatively stable from 2010 to 2025. But Tokyo, the largest today and in 2030, is expected to grow at a much slower rate than the other mega-cities.

Among the most populated agglomerations, 7 out of 10 will be in Asia-Pacific

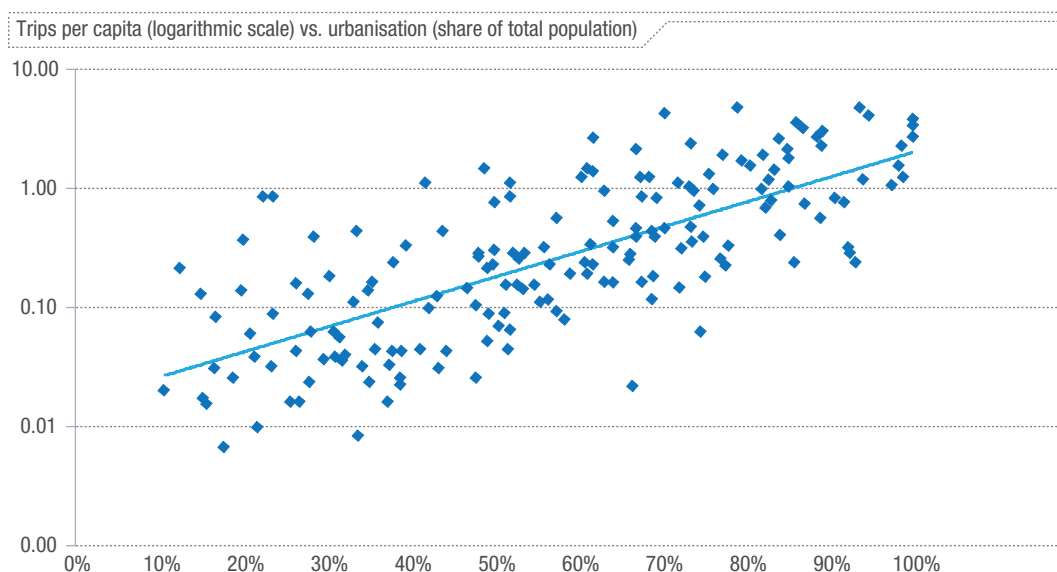


As urbanisation leads to greater economic growth and per capita GDP, the demand for air travel increases. This is clearly shown by the close correlation between percentage of urbanisation and the number of trips per capita of a given country.

Not only does urbanisation drive economic growth and air travel, it also provides a framework for the development of aviation mega-cities, cities with more than 10,000 daily long-haul passengers, to be built upon. Today, 22 of the 42 mega-cities have a population of more than 5 million people and 38 of the 42 have over 1 million inhabitants.

Urbanisation is both a building block for economic growth and prosperity. Over the next 20 years, the inhabitants of these urban environments will continue to drive the global demand for aviation.

Propensity to travel and urbanisation are correlated



TOURISM AND IMMIGRATION

There are a number of reasons why people choose to travel. The WTO (World Tourism Organisation) defines the types of travel as:

- ▶ **Leisure**, recreation and holidays (54% of all arrivals in 2010).
- ▶ **Visiting friends and relatives (VFR)**, health, religion and other (30% of all arrivals in 2010).
- ▶ And lastly, **business and professional**

travel (16% of all arrivals in 2010).

Within each of these categories, there are a number of drivers which affect people's willingness to travel and the motivators behind which destinations they choose.



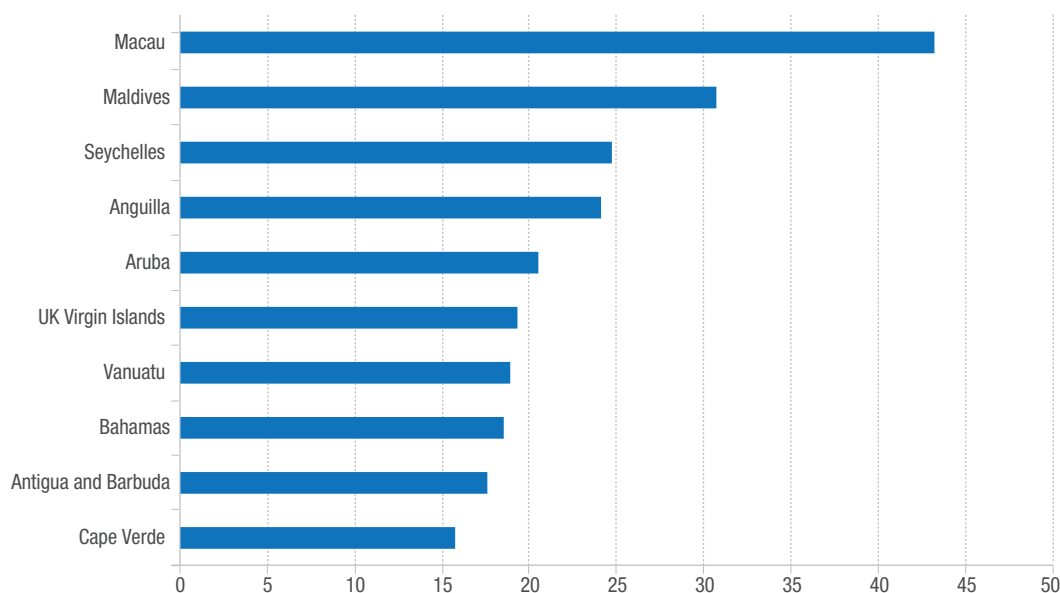
A bright future for the travel and tourism industry

Tourism plays an extremely important role in many countries economies, to the extent that some countries choose to base the majority of their economy on tourism. For example, the direct contribution to the economy of the travel and tourism industry in Maldives represented 30 % of their GDP in 2011, according to the World Travel & Tourism Council (WTTTC). These high percentages can also be seen in a number of island states around the world.

Among all the direct, indirect and induced benefits that air transport provides to the world economy, its impact on the tourism industry cannot be understated. According to the world Tourism Organization (WTO), 51% of all international tourism arrivals were made possible due to air transport in 2010. Air transport will continue to benefit from international tourism as the WTO forecasts that air transport will represent 52% of all international tourism arrivals in 2020.

Tourism plays an important role for many countries

Direct contribution of tourism to the economy (share of GDP) – Top ten countries in 2011



Source: World Travel and Tourism Council, Airbus

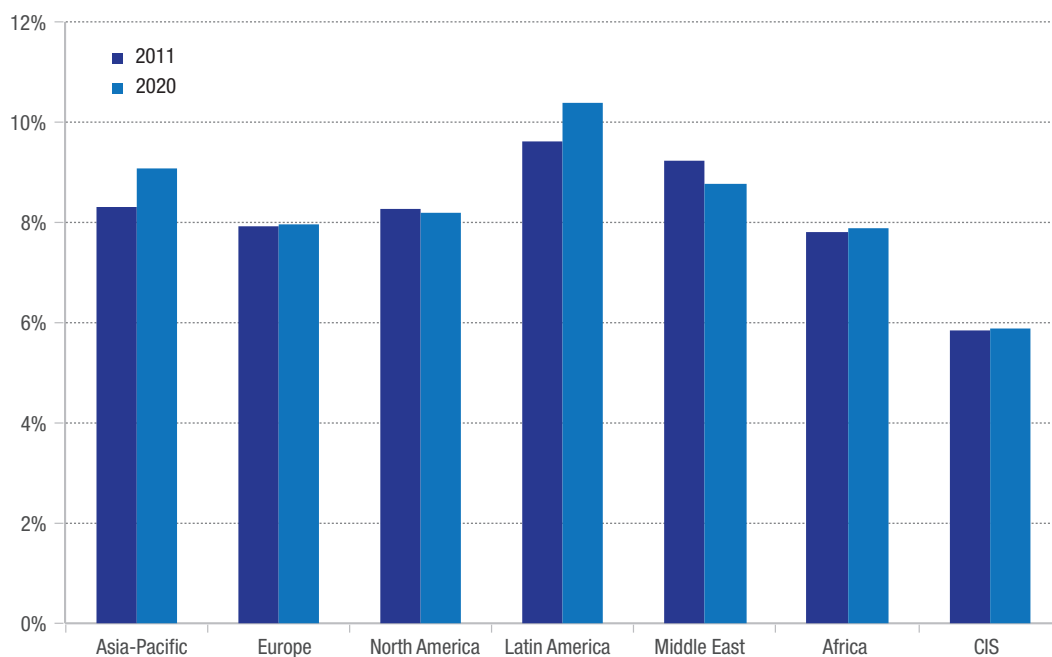


The WTTC forecasts that the travel and tourism industry's total contribution to GDP and employment will remain high in 2020, in every

region of the world, and that this contribution will increase in Asia-Pacific and Latin America.

Travel and tourism will account for a significant share of the global economy by 2020

Total contribution of travel and tourism to the economy, by region (share of GDP)

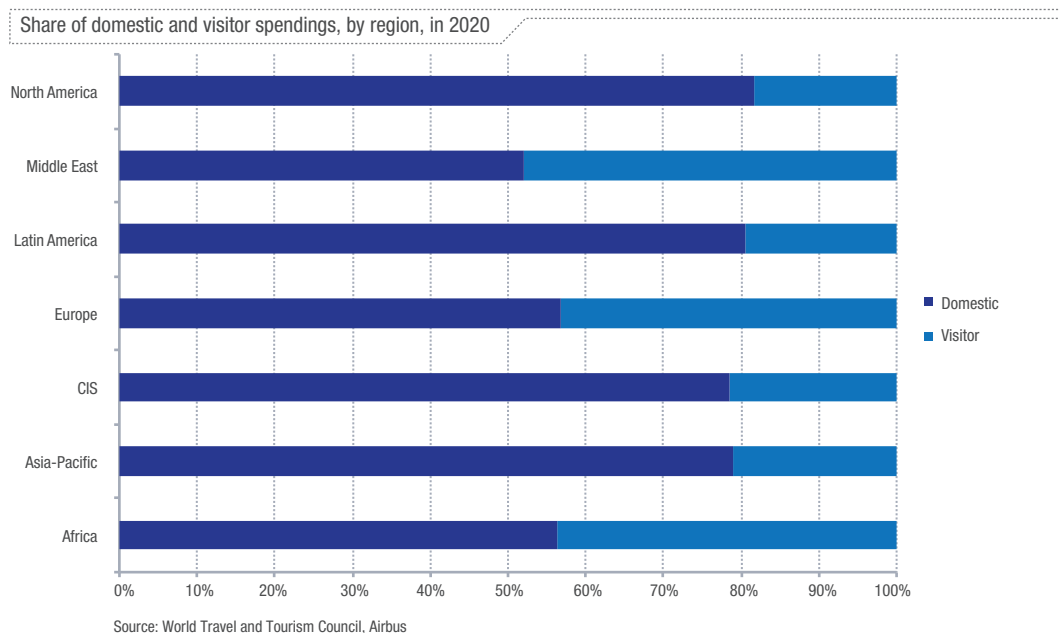


Source: World Travel and Tourism Council, Airbus

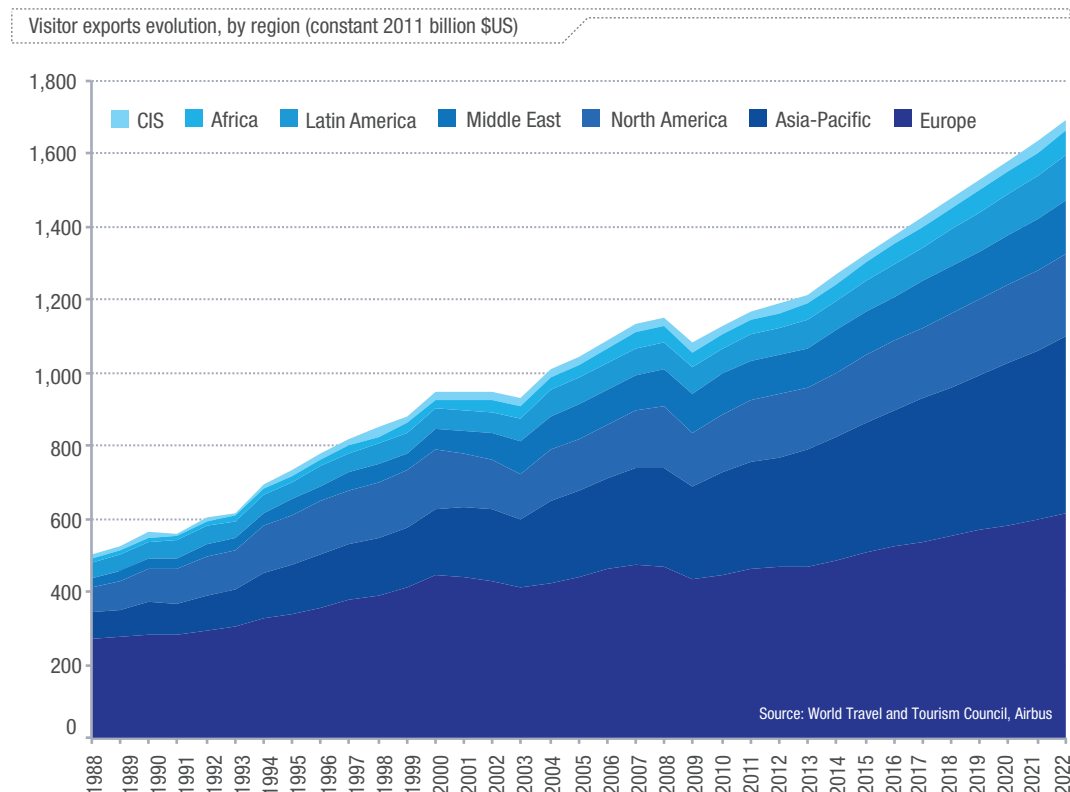
According to the WTTC, visitor exports will continue to represent a large share of all tourism expenditures, with almost 50 % for Africa, Middle East and Europe.

The large share of domestic spending of Asia-Pacific (China, India and many other countries) and North America is characterised by a strong domestic demand for tourism activities.

2020 share of domestic and visitor spendings



Europe will be the largest region in terms of visitor exports



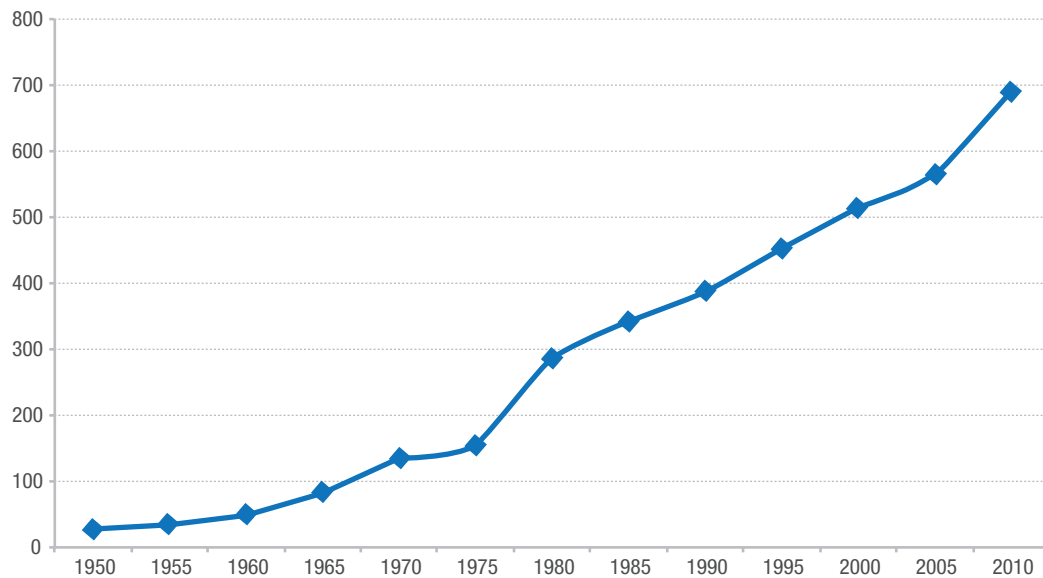
More international education

More and more people emigrate so as to benefit from studies in a foreign university and employment opportunities. According to the Institute of International Education (IIE), more than seven hundred thousand foreign students were in the US in 2010.

Not only do these students often need transportation to get to the country of their new university, but they will also travel once they start their studies, occasionally by air, with their families also likely to visit them.

More people studying abroad

International students in the US (Thousands)



Source: Institute of International Education, Airbus

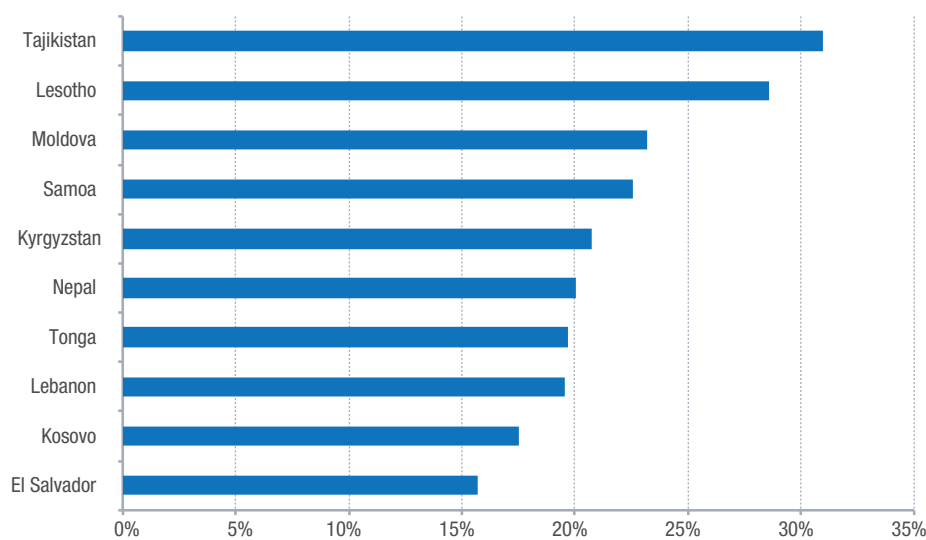
Emigration and Immigration

On top of expatriates that only live in a foreign country for a short period of time, there are also increasing rates of immigration, partially caused by increased globalisation. One of the ways that immigration feeds economic development

is through remittances, where immigrants send money back to family members in their home countries. Some countries are heavily dependent on remittances, which can account for more than 20 % of their GDP.

Many countries are dependent on remittances

Remittances sent (share of GDP) – Top ten countries



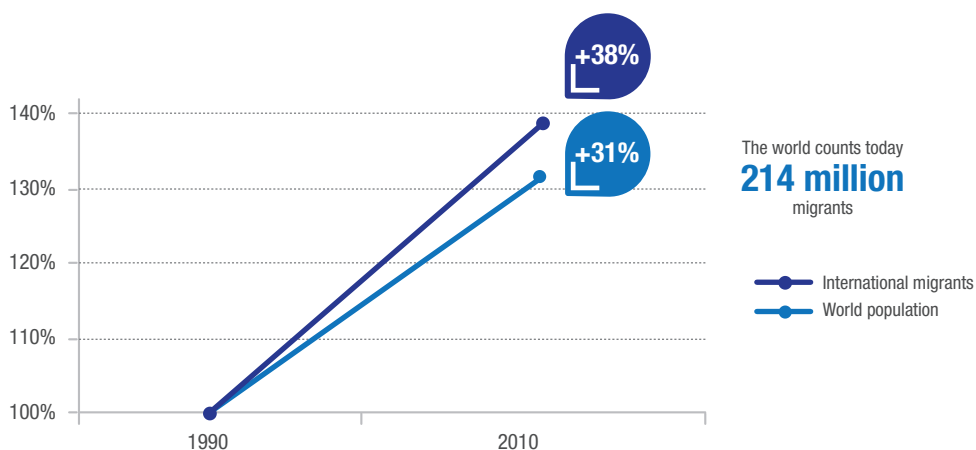
Source: World Bank, Airbus

According to the world Bank, more than 215 million people (3% of the world population) live outside of their country of birth. In 2010, the US and Russia were the two largest immigrant destinations.

This is a key driver of aviation growth, and one that is often resilient to the early stages of downturns.

Global migration grew faster than global population

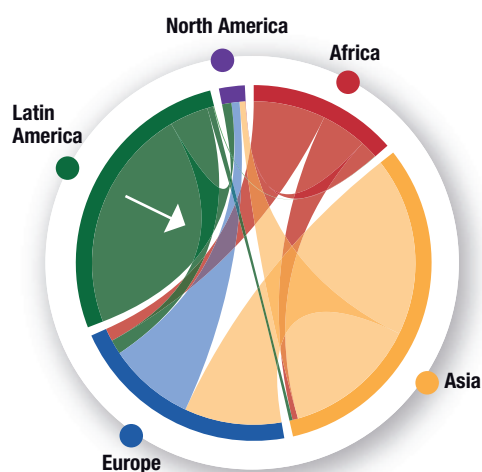
Relative evolution of world population and international migrants, 1990 set to 100% (intra- and inter-regional migration)



Source: United Nations Population division, International Migrant Stock

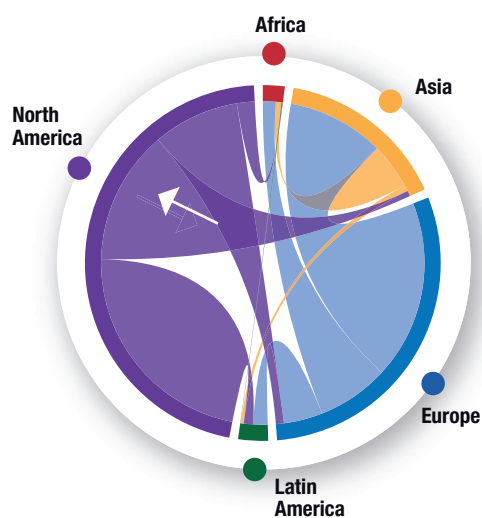
Regions sending migrants

2010 world inter-regional migration corridors
2010 by emigration region (million persons)



Regions receiving migrants

2010 world inter-regional migration corridors
2010 by immigration region (million persons)



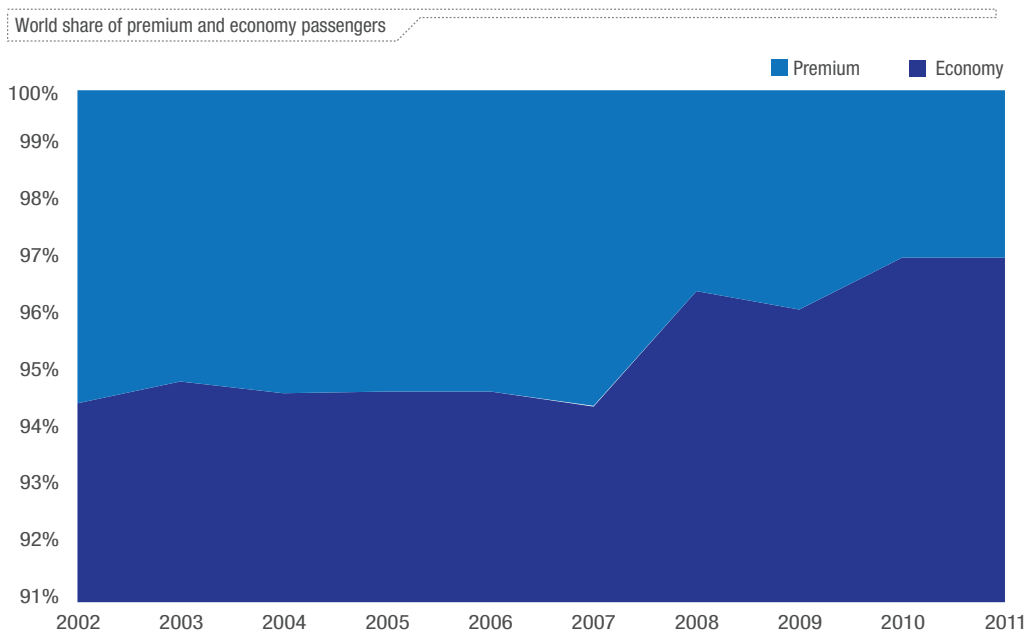
Region definition according to United Nations;
Asia including Oceania, countries of the Middle East and countries of CIS, Europe including Russia
Source: United Nations Population division, International Migrant Stock

Business and professional tourism will maintain its share

While traffic on economy class represents more than 95 % of all passengers worldwide according to Sabre, premium class is necessary in the profit management of most carriers:

around 15-20 % of all revenue comes from the premium class. The average yield ratio between the premium and the economy class is around three to one, according to Sabre.

Premium class accounts for 3 % of worldwide passengers and 20% of revenues



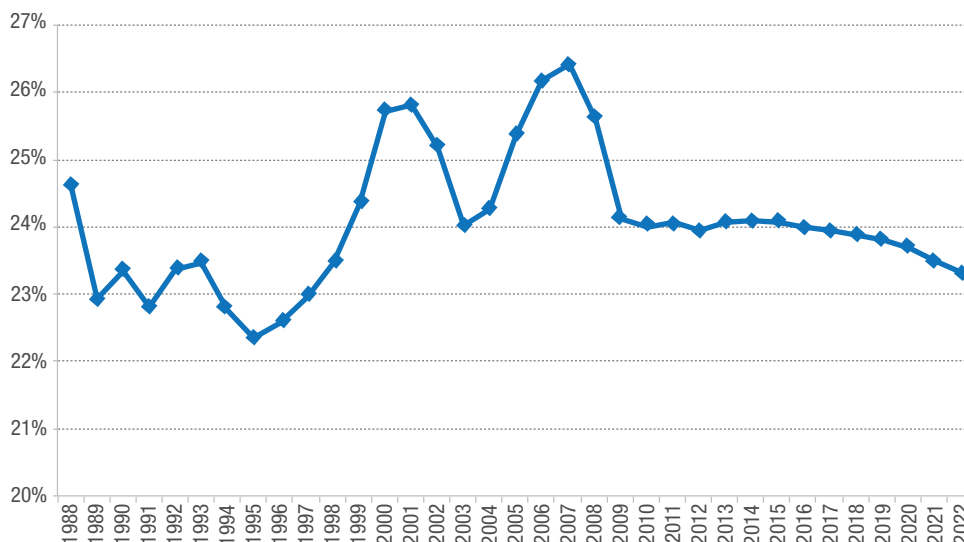
Source: Sabre, Airbus

Even though the recent economic crisis has had a negative impact on premium class bookings, we expect that business travel will still represent a formidable share of air passenger traffic. According to the WTO, 17 % of international tourism will be business and professional related in 2020.

The contribution of business related expenditures in the travel and tourism industry will remain relatively constant between today and 2020 ending 1 % down from today's level at 23 % of all expenditures.

Business will account for a significant share of all tourism related spendings

Share of business spendings in direct travel and tourism contribution to the economy



Source: World Travel and Tourism Council, Airbus

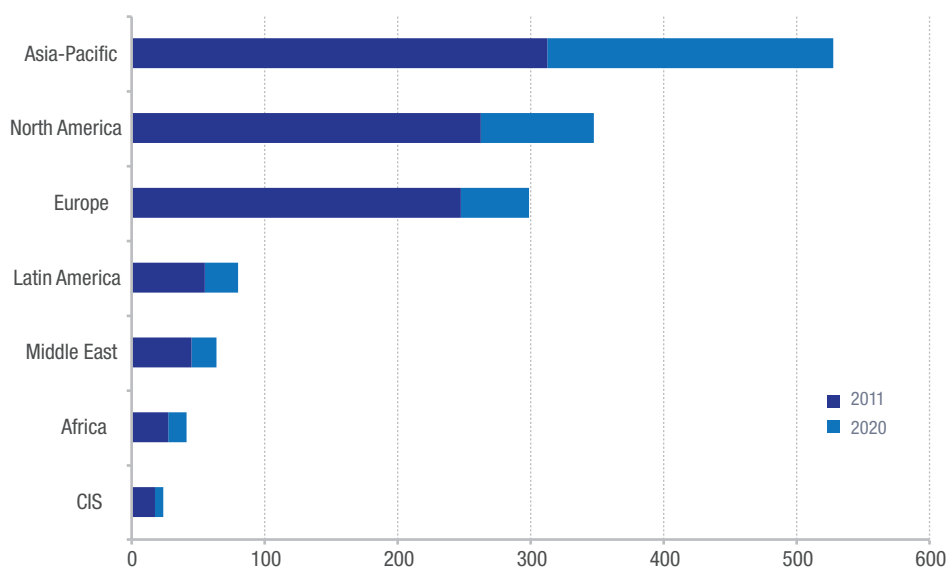
Business travel will continue to remain a very key component of the global business world as people continue to prefer a face-to-face meeting over video teleconferencing. Today, as in ten years time it is projected that business travel will remain high in Asia-Pacific, North America and Europe. However, the growth in expenditures in the Asia-Pacific region is expected to be the most rapid over the next 10 years.

In terms of countries the BRIC nations, Brazil, Russia, India and China, will be where the growth in business travel expenditures will be the highest.

However, it is likely that airlines will continue to search for ways to reduce the cost per passenger with aircraft like the A380, and ways to extract more revenue from the back of the plane.

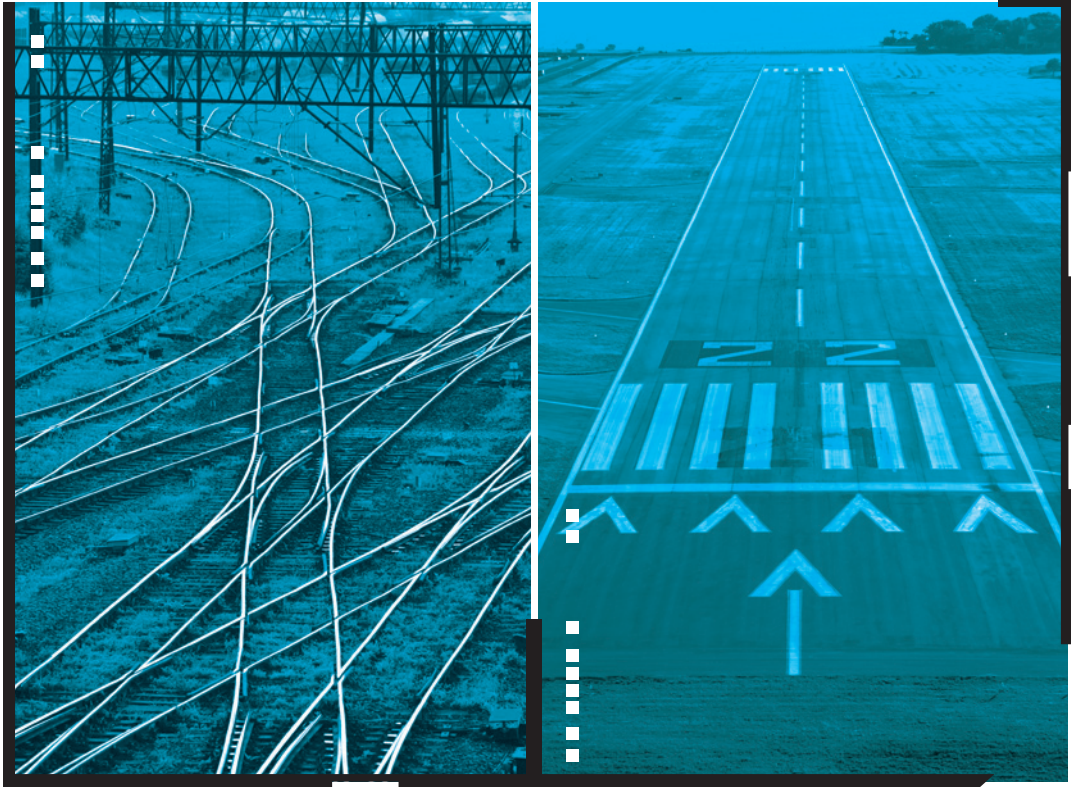
Business expenditures will grow at 4.0 % per year

Business expenditures evolution, by region (Constant 2011 billion \$US)



Source: World Travel and Tourism Council, Airbus

TRAINS & PLANES



Just as civil aviation has evolved over the last century from soaring tests on self-made wooden gliders to scheduled long-haul traffic double decker wide-body aircraft, another, means of mass transportation, some 100 years older, has also evolved: rail transport. What started with what were effectively wheeled steam boilers at the beginning of the 18th century, has in many places of the world developed into a network of modern high-speed trains running up to 350 km/h.

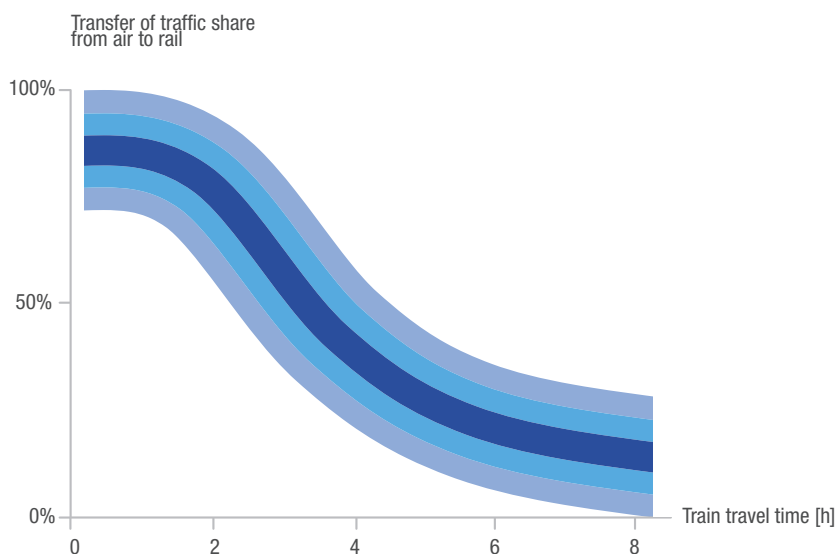
According to the International Union of Railways (UIC) more than 90 % of today's 14,600-km-network of high-speed-rail is located in Europe, Japan and China, and despite projects all over the world, that in total could almost triple the network length by 2025, these three regions will still account for more than 80% of high-speed rail kilometres.

When it comes to modal competition between train and aircraft, a very decisive factor in the traveller's choice is the time it takes to go from one city to another. In terms of travel time and distance between two cities, air and railway transport have some overlapping market segments.

Up to a certain distance limit, trains can compensate for the faster travel speed of aircraft. This is because access time from a city centre to a train station might be shorter than to an airport; and less onerous passenger and baggage handling procedures at train stations also contribute to competitive travel times by train.

However, there is a trend for new high speed rail stations to be situated further from city centres, and as land cost increases and availability decreases, this reduces this advantage over time.

Transfer of traffic from air to rail



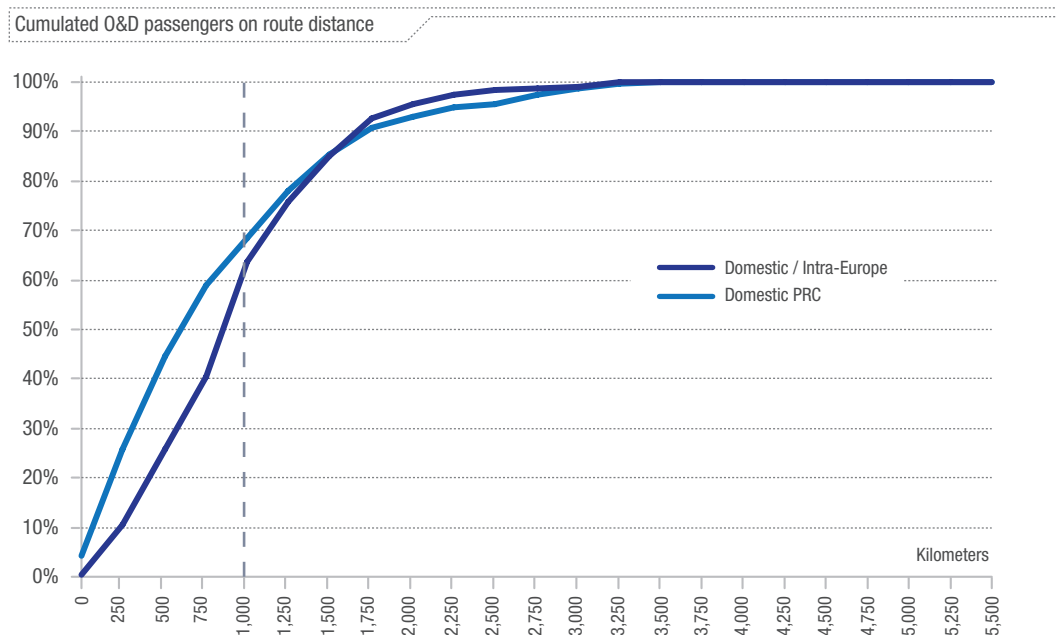
Assessing the potential modal shift from air to rail in markets where plane and train are competing against each other, depends on multiple and often regionally specific factors.

The graph above illustrates the market share transfer from air to rail as a function of train travel time. The blue shaded, s-shaped curve represents aggregated observations of markets where plane and train are competing against each other. Market share shift occurs especially

on trips of up to three hours and reduces more rapidly for train travel times above four hours.

Looking at the distribution of domestic and intra-regional traffic in Europe and China over the great circle distance of Origin-and-Destination city pairs (O&D city pairs), the zone on the left of the dashed line represents the area of O&Ds separated by up to 1,000 km, a distance that corresponds to a three to four hour trip at 300 km/h.

30 % to 40 % of domestic PRC passengers on O&Ds of more than 1000 km



Source: Sabre, Airbus

In Europe, where modal competition between aircraft and train has existed for several decades and where some traffic has already moved from air to rail, air travel still represents about 60 % of domestic and intra regional traffic on routes with great-circle distances of less than 1,000km. High-speed rail in China is relatively recent, with the first lines having been inaugurated over the last few years. Therefore only a very limited amount of air traffic has been transferred to rail transport. There is much greater competition in Europe than in China, as a much greater portion of China's major city pairs are further apart.

Air travel is well positioned to meet the need to link the rapidly growing population centres in China, particularly in the central regions, quickly and efficiently.

Given the current state of railway projects in China, some 35 % of O&D city pairs that are served today by air transport on non-stop and multi-stop flights will face competition from high-speed rail. Estimates on modal traffic shift vary between 5 to 15 % over the next decade.

Several factors influence the future air vs. rail market share and the potential modal traffic shift.

Travel time, as mentioned, is one of the major factors. In cases where high-speed trains run on a dedicated, high-speed only network, new train stations are necessary that might not always be built in close proximity to the city centre. In these cases access time to a station can be as long as those to an airport. Modal shift will also be driven by competitive pricing, where especially low cost carriers might be able to maintain and enlarge the air transport market. Apart from modal competition there are also opportunities for intermodal complementarities. Some major airports are connected to the high-speed rail networks through dedicated stations. In these cases trains can contribute to expanding surrounding airport catchment areas and may help to enlarge accessible markets for air transport.

High speed rail and air transport might face competition on some market segments. But, due to the main performance characteristics and differences between surface and air transport large segment markets will remain well separated. Air transport networks still have the potential to respond to modal competition. Finally, the advantages of both transport modes can be combined to create synergies on both sides, meaning that the future will very much be a story of air and rail, rather than air or rail.



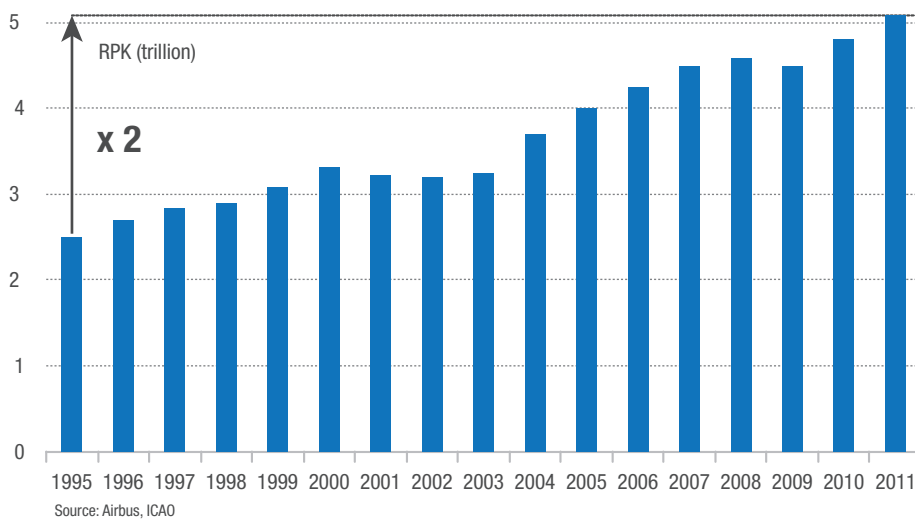
NETWORK DEVELOPMENT



Traffic on the airline network has grown rapidly over the last decades: measured in Revenue

Passenger Kilometres (RPK), the global air traffic of 2011 was twice the volume of 1995.

Global RPK traffic, 1995 - 2011

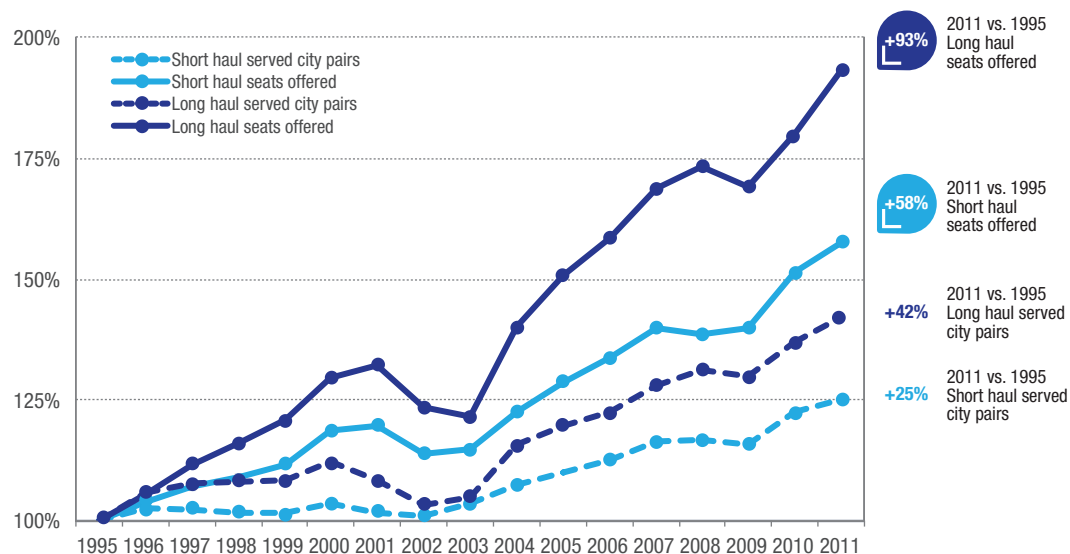




This additional traffic has been accommodated through both network and capacity expansion: the network has been extended with the opening of new routes and the capacity on the existing network has been increased with more flight frequencies and larger aircraft.

Contrasting network evolution with total traffic evolution shows that a large part of the additional traffic has been absorbed with capacity increase on the already existing network. The total of offered seats on the short-haul market by 2011 was 58 % above the level of 1995, whereas the number of additional non-stop city pairs over the same period has increased by 25 %; the total capacity on long-haul city pairs almost doubled with an increase in offered seats of 93 %, whereas the number of new non-stop connections increased by around 42 %.

Evolution of offered seats and number of served city pairs, long haul and short haul market - 1995 base year at 100%



Traffic as of month of September
Long-haul traffic: flight distance >2,000nm, excl. domestic traffic;
Source: Airbus, OAG

The future evolution of the airline network is an important input for the Airbus Global Market Forecast. The shape of the air transport network, such as the number of routes that are served or

the competition of airlines on a single market does in the end also influence the type of aircraft needed to satisfy the demand for air travel.

Focusing on the detail helps to define the forecast.



157 global traffic flows



>10,000 country pairs



>200,000 O&D city pairs



>1,000,000 O&D city pair routings

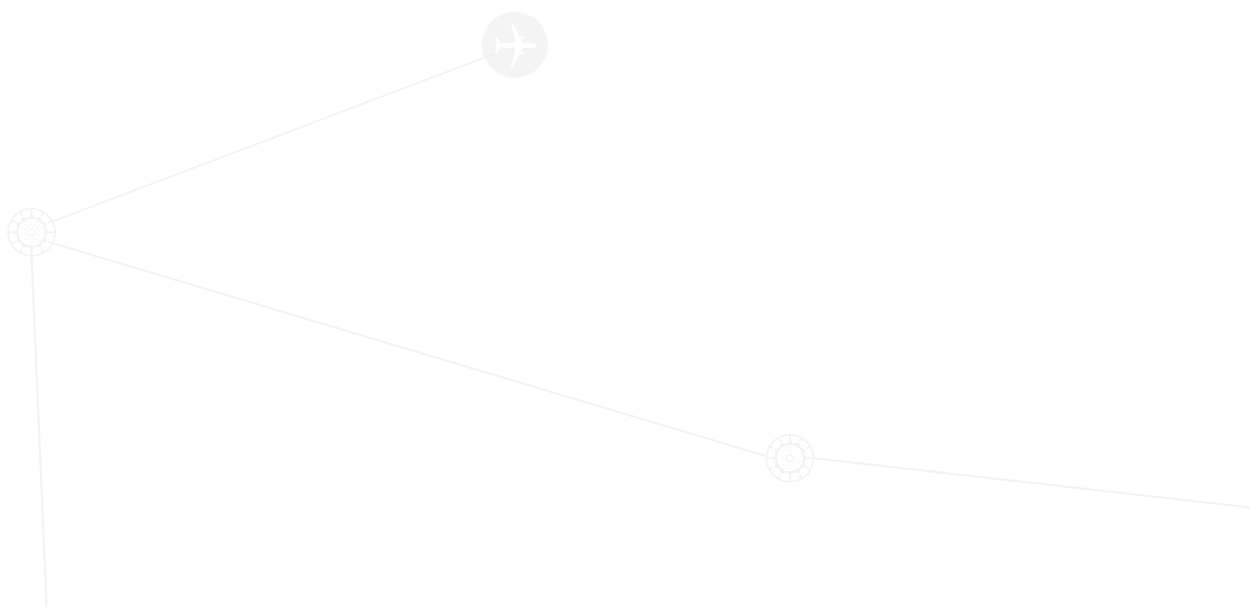
Macro traffic forecast

Micro network forecast

The global traffic forecast of 157 traffic flows in the GMF 2012 is the baseline for further network analysis.

Adding more country and city-pair related details helps to refine the traffic forecast in order to reflect country or city pair specific characteristics. This enlarges the scope of our study from 157 global traffic flows down to more than 10,000 country pairs and more than 200,000 origin-destination city pairs.

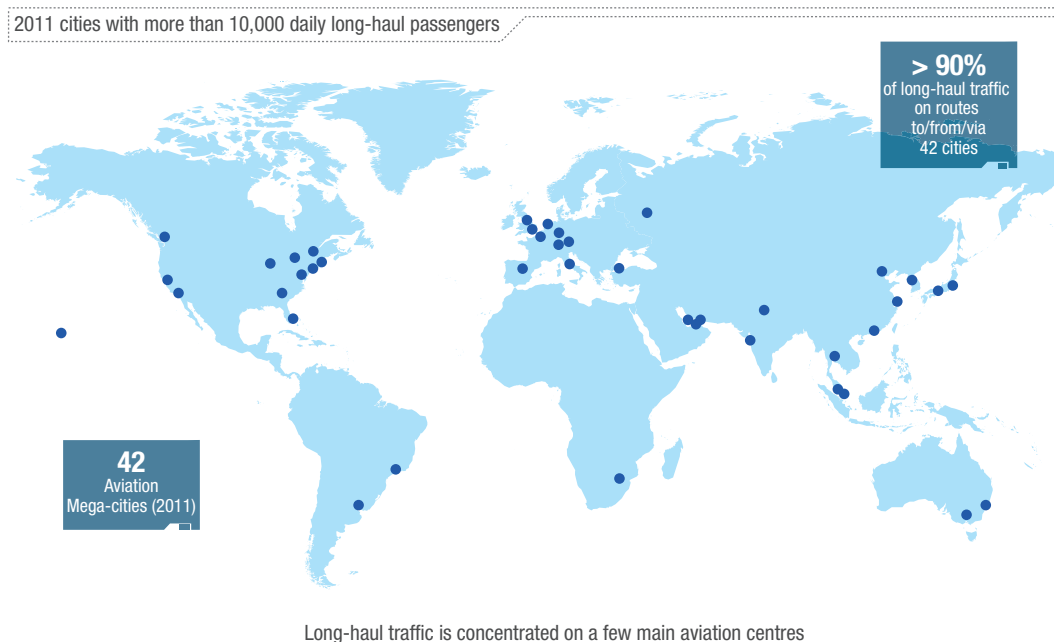
The air transport network today comprises more than 18,000 non-stop connections between cities with more than 1,500 long-haul and more than 16,500 short-haul city pairs. Increased access to air travel all around the world will make further non-stop connections viable and therefore the network will continue to grow. This evolution is taken into account in the GMF 2012 with the introduction of several thousand new routes into the forecast.



By 2011, some 300 cities that handle more than 100 long-haul passengers per day on average, are connected to the global long haul network. However, the single relative weight of each of

these cities within the long-haul network varies. Of the more than 300 cities only 42, less than 15 %, handled more than 10,000 long-haul passengers per day.

42 cities in the world handle more than 10,000 long-haul passengers per day.

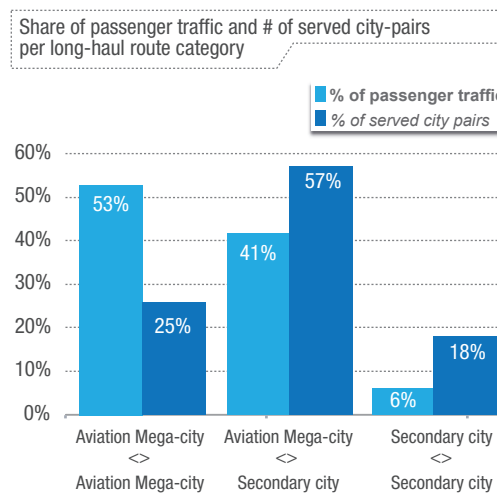


Traffic as of month of September
Long haul-traffic: flight distance >2,000nm, excl. domestic traffic;
Source: Airbus GMF

Aviation Mega-cities, 25% of the routes, 50% passengers between them

► the number of non-stop city pairs operated exclusively between the Aviation Mega-cities accounts for only 25 % of the total non-stop long-haul city pairs. Contrary to this, more than 50 % of the 2011 long-haul passengers have been carried between two of these cities, either as non-stop origin-destination passengers or as connecting passengers to destinations beyond the 42 hubs.

► The number of non-stop city pairs between hubs and secondary cities accounts for the largest percentage in terms of non-stop connections, more than 50 %. The share slightly above 40 % in terms of passenger traffic stays behind the traffic share of city pairs between the Aviation Mega-cities. Adding the key figures of



Traffic as of month of September
Long haul traffic: flight distance >2,000nm, excl. domestic traffic;
Source: Airbus GMF

these two types of long-haul connection together shows that more than 90 % of today's long-haul traffic travels from, to or via the 42 largest hubs.



Stepwise global traffic breakdown

There are three ways to accommodate traffic growth on a route: increase frequency, increase capacity or do both at the same time. The first step for an airline to expand on a route can be to increase frequencies; this is limited when reaching a certain minimum service level, e.g. one flight per day.

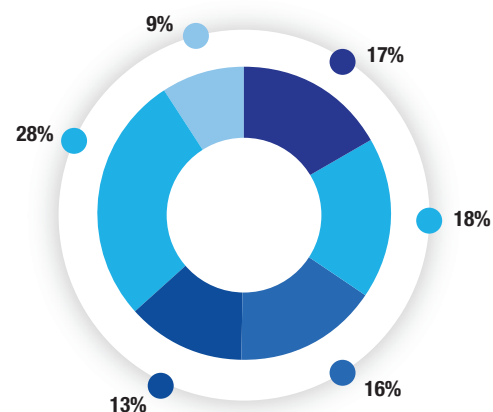
Once this limit is reached the airline could increase frequency and capacity in parallel over a certain period of time, e.g. with additional flights around the weekend and larger aircraft on some days of the week.

This continued expansion would then lead to an upper limit of flight frequencies, above which additional frequencies do not necessarily bring additional value to the passenger. Therefore the more economic alternative for further expansion would be to upgrade the capacity per flight and to grow solely in aircraft size.

However, this upper limit in flight frequencies can also be reached earlier due to congested airports that simply do not have airspace, runway or apron capacity to accommodate more flight movements.

Distribution of traffic and frequency

Long-haul passenger traffic and frequency split on routes between the 42 2011 Aviation Mega-cities



Share of total passenger traffic between the 2011 Aviation Mega-cities per route frequency and number of city pairs

Flights per day (# of city pairs)

- up to 1 (179)
- up to 2 (93)
- up to 3 (50)
- up to 4 (32)
- up to 10 (43)
- more than 10 (5)

Source: OAG, Airbus

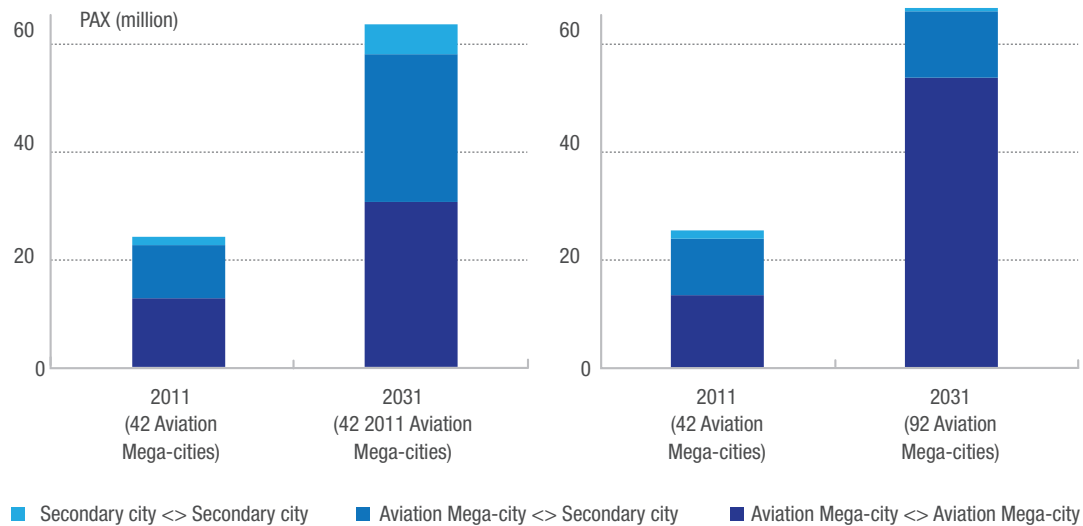
Many of today's long-haul trunk routes already offer a high level of frequency:

More than 400 non-stop city pairs are offered between the 42 Aviation Mega-cities. These 400 city-pairs represent more than 50% of the 2011 long-haul passenger traffic. Looking more closely at how the traffic between these 42 hubs is carried operationally, it can be seen that 320 out of the 400 are served up to three times a day, resulting in some 50 % of the passenger traffic. The other 50 % is on only 80 city pairs that today already have more than 3 daily flights.

With the expected growth in air traffic over the next 20 years, not only will the overall quantity of traffic increase, but also the allocation of this traffic on the route network will also change. Not surprisingly, routes to and from the emerging economies will grow at a higher rate than those in the developed regions. The opening of new non-stop routes will inevitably take connecting traffic from today's existing routes. This is visible with the evolving traffic share on non-stop long-haul routes that today

already connects the 42 Aviation Mega-cities: their relative share of long-haul passenger traffic is 53 % today and is expected to slightly decrease to 49 % by 2031. In absolute terms however, this still equates to traffic growth of +140 % between the top 42 cities, compared to an overall growth of long-haul passengers of +160 %. But, with the expected overall traffic growth, the number of cities, which fulfill the criterion of 10,000 daily long-haul passengers, to become aviation mega-cities will increase to the total of 92 cities by 2031.

Composition of long-haul passenger traffic per route category, 2011 and 2031



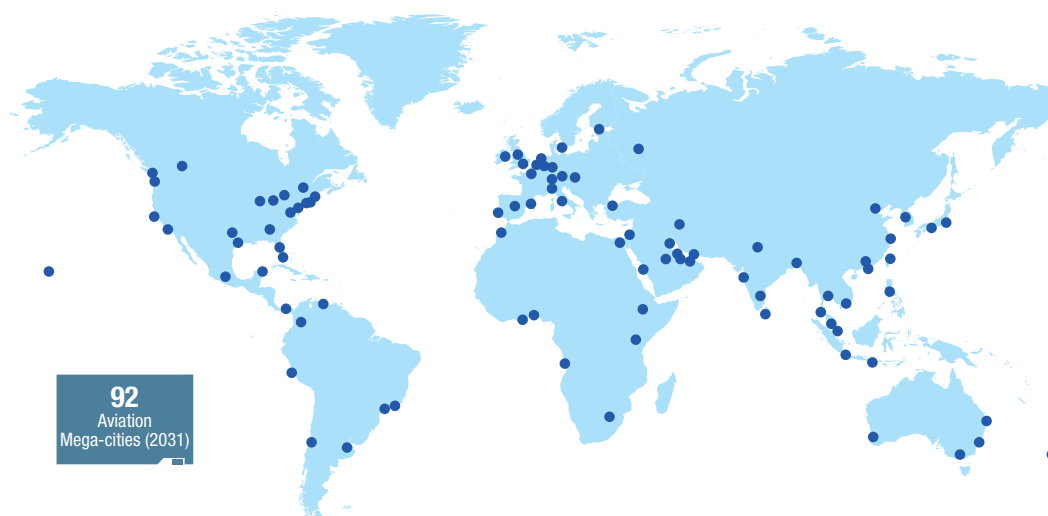
Traffic as of month of September; including direct and connecting traffic - Long haul traffic: flight distance >2,000nm, excl. domestic traffic;
Source: Airbus GMF

Along with the increase in Aviation Mega-cities over the coming decades, the number of big trunk routes will increase as well. By 2011 more than 180 long-haul city-pairs had average daily round trip traffic of more than 1,000 passengers.

Three quarters of these large city-pairs connected Aviation Mega-cities with each other. By 2031, it is expected that almost 600 city-pairs will handle 1,000 or more passengers per day.

92 aviation Mega-cities in 2031

2031 cities with more than 10,000 daily round trip long-haul passengers

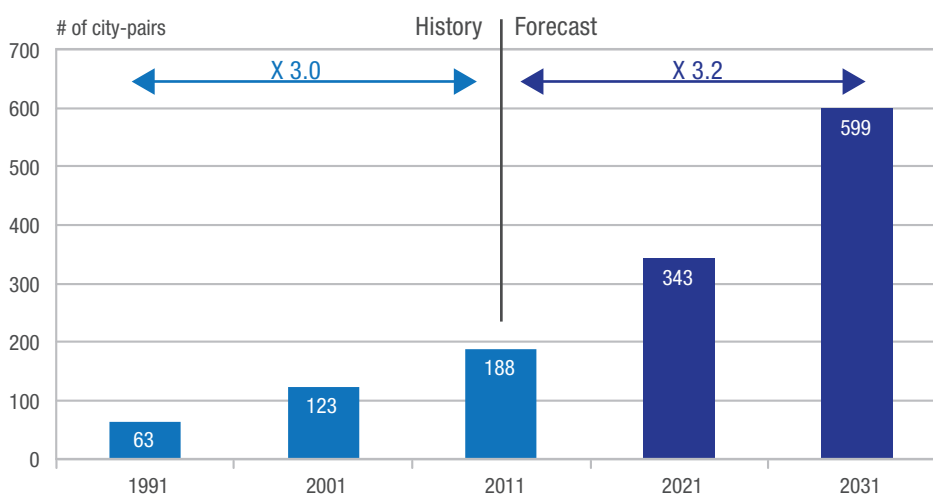


Long-haul traffic is concentrated on a few main aviation centres

Traffic as of month of September
Long-haul traffic: flight distance >2,000nm, excl. domestic traffic;

Number of long-haul trunk routes expected to more than triple by 2031

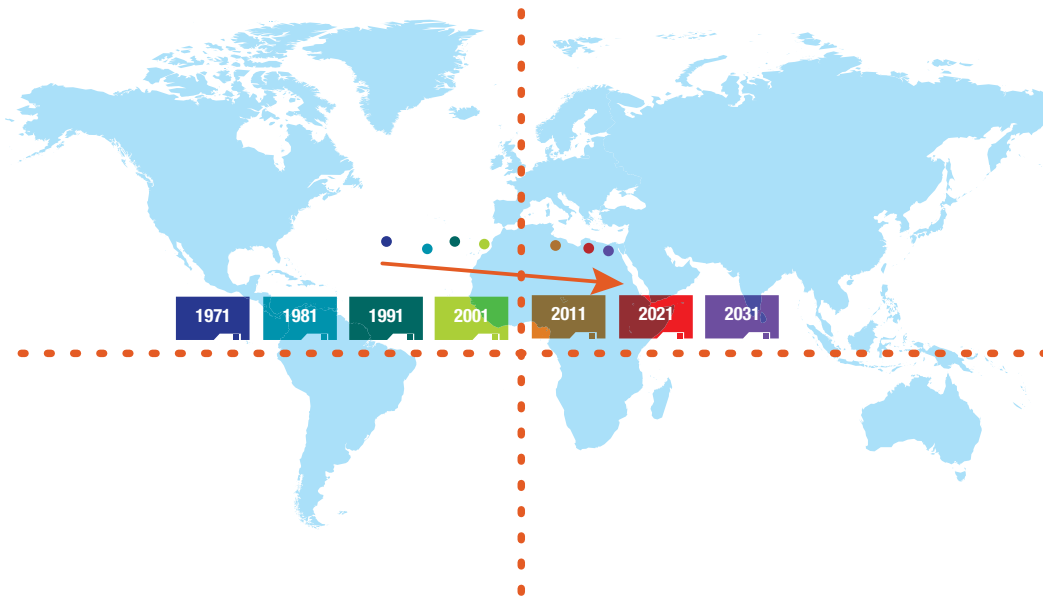
Long-haul city-pairs with more than 1,000 daily passengers*



Traffic as month of September; estimates for historic passenger derived from offered seats; Long haul traffic: flight distance >2,000nm, excl. domestic traffic;
Source: OAG, Airbus GMF

The centre of gravity of air traffic moving South and East

Geographic centre of gravity of departing/arriving/connecting passengers per city



Traffic as month of September; estimates for historic passenger derived from offered seats; respective centres of gravity as median of city coordinates weighted by passenger traffic

Source: Airbus GMF, OAG

The air transport's centre of gravity is moving eastwards:

For interest sake let's imagine the world as a two-dimensional slab, just as a projection in an atlas. It's then possible to find the supporting point of this slab. This point, defined as the "centre of gravity", is the point on which the slab could be positioned and would remain balanced. If the slab is now loaded at several points, the location of the centre of gravity moves.

Let's assume now that these loads are represented by the passenger weight of each city, which corresponds to the sum of passengers on departing and arriving aircraft for each single city. Then it can be illustrated how the centre of gravity moves on the surface over time.

In the early 1970s the centre of gravity would have been right in the middle of the northern Atlantic. North America and Europe have been the regions where air traffic was the most concentrated by far.

By early 2000s, the point of equilibrium had already moved slightly towards the east, but still remained on the western hemisphere. In 2011, the centre of gravity passed the prime meridian to the eastern hemisphere.

Between 1972 and 2011, it has therefore moved on average some 130 kilometres per year in south-easterly direction. Over the coming 20 years the point of equilibrium is expected to continue to move in a south-easterly direction, but at a slower pace of roughly 80 kilometres per year. The total distance that the centre of gravity is expected to have moved between 1972 and 2031 is about 6,500 kilometres, which is the equivalent great-circle distance between Amsterdam and Chicago or Frankfurt and Mumbai.



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PASSENGER TRAFFIC



One of the fundamental inputs of the GMF, used to derive the demand for aircraft, is the traffic forecast. In the Airbus forecast, the world is divided in 19 regions: Sub-Sahara Africa, Asia, Australia/New Zealand, Canada, Caribbean, Central America, Central Europe, CIS, Indian Sub-Continent, Japan, Middle East, North Africa, Pacific, Russia, South Africa, South America, Western Europe, PRC, US.

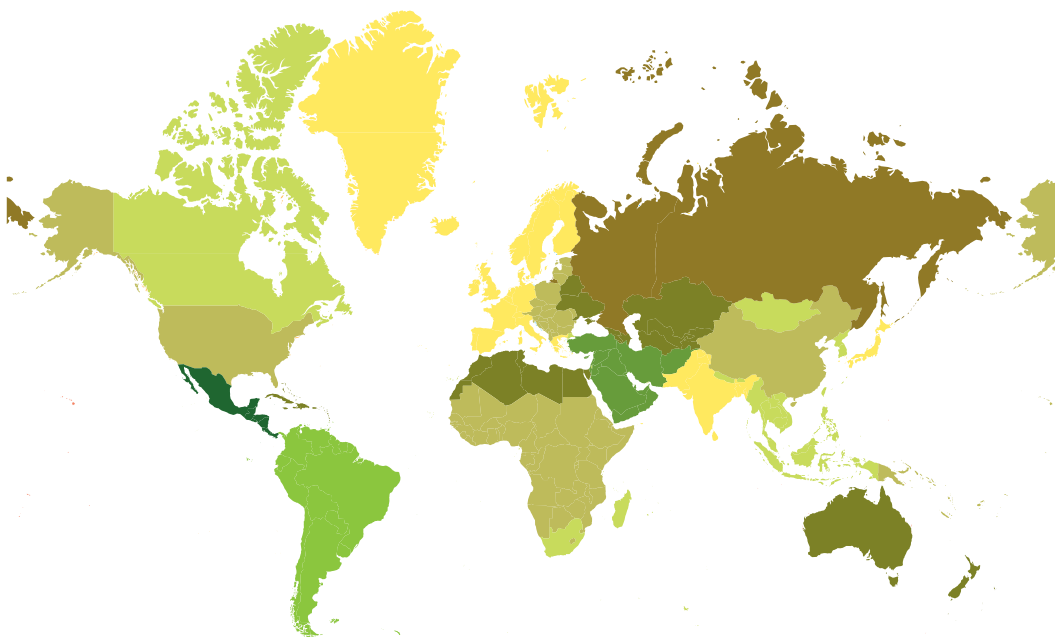
Each region regroups countries which have been put together because of their geographical closeness and/or because of the similarity of their economic development, the state of maturity and the degree of liberalisation of air transport. That is why, for example, Russia is considered separately from CIS, and South Africa separately from Sub-Sahara Africa.



FORECAST

The nineteen regions of the GMF

World map of the GMF regions



Neighbour countries of the same colour belong to the same region

A traffic forecast is performed for all the traffic flows linking the 19 regions of the GMF. For this GMF, 157 passenger traffic flows have been identified. Similar to the definition of the GMF regions, some specific traffic flows have been treated separately. For example, Domestic Brazil has been separated from Domestic South America.

For each of the 157 traffic flows, data has been collected from civil aviation authorities, airline

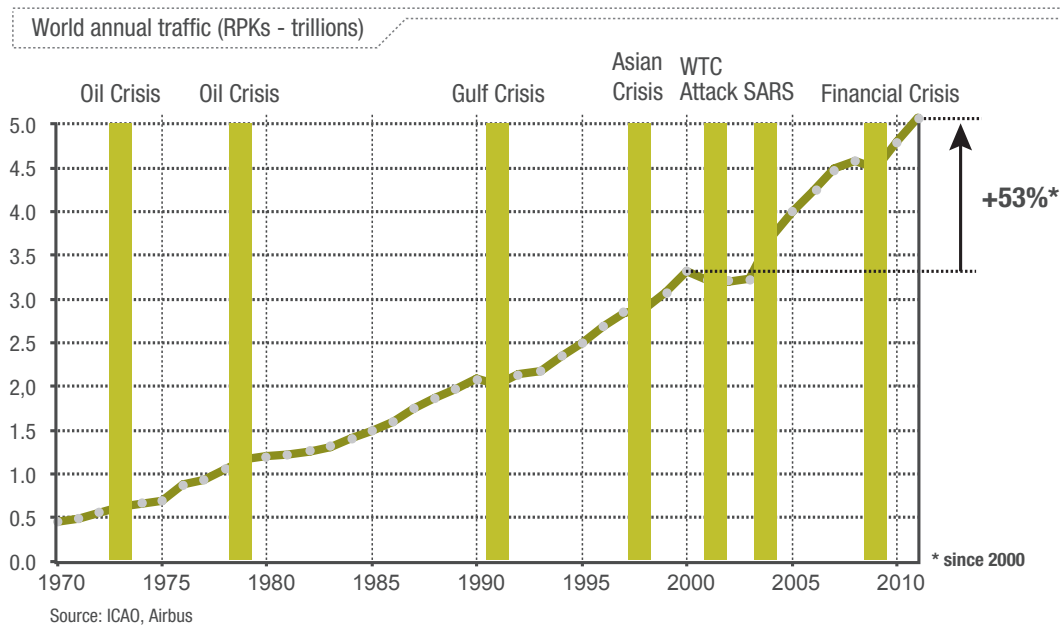
associations and/or other databases to provide the most reliable historical evolution of passenger air traffic and yields. IHS Global Insight is our main provider for historical regional economic data and forecast. For each flow, several econometric models have been carefully designed and the most relevant chosen, based on statistical properties and market expertise. In other words, the final chosen model expresses traffic as a function of the most appropriate factors which explain its evolution.

Air transport is a growth industry

As seen historically, air transport is a growth industry as proved by its resilience to external shocks. The several exogenous events it has

faced in recent years had an impact in the short-term, but did not prevent air traffic from recovering its long-term growth trend.

Air travel has proved to be resilient to external shocks



For example, the 1990-1991 Gulf War provoked a -2.9% decrease in world traffic, expressed in RPKs (Revenue Passenger Kilometre). The 1998 Asian crisis slowed the world traffic growth down to 1.8%. Last decade (2000-2011) had several very pronounced exogenous shocks: the 2001 terrorist attacks in the US (-2.9% RPKs in 2001, -0.5% in 2002), the 2003 SARS respiratory disease (+1.3% RPK in 2003), and finally the 2008-2009 financial crisis (+2% RPK in 2008, and -2% RPK in 2009). All these events did not prevent passenger traffic from increasing by 53% over the period of 2000-2011 period. **People definitely want and need to fly.**

Growth over the last 40 years was enabled by various factors:

► **Demographic evolution**, with both greater population and especially greater urban populations.

► **Increased wealth**, in parallel with the development of a middle-class in many countries.

► **Progressive liberalisation of air transport**, which permitted the creation of the low-cost business model. This in turn provoked the reaction of traditional airlines, which improved the efficiency of their operations, notably with the increase of aircraft fleet productivity and load factors and the continued development of the hub-and-spoke system. The overall effect was a decrease of the airlines' unit cost (average cost per RPK), which itself has translated into a decrease in the average ticket price over time.

► **Globalisation**: Allowing increased world connectivity of people as well as their overall increased need and ability to travel.

► **Availability of efficient, operationally capable aircraft**, which has facilitated passenger trips.

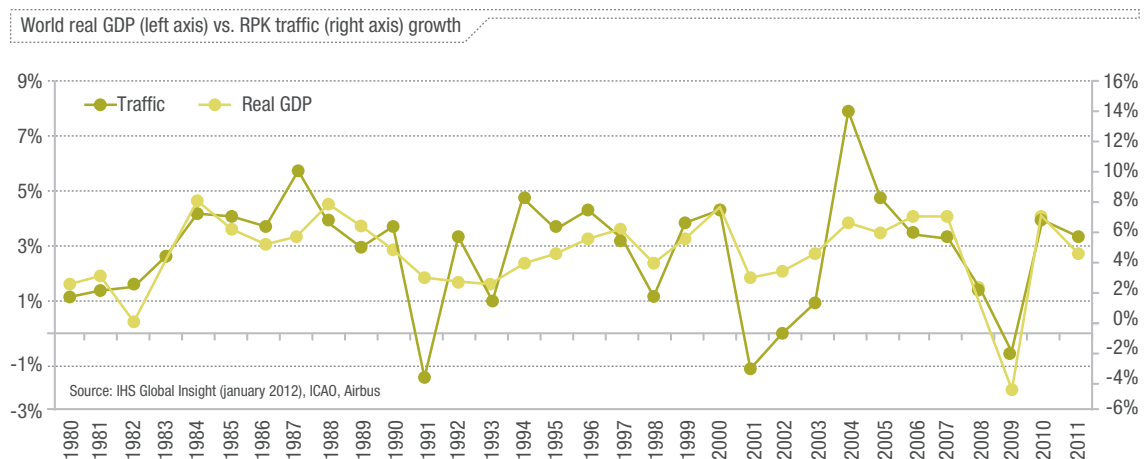
From a forecast perspective, passenger air traffic is driven by two main factors:

► **Global economic activity.** Considering only the Gross Domestic Product (GDP) at a worldwide level, an increase of this indicator translates into an increase of global wealth, which increases people's propensity to travel. Among the other macroeconomic activity data, we also look at Exports, Imports, Disposable Income, Private Consumption, Unemployment Rate, Consumer Price Index, Oil prices, etc. For example, trade variables are more suitable to traditionally business traffic flows, whereas total net disposable income is more suitable to traditionally leisure traffic flows.

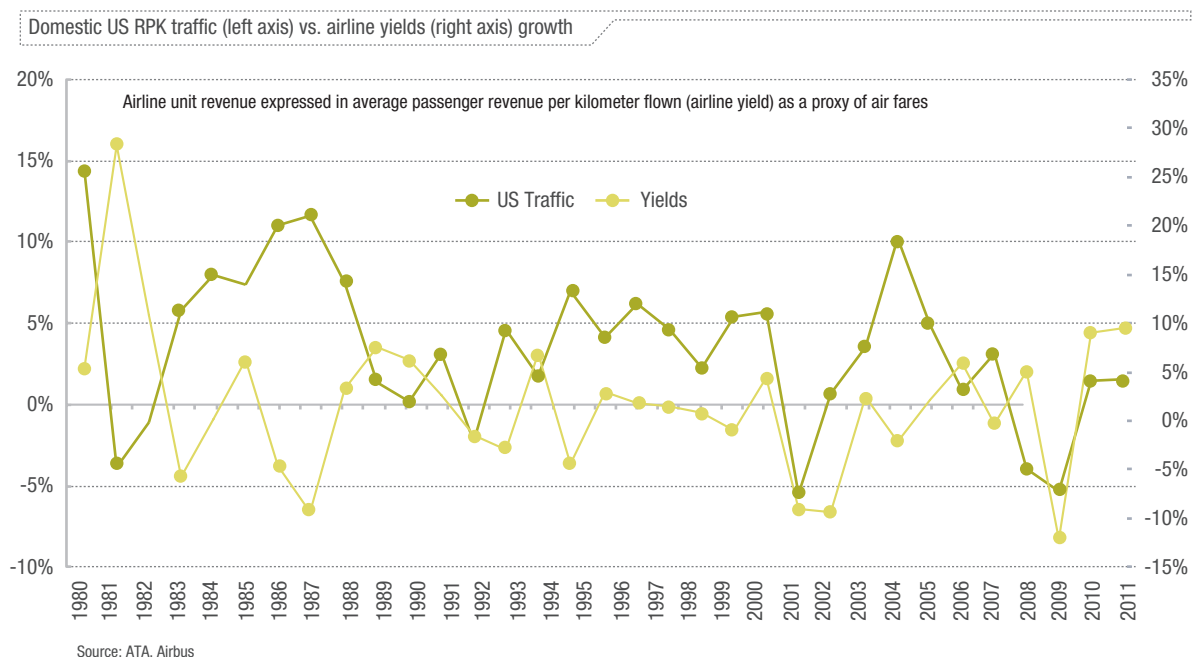
Over the last 40 years, the income elasticity of passenger air traffic is estimated to be around +1.3 at world level, meaning that if world GDP increases by 1%, then air traffic is expected to increase by 1.3%.

► **The price of travel.** Everything else being equal, a decrease in the average price relaxes the consumers' budget constraints and makes more people economically able to fly. It is estimated that the price elasticity of passenger air traffic is around -0.6 at world level, meaning that if the average price decreases by 1%, then the air traffic is expected to increase by 0.6%.

Air traffic is correlated to the economy



Air traffic is correlated to air fares



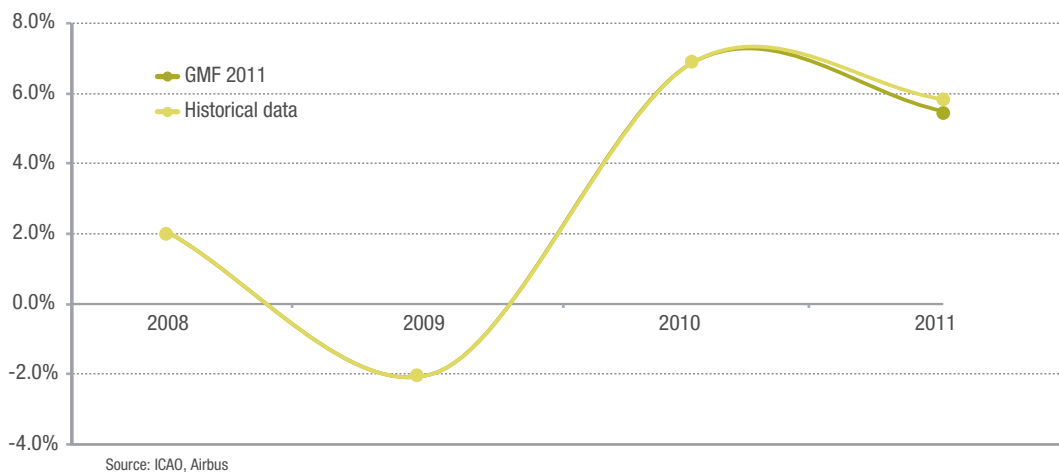
2011 was a good year for air traffic

Despite the “Arab Spring” events in the Middle-East and North Africa, the tsunami in Japan and rising fuel costs, 2011 was a very good year for passenger air traffic.

World RPKs (scheduled and non-scheduled) went past the 5 trillion threshold, with traffic increasing by 5.8 %, confirming the 6.9 % recovery from the financial crisis in 2010. With a 5.5 % traffic growth prediction for 2011, the previous GMF (GMF 2011) was quite accurate.

Airbus forecasts are continually conservative

Actual vs. GMF2011 World RPK year-on-year growth rate



2011 growth was driven by emerging regions, the fastest growing regions in terms of total traffic being Russia, CIS, PRC, Middle East, South America and Asia.

GMF 2011 slightly underestimated the huge growth of these regions. In 2011, the advanced regions continued to grow, although at a slower pace than the world average, with 3.7 % increase for the US and 4.8 % increase for Western Europe.

The March 2011 earthquake in Japan, the tsunami it created and Fukushima nuclear plant disaster was a terrible shock for the country and its air traffic was very broadly impacted.

According to Sabre data, domestic RPK traffic decreased by -8.3 % and international traffic decreased by -5.3% for the full year 2011. Load factors were significantly impacted as traffic supply (ASK) did not match demand collapse.

The 2011 “Arab Spring” events in North Africa and the Middle East, unpredictable at least for the timing and intensity, had a negative impact on air traffic, with for example the NATO intervention in Libya closing for some months the airspace for commercial airlines. RPK traffic from / to / within North Africa decreased by 3.2 %, Libya being the most impacted country. However, ASK traffic from/to/within Algeria kept growing.

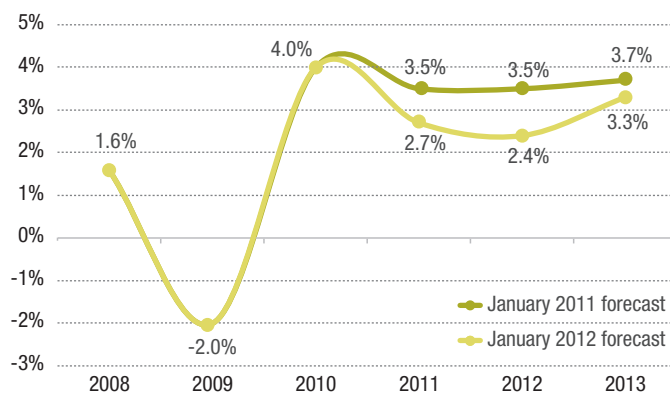
Expected slowdown of growth in the short-term

After the recovery from the 2009 economic crisis, new concerns appeared in mid-2011 with the Eurozone macroeconomic difficulties and the possible contagion to other regions of the world.

Therefore, the global economic outlook for the next two years at the beginning of 2012 (+2.4 % real GDP growth in 2012, +3.3 % in 2013) was more pessimistic than it was at the beginning of 2011 (+3.5 % in 2012, +3.7 % in 2013).

Short-term economic outlook is less optimistic than one year before

2012 and 2013 World real GDP forecast (Beginning 2011 and 2012 forecasts)



Source: IHS Global Insight (January 2012), Airbus

The difference in the pace of growth between advanced and emerging regions will still be valid with, PRC and Indian sub-continent being

the leaders and Western Europe and North America displaying the slowest growth.

Emerging regions will drive the short-term economic growth

2012 and 2013 real GDP forecast by region



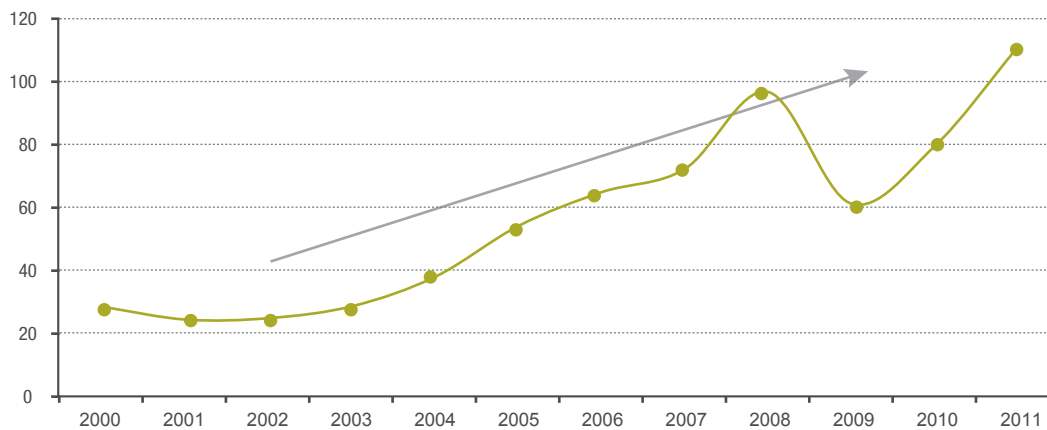
Source: IHS Global Insight (January 2012), Airbus

This slowdown in the world economic growth will be coupled with high crude oil prices which will continue to challenge airline finances. Crude oil prices progressively returned to the peak value

of 2008 after the economic crisis in 2009. These high prices can be explained by geopolitical tensions, a high demand in emerging regions and small excess capacities in production.

High fuel prices becoming the new norm

Nominal crude oil price (Brent, \$US) historical evolution



Source: IHS Global Insight (July 2012), Airbus

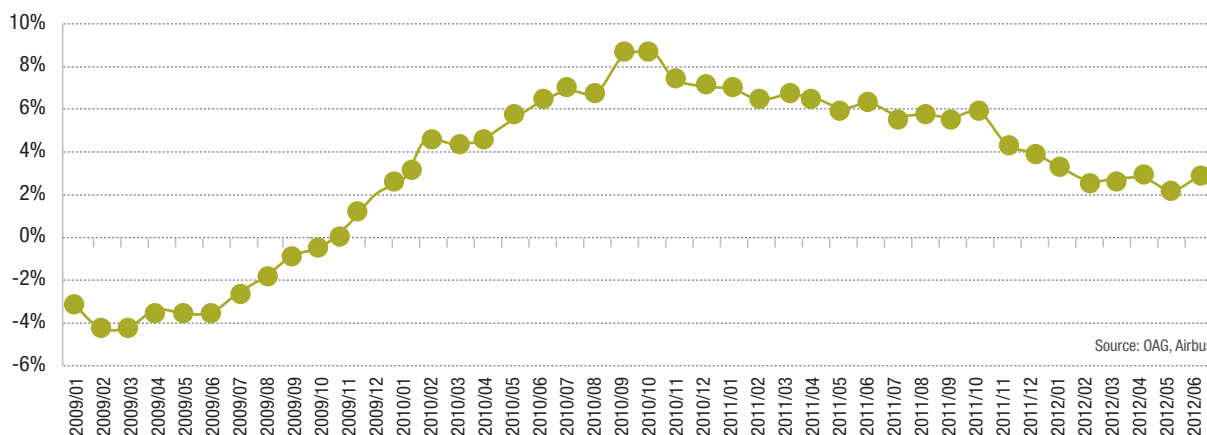
Fuel currently represents around 30% of an airlines total operating costs and based on recent history and the long-term forecast, it is apparent that higher prices in fuel are the new baseline.

At the time of writing this text, ASK traffic growth has been positive in 2012 but decelerating. The observed increase in load factors at the

beginning of 2012 is also expected to decelerate. Therefore, we expect RPK growth to be in the range of 3-4% in 2012, which is confirmed by our short-term scenario on real GDP and average ticket price and the elasticity of passenger air traffic related to these indicators.

After a strong recovery, ASK traffic grows at a slower pace

World ASK year-on-year growth rate (monthly data)



Source: OAG, Airbus

Robust expectations in the long-term

From 2011 to 2031, it is forecast that world real GDP will grow at 3.2% per year on average, slightly below the GMF 2011 forecast of 3.3% over the same period of time.

This slightly lower growth rate mainly reflects short-term macroeconomic concerns, but in the long-term, the economic growth prospects remain robust.

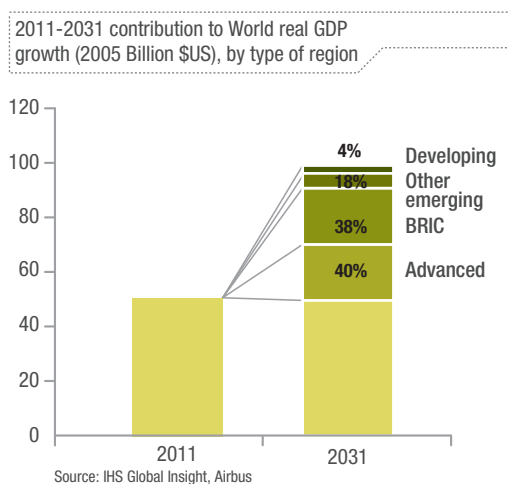
Emerging regions will drive long-term economic growth



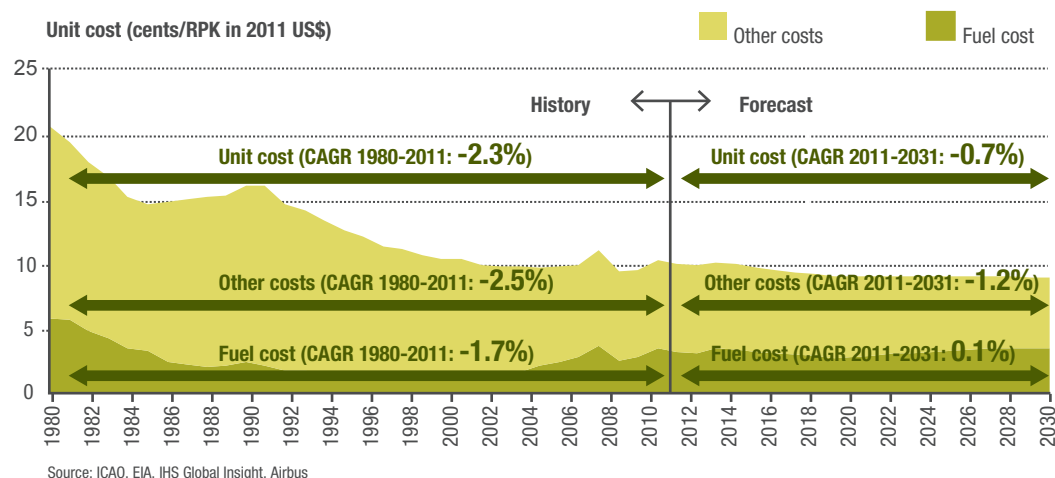
Much of the growth will be driven by Indian Sub Continent (+7.1%), PRC (+6.5%), South America (+4.4%) and Africa (+4.4%). Despite the lower growth of Europe (+1.8%) and North America (+2.6%), these two regions will contribute to

37% of the total real GDP growth, expressed in 2005 \$US, between 2011 and 2031. Overall, the advanced economies will account for 40% of the total real GDP growth, and emerging economies for 56% (25% for China alone).

Emerging regions will contribute 56% to the total economic growth between 2011 and 2031.



Cost per RPK (inflation removed) expected to decrease by an average of 0.7% yearly until 2031



As already mentioned, the airlines have achieved remarkable efficiency improvements, their unit operating cost having decreased at a yearly average of -2.3% per year in real terms over the period 1980-2011.

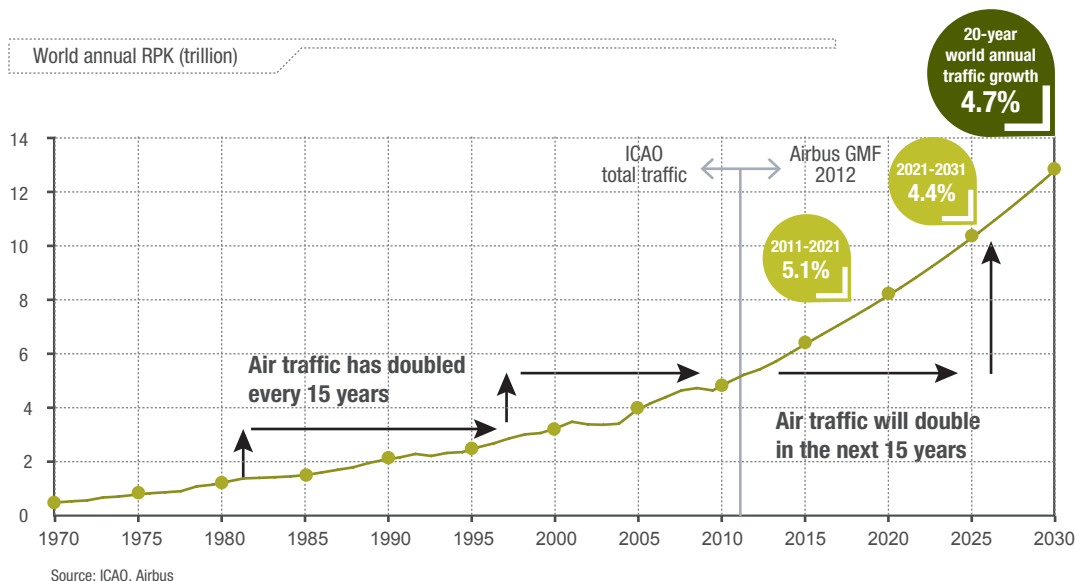
Although this efficiency has reached a high level, we expect that the non-fuel unit cost will still decrease, although at a slower pace, -1.2% per year on average between 2012 and 2031, in real terms. This will be achieved thanks to more efficient airline operations. Fuel costs are expected

to maintain their long-term upward trend, with persistent volatility leading to the continued difficulty for airlines today. It is expected that eco-efficient types due to enter service in the near-future will help by lowering the fuel burden on airlines and act as a natural fuel hedging mechanism. We therefore expect that airlines' unit cost will decrease by 0.7% per year on average on 2012-2031, in real terms, potentially relaxing the pressure on the price of travelling for passengers, and stimulating traffic.

Traffic forecast results

Based on the main drivers we identified for each traffic flow, and the forecast of their evolution, our analysis suggests that RPKs will double in

the next 15 years, as it did in the last 30 years. Air transport is and will remain a growth industry.



World RPK traffic is expected to increase at a 4.7% growth rate per year on average. As 2011 was a good year for air traffic, the 4.7% forecast

growth rate means that passenger traffic in 2030 will be similar to 2030 traffic levels of the GMF 2011 forecast.

Emerging regions grow faster, advanced regions remain significantly high

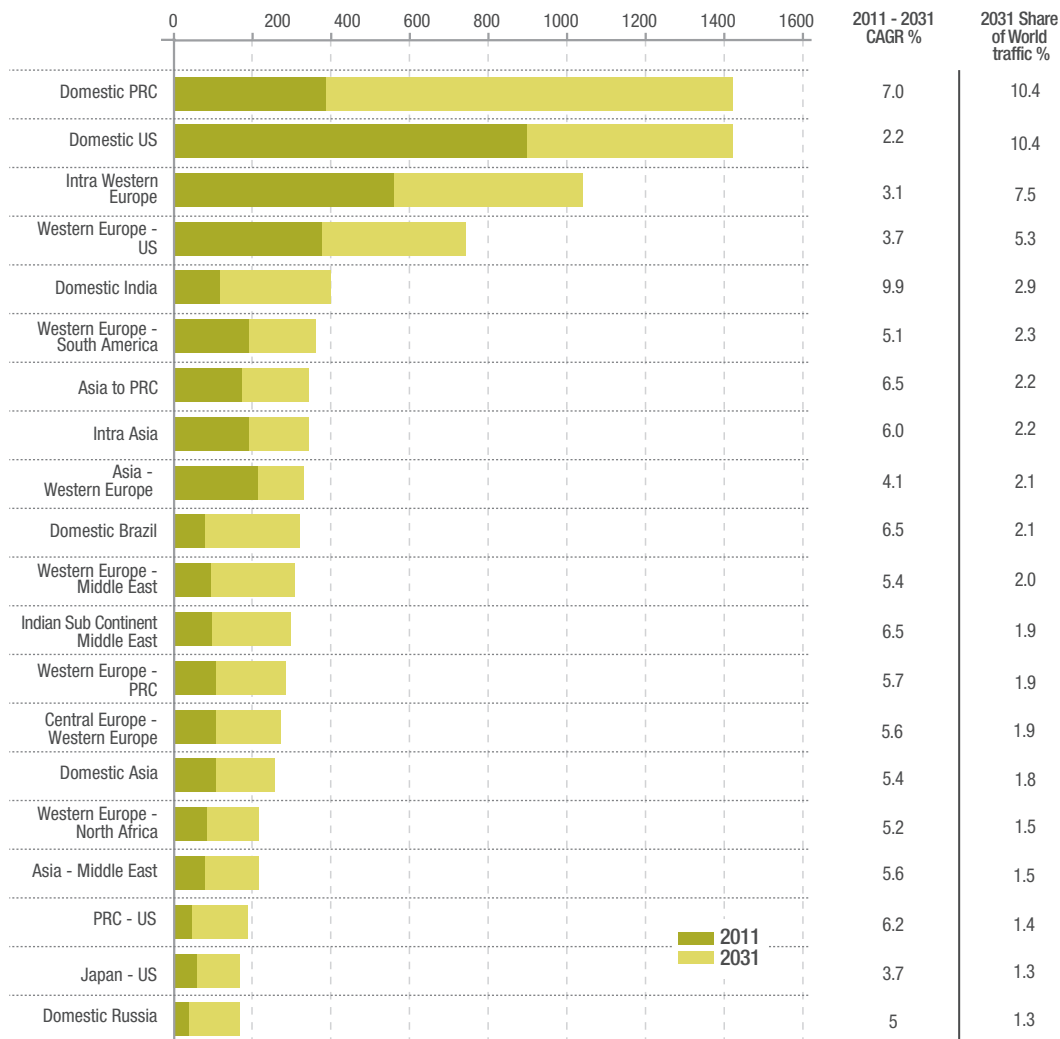
With a 7.0 % average growth rate per year over the next 20 years, Domestic PRC will become the largest single flow in 2031 with 10.4 % of the total world RPK traffic, closely followed by Domestic US and followed by Intra Western Europe. Ranked fourth we find the largest inter-regional flow, Western Europe – US, which will grow

on average by 3.7% per year on 2012-2031 and will represent 5.3% of the world RPKs in 2031.

Remarkably, the first four flows will represent 34% of all RPKs in 2031. They will be followed by Domestic India and Western Europe – South America.

The four largest flows will represent 34% of the world traffic in 2031

Largest 20 flows in 2031, by RPK (billion)

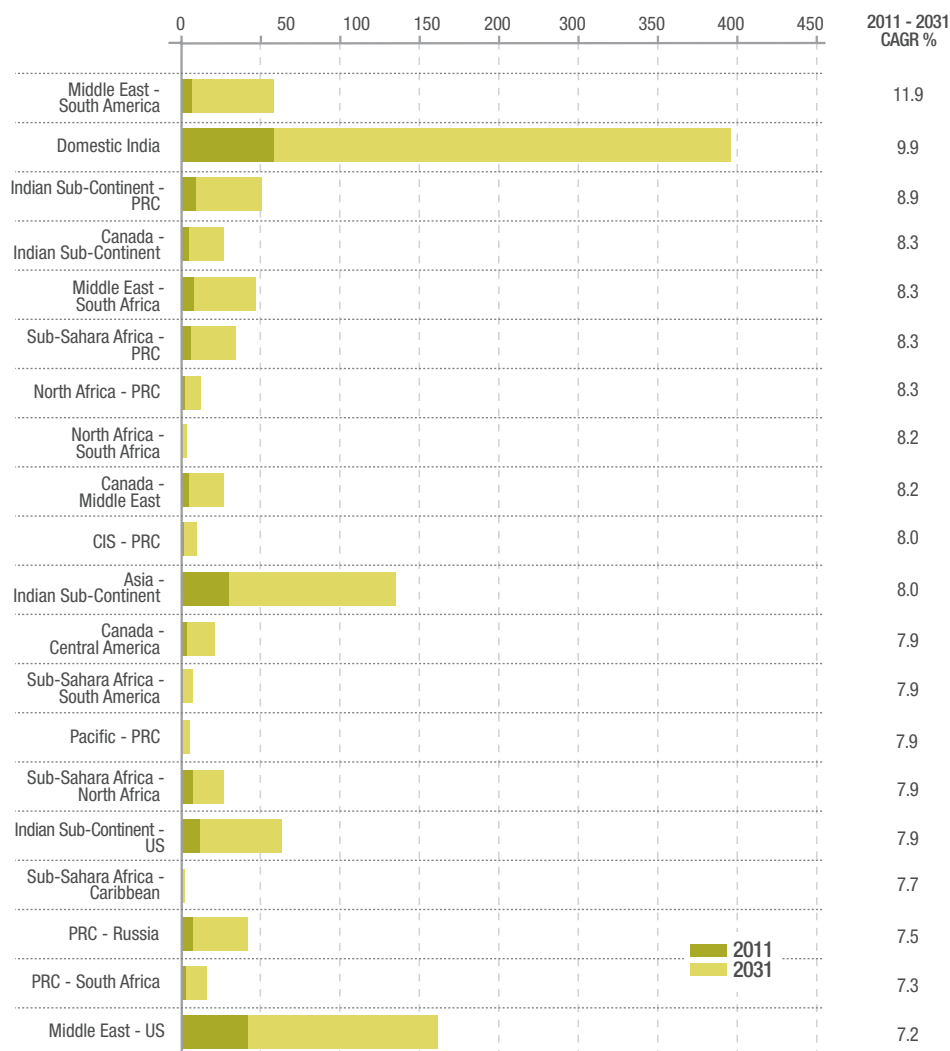


The fastest growing flows between 2012 and 2031 mostly include emerging regions, thanks to untapped demand and robust economic growth prospects in these regions.

Middle East – South America (11.9% growth on average), Domestic India (9.9% average growth) and Indian Sub-Continent – PRC (8.9%) will be the three fastest growing flows.

The fastest growing flows will mainly concern emerging regions

Fastest growing 20 flows in 2031, by RPK (billion)

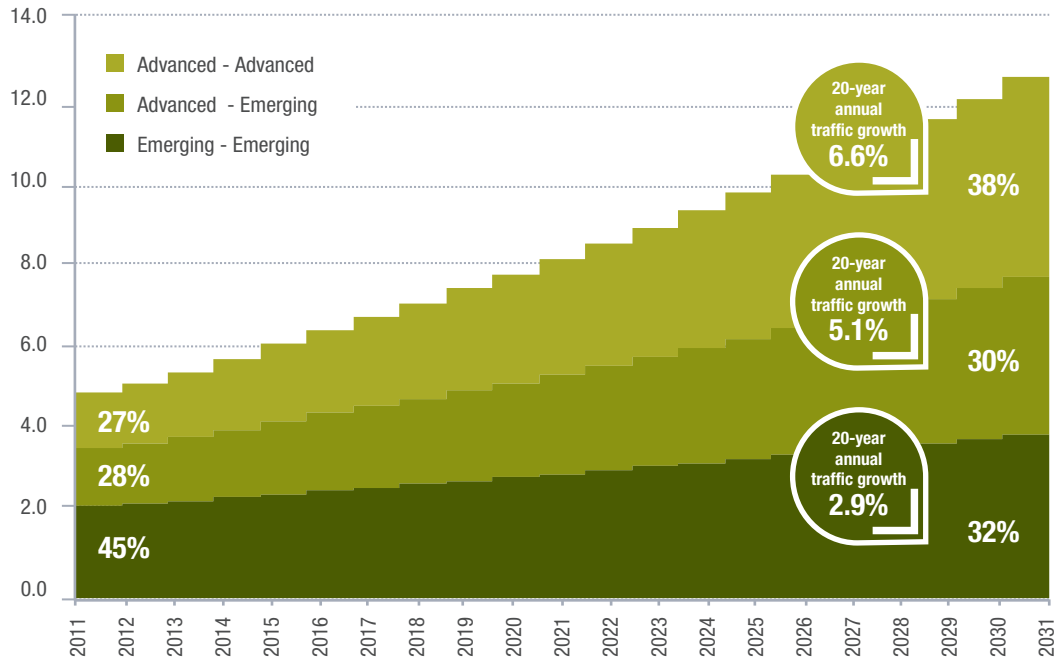


Distinguishing between advanced and emerging countries, the share of “emerging – emerging” traffic flows is expected to become the largest with 38% of World RPKs in 2031, growing at 6.6% per year on average.

They are followed by “advanced – advanced” flows, losing market share from 45% in 2011 to 32% in 2031, and “advanced – emerging” flows, gaining market share from 28% in 2011 to 30% in 2031.

The fastest growing flows will mainly concern emerging regions

World annual RPK (trillion), by type of flow



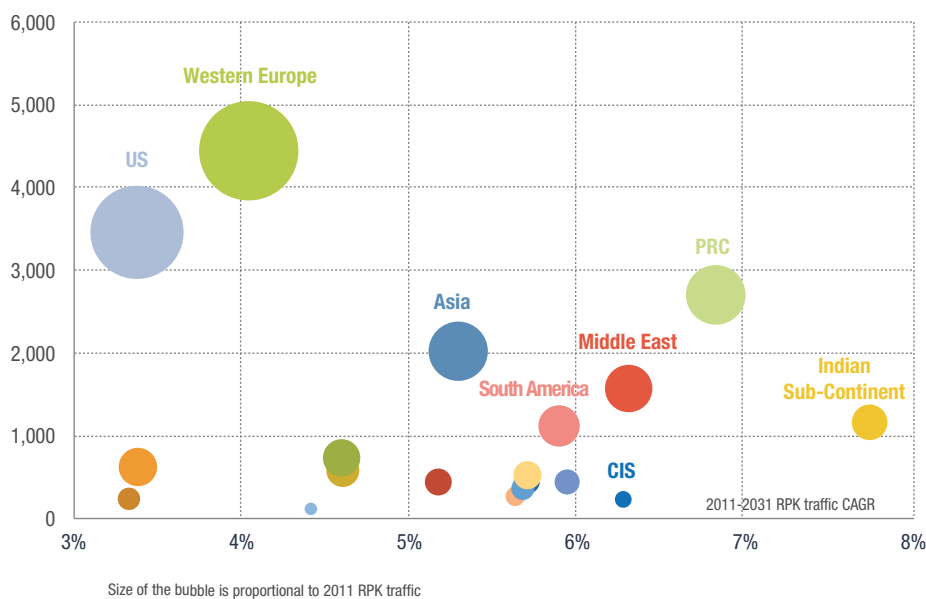
Traffic with emerging markets represent 55% of traffic today, 68% in 2031

As a result, the fastest growing regions in terms of total RPK traffic will be the emerging regions: Indian Sub-Continent (+7.6%), PRC (+6.8%), Middle East (+6.2%), CIS (+6.2%). The largest

will remain Western Europe and the US, with respectively 21% and 17% of the total traffic in 2031, followed by PRC (13%), Asia (10%), Middle East (7%) and South America (5%).

Western Europe and the US will remain the largest regions in 2031

2031 RPK (billions) from / to / within

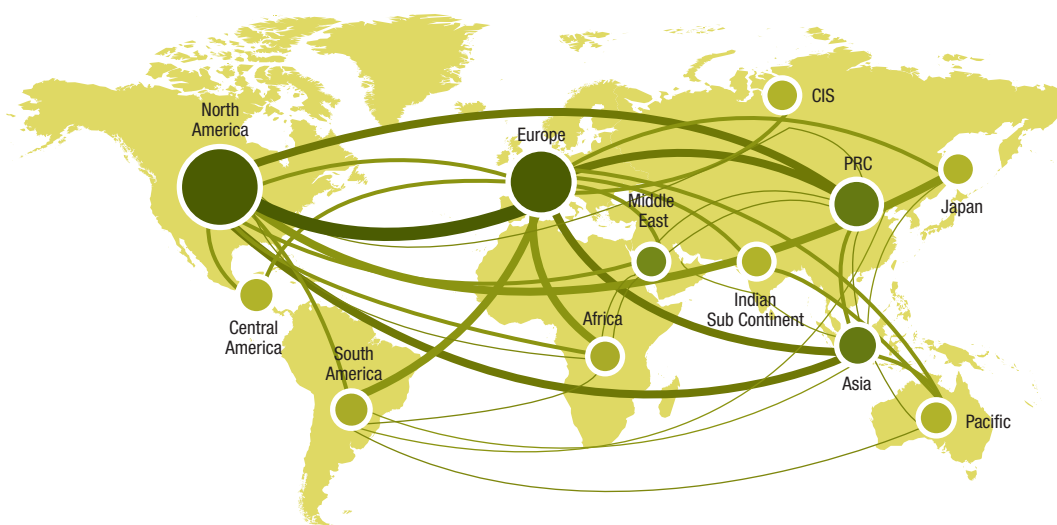


Aggregating the regions at a broader level, Europe and North America will remain in 2031 the largest regions for domestic and intra-regional traffic as well as for interregional traffic.

Similarly, the transatlantic Europe – North America flow will remain the largest interregional flow in 2031 (13% of all interregional traffic in 2031, down from 17% in 2011).

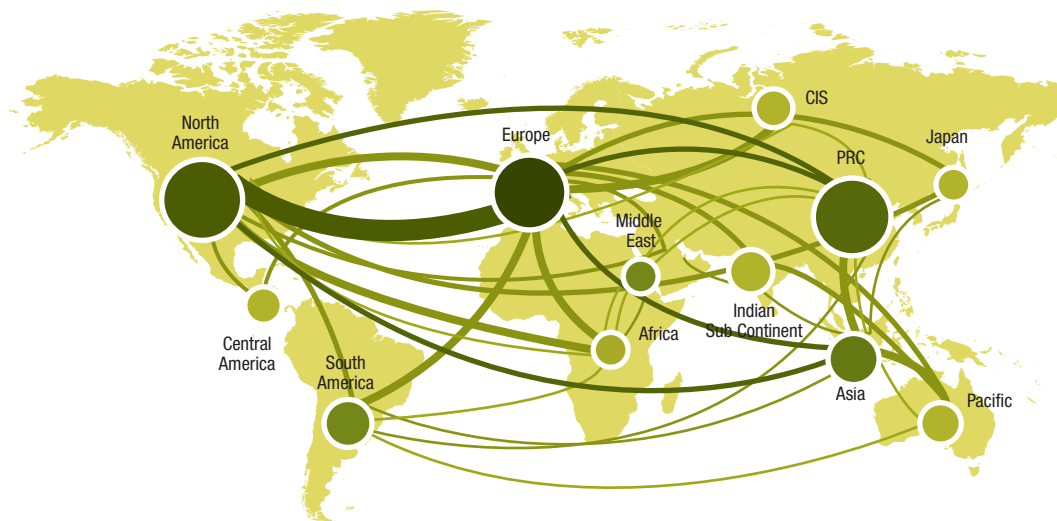
Major traffic flows and regions in 2011

2011 RPK traffic by flow and region



Major traffic flows and regions in 2031

2031 RPK traffic by flow and region



- (1) The size and darkness of each line is proportional to the traffic on the flow.
- (2) The size of each bubble is proportional to domestic and intra-regional traffic of the region.
- (3) The darkness of each bubble is proportional to total traffic from/to/within the region.

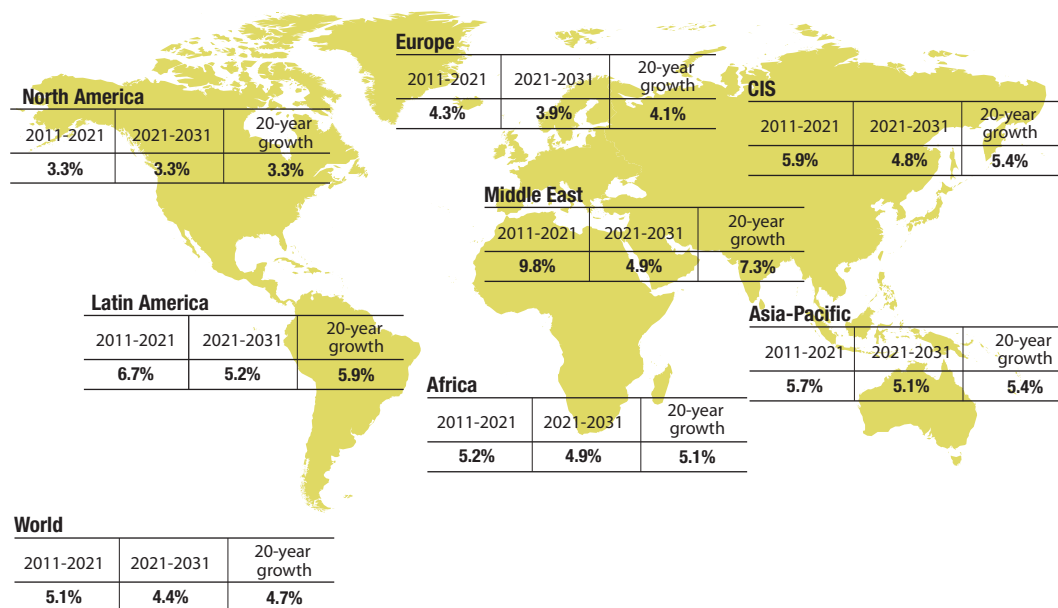
Emerging economy airlines will grow rapidly

At the airline domicile level, the world 2012-2031 4.7% average RPK growth will be driven by Middle East airlines (+7.3% per year on average over 2012-2031), Latin American (+5.9%), Asia-Pacific

(+5.4%), CIS (+5.4%) and African airlines (+5.1%). Although at a slower pace, European and North American airlines will continue to grow, respectively at 4.1% and 3.3% per year on average.

RPK growth by airline domicile driven by Middle East

2011-2031 traffic growth by airline domicile, per region



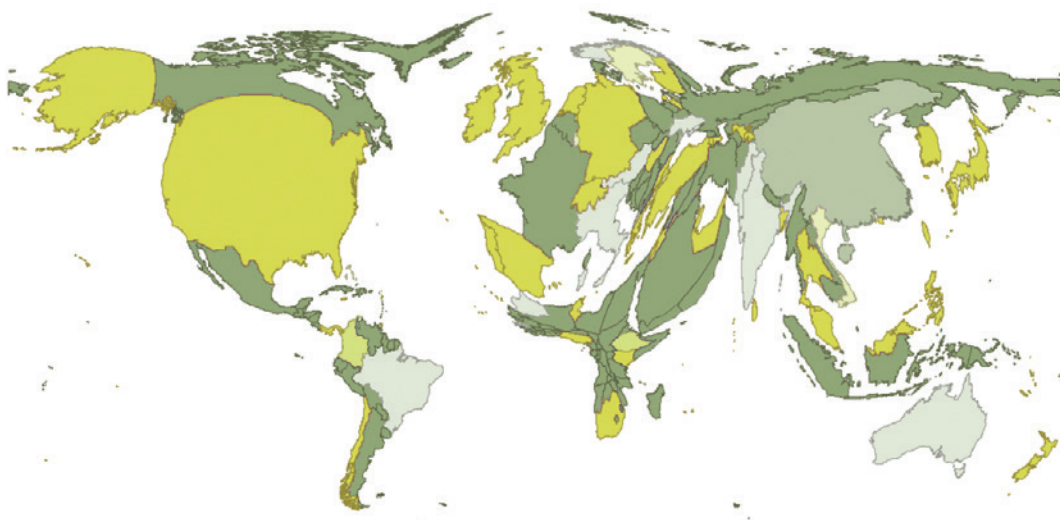
Consequently, between 2011 and 2031, the airlines of the emerging regions will gain the most market share of total world traffic. Middle East airlines will represent 11% of total RPKs in 2031 from 7% in 2011, while PRC airlines

will represent 13% of total RPKs in 2031, up from 10% in 2011. Airlines from Europe, North America will still represent a high share of traffic in 2031, respectively at 24% and 20% of the world RPKs.



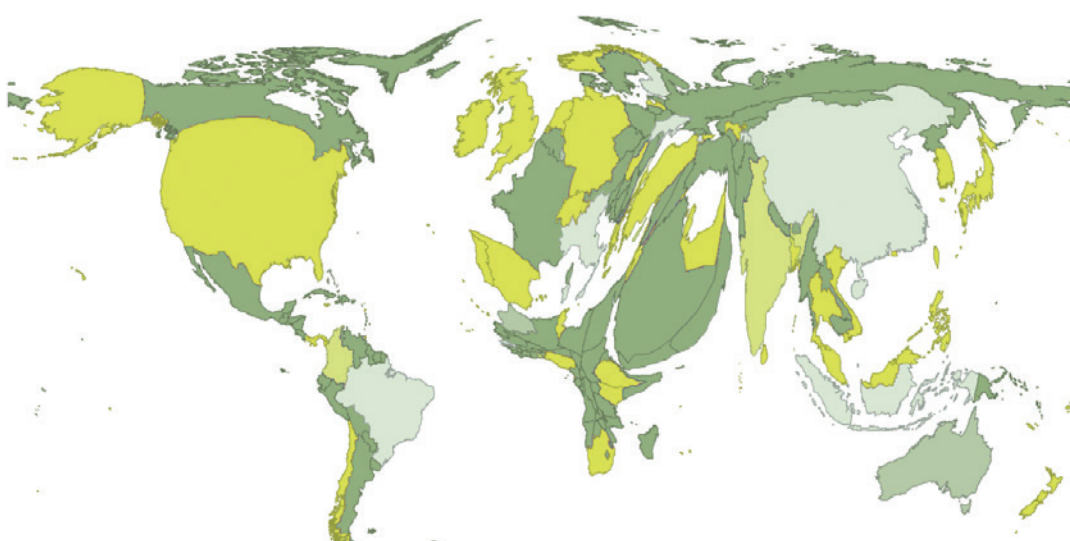
European and North American airlines are the largest in 2011

Anamorphic map – 2011 airline domicile RPK traffic, by country



Emerging countries airlines will be the fastest growing until 2031

Anamorphic map – 2031 airline domicile RPK traffic, by country



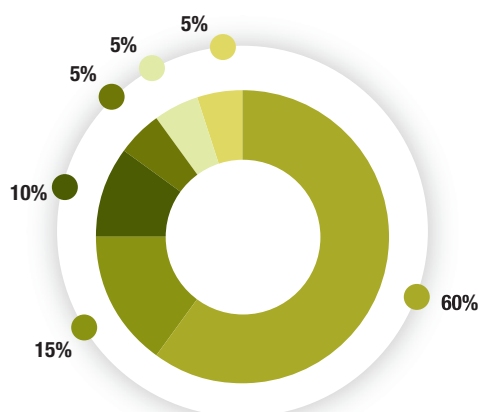
LCC will continue to grow

Our airlines segmentation consists of 6 groups of airlines: Global Network, Major Network, Small Network, Low-cost, Charter, Regional and Affiliate. Global Network airlines will be the largest in 2031, keeping a share of traffic of 59%, slightly down from 60% in 2011.

Low-cost carriers will gain the most market share, from 15% to 20%, thanks to the dynamics of the American, European and Asian low-cost carriers and as a consequence of ongoing liberalization of air transport all over the world.

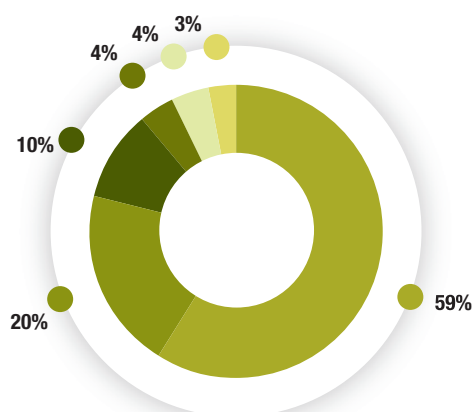
Global Network and Low-cost carriers are the largest in 2011

2011 share of World RPK traffic by airline type



Low-cost carriers will be the fastest growing airlines between 2011 and 2031

2031 share of World RPK traffic by airline type



- Charter
- Major Network
- Small Network
- Global Network
- Regional And Affiliate
- LCC

Source: Airbus



II >

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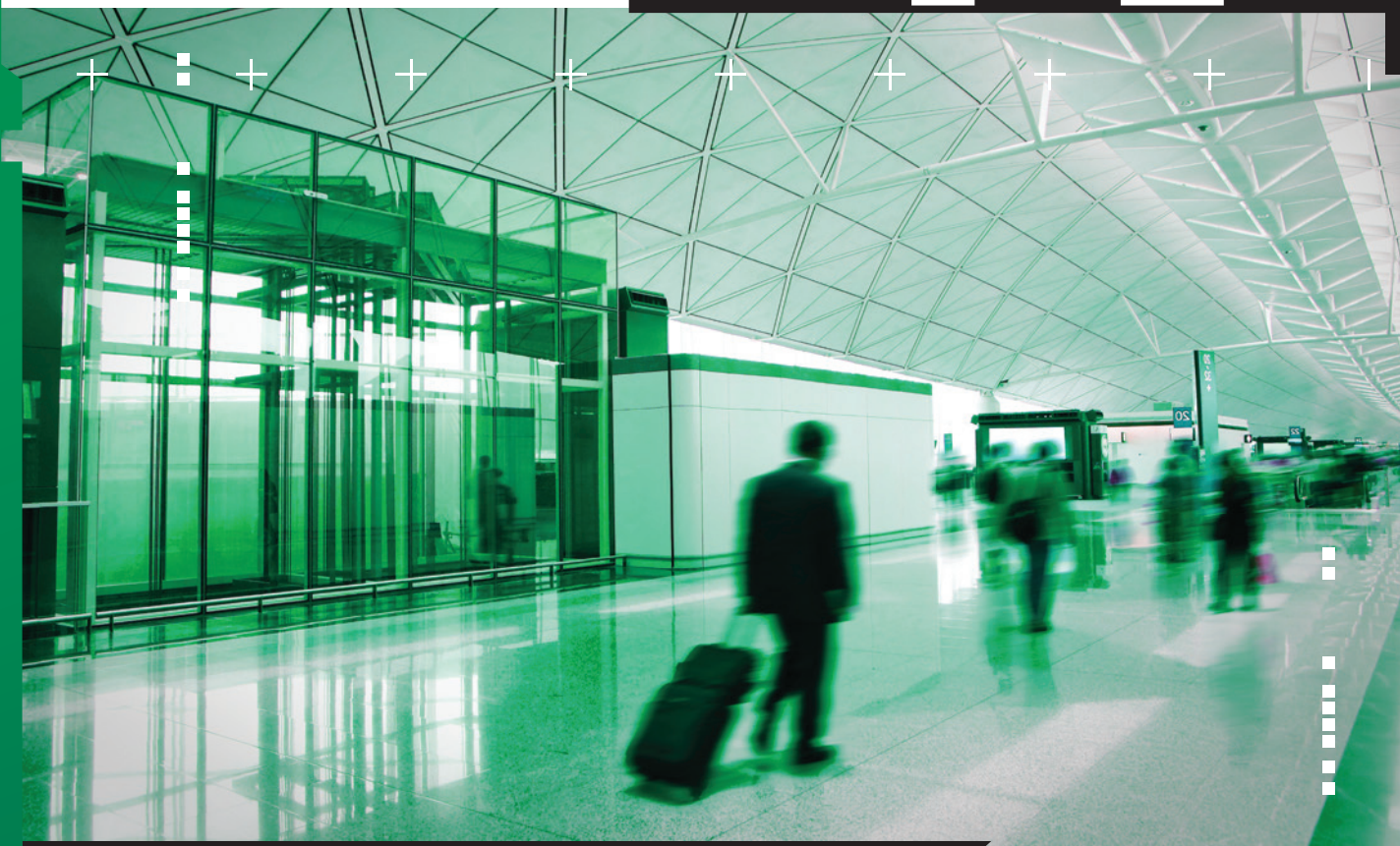
II >



DEMAND FOR PASSENGER AIRCRAFT



DEMAND BY AIRCRAFT SEGMENT



Single-Aisle Low Cost to long-haul

Today, there are 12,161 Single-Aisle aircraft providing service to customers in every corner of the globe. They represent 78 % of the total commercial airline fleet of aircraft over 100 seats.

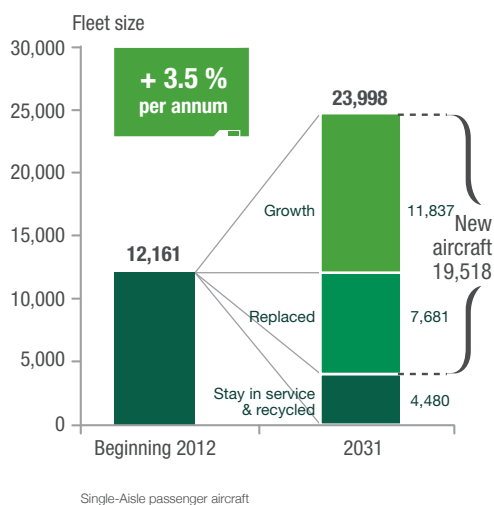
By 2031, the number of aircraft will more than double to almost 24,000 aircraft growing at 3.5 % per year. Some 19,500 of the 24,000 will come from new deliveries between now and 2031 with ~40% coming from replacing older aircraft and ~60% targeting growth in the industry.

A large number of these new deliveries will come from new more fuel efficient aircraft like the A320neo. This variant delivers 15 % lower fuel burn through the continuing application of new technology at the right time, specifically through aerodynamic and engine improvements.

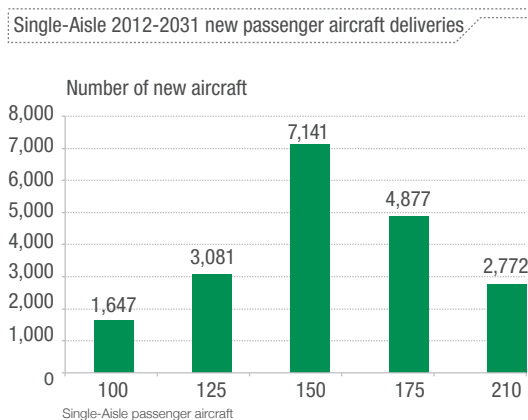
Geographically, North America and Europe will drive the demand, as they look to replace their aging fleets. These two regions combined will account for nearly 50 % of the overall demand for new Single-Aisle aircraft.



Single-Aisle fleet in service evolution



Single-Aisle 2012-2031 new passenger aircraft deliveries

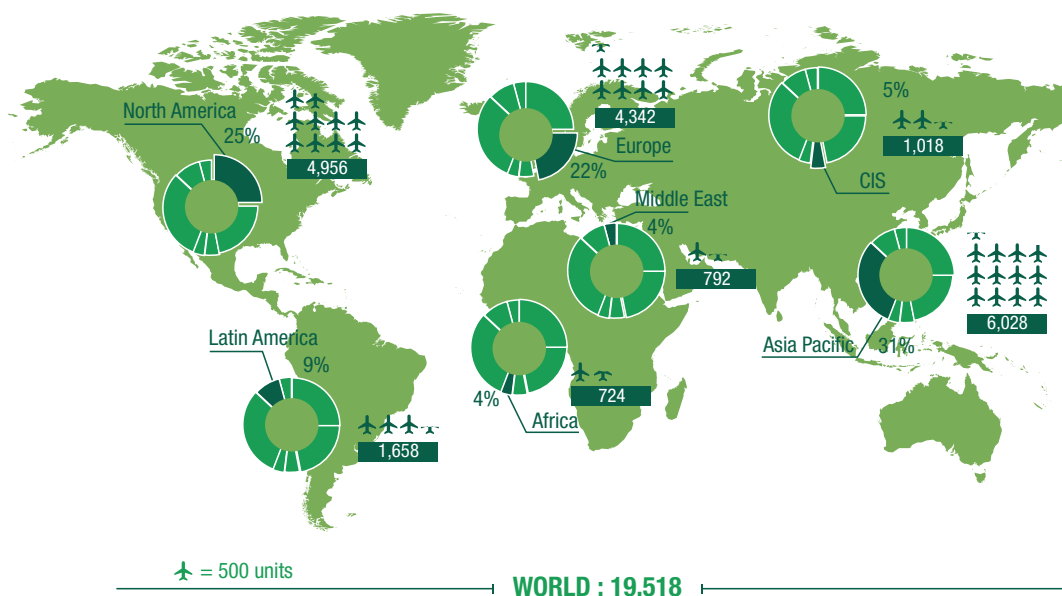


Single-Aisle aircraft perform a range of operations from direct service to connecting aviation mega-cities to smaller airports in the region, for the purpose of hubbing. One way that clearly displays the use of Single-Aisle aircraft to connect larger hub airport is seen in the transition of regional airlines from aircraft with less than 100 seats to Single-Aisle aircraft. Not only does the type of operation vary within the Single-Aisle but the range or distance flown also varies greatly. Between 5-7 % of the fleet in 2011 is used on what is traditionally considered long-haul routes, over 2,000 nm; a trend that it is likely to continue, with the introduction of newer, more range capable variants over the forecast period, like the A320/A321neo.

The size of aircraft is the third category displaying the great flexibility of Single-Aisle aircraft. The seating in the Single-Aisle segment is broad with the types segmented between 100 to 210 seats. Our forecast predicts that the centre of gravity for the category will remain at 150 seats, but with larger capacity types more significant in volumes than smaller types, with for example more than 7,600 deliveries expected in 175 and 210 seat categories over the period. This broad variation in operations, ranges and seating capacity is why Airbus believes in providing a family of aircraft, clearly shown by the many airlines who are expected to purchase more than one category of Single-Aisle aircraft.

New deliveries of Single-Aisle aircraft by region

20-year demand (2012-2031)



Twin-Aisle

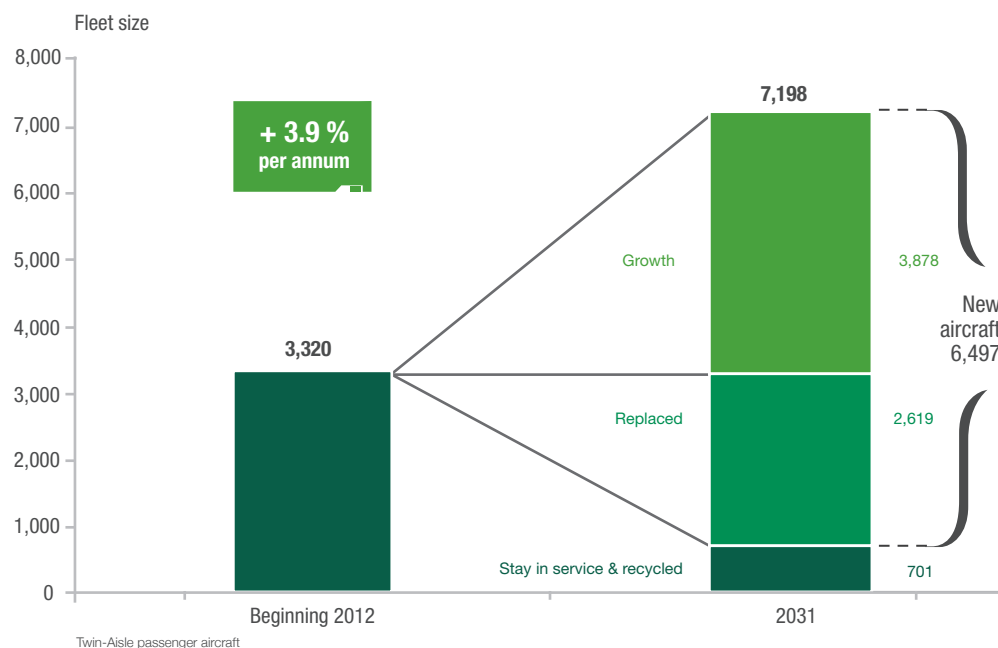
Broad requirements, broad capability

Like the smaller Single-Aisle aircraft, the Twin-Aisle aircraft also provide a varied operational capability to airlines around the world. Taking passengers on high density short-haul routes, like Singapore to Kuala Lumpur, or low-density long-haul routes, like Rome to Buenos Aires. 37 % of all RPKs were flown on the 3,320 Twin-Aisle aircraft in service at the beginning of 2012. By 2031, the fleet of Twin-Aisle aircraft will double to almost 7,200 aircraft; growing at a

rate of 3.9 % per year. These aircraft will be used to connect major aviation hubs across the globe, but also to connect major hubs to secondary cities. 40 % of the deliveries, 2,600 aircraft, will replace existing, less fuel efficient aircraft with new, eco-efficient aircraft like the A350XWB. 3,900 aircraft will be used for growth, Asia-Pacific will be the largest contributor to the demand for growth in this market segment.



Twin-Aisle fleet in service evolution

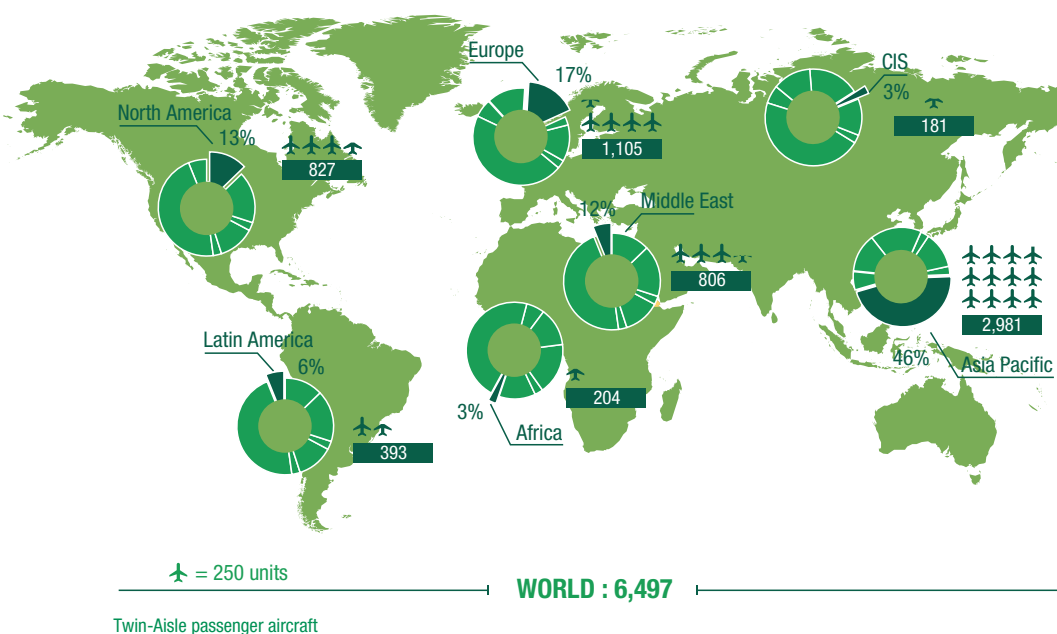


Today, Asia-Pacific represents 36 % of the total fleet of twin-aisle aircraft, and this percentage will continue to grow over the forecast period to more than 40 % in 2031. The Middle East also has a large appetite for aircraft in this category,

representing 42 % of the demand for aircraft above 100 seats for the Middle East and 12 % of the world's Twin-Aisle demand. North America and Europe jointly represent 30 % of the overall demand.

New deliveries of Twin-Aisle aircraft by region

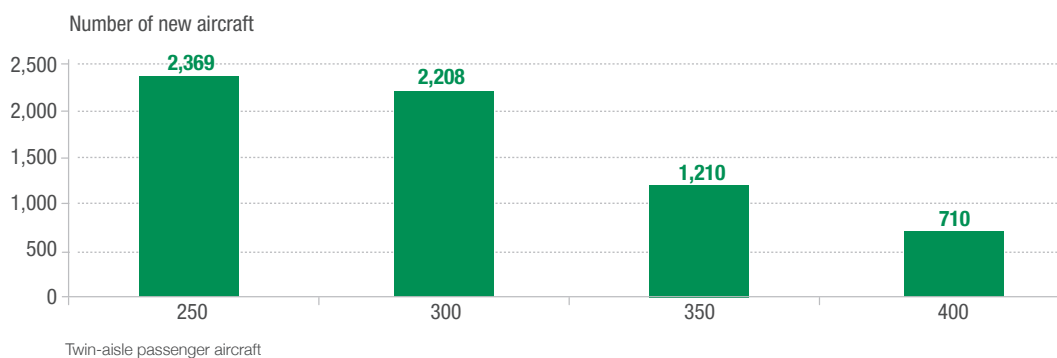
20-year demand (2012-2031)



In terms of the size of aircraft, the Twin-Aisle segment incorporates aircraft between 250 and 400 seats. The centre of gravity in this segment is in the 250-300 category, which is expected to represent 70 % of the Twin-Aisle demand,

a market where the 787 and A350XWB compete today. But aircraft in the 350-400 category will still represent more than 1,900 units over the next 20 years, a segment where the A350-1000XWB is designed to fit efficiently.

Twin-Aisle 2012-2031 new passenger aircraft deliveries



Very Large Aircraft A common sight today at the world's major airports

Very Large Aircraft, VLAs, are becoming a common sight in the largest aviation cities around the world. In 2012, 16 of the top 20 largest airports for international traffic were or soon will be serviced by the A380. Through their size and new technologies, these aircraft are designed to meet demand efficiently by minimising seat costs in both fuel and CO₂. The VLAs, like the A380 provides the flexibility airlines need to manage their revenue through providing unmatched space onboard to their strategies and the needs and wants of their customers.

Looking at the segmentation and seating chart in the summary section of this document, it shows is the most adaptable aircraft in this respect, with seating, either in service or on order, ranging from just over 400 seats to just over 800 seats; a cabin with unrivalled versatility. VLAs are optimally suited for meeting the increasingly expanding demand for passengers not only between mega-cities but also with secondary cities and high density domestic routes.

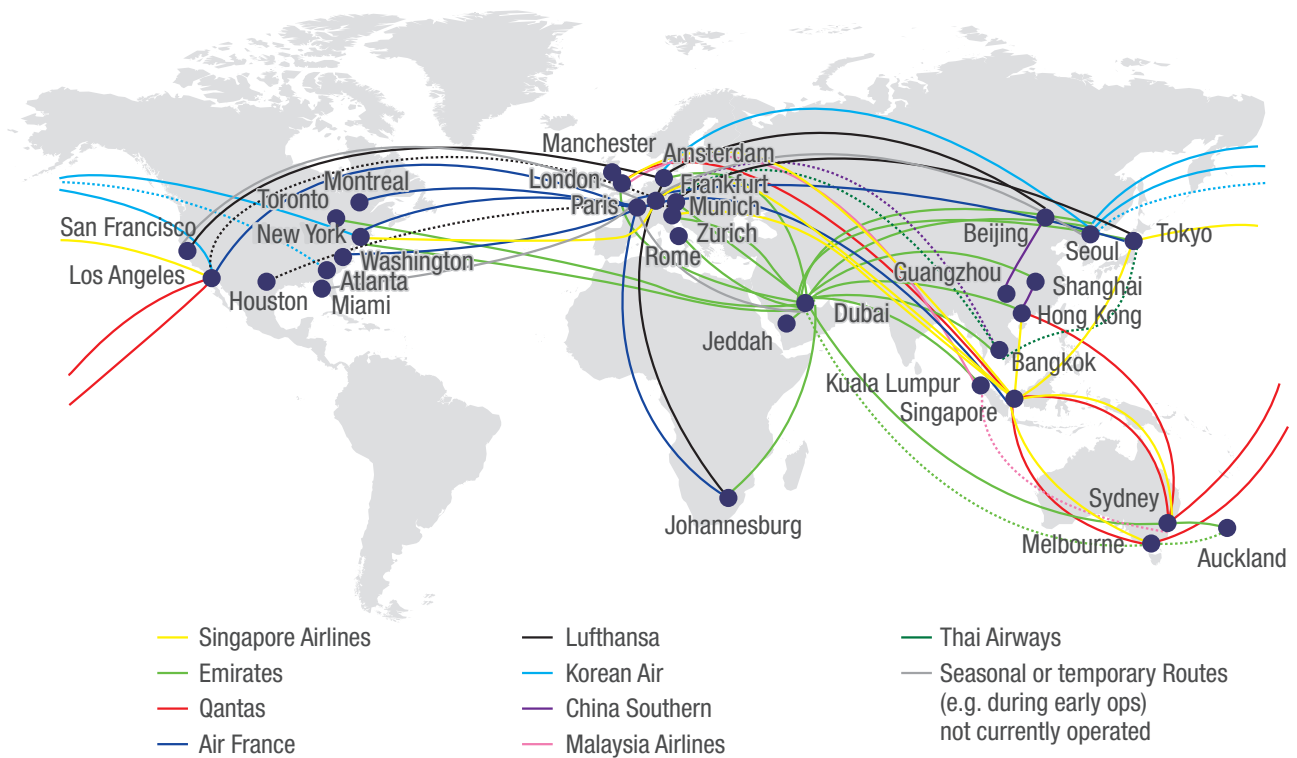
Today, there are many more markets and routes which are ideally suited to VLAs, and as more deliveries are made and more customers join the existing customer base of the A380, these too will become the home for these aircraft.

The requirement for VLAs exists today and will grow with the world's network and the needs of people to fly. By 2031, this demand will result in a need for more than 1,300 VLAs.

Given the projected growth in Asia-Pacific, both economic and air passenger traffic growth, the regions demographics, urbanisation trends and the dense traffic flows between Asia-Pacific and Europe and North America, it is unsurprising that the region's airlines will take 46% of these aircraft over the next 20 years. The Middle East will be the second largest region in terms of demand for VLAs, at 23%. This can be seen today in the size of the backlog of A380s within Middle Eastern carriers. Europe is expected to be the third largest region in terms of demand with 19% of the demand.

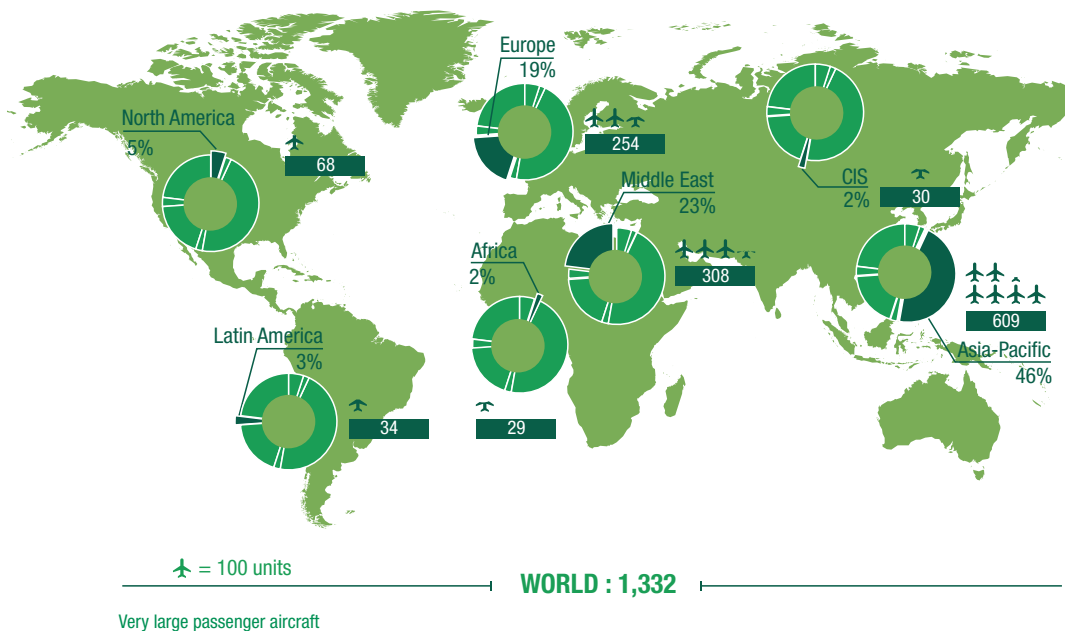


The A380 network as of July 2012



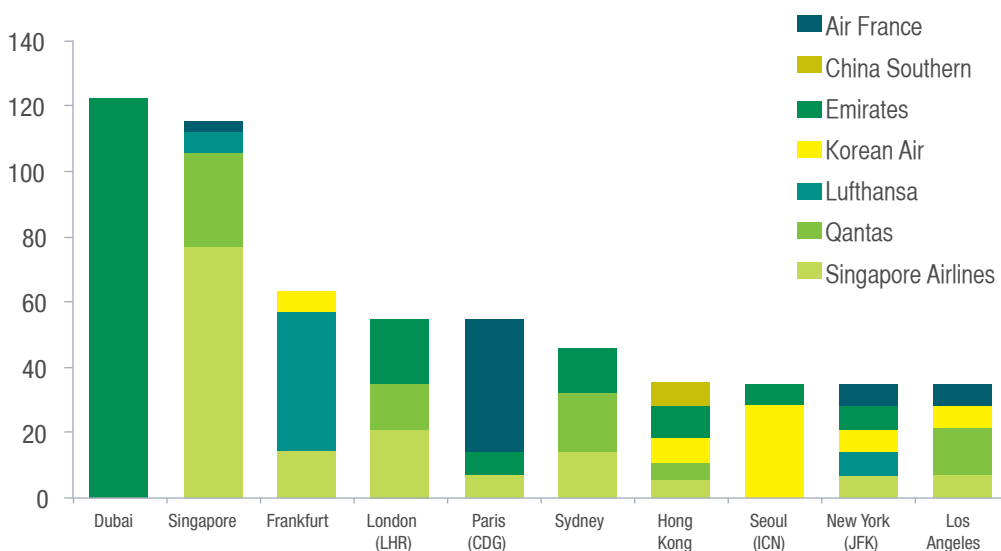
New deliveries of Very Large Aircraft by region

20-year demand (2012-2031)



A380s link the world's aviation mega-cities

Top 10 A380 airports ranked by weekly departures

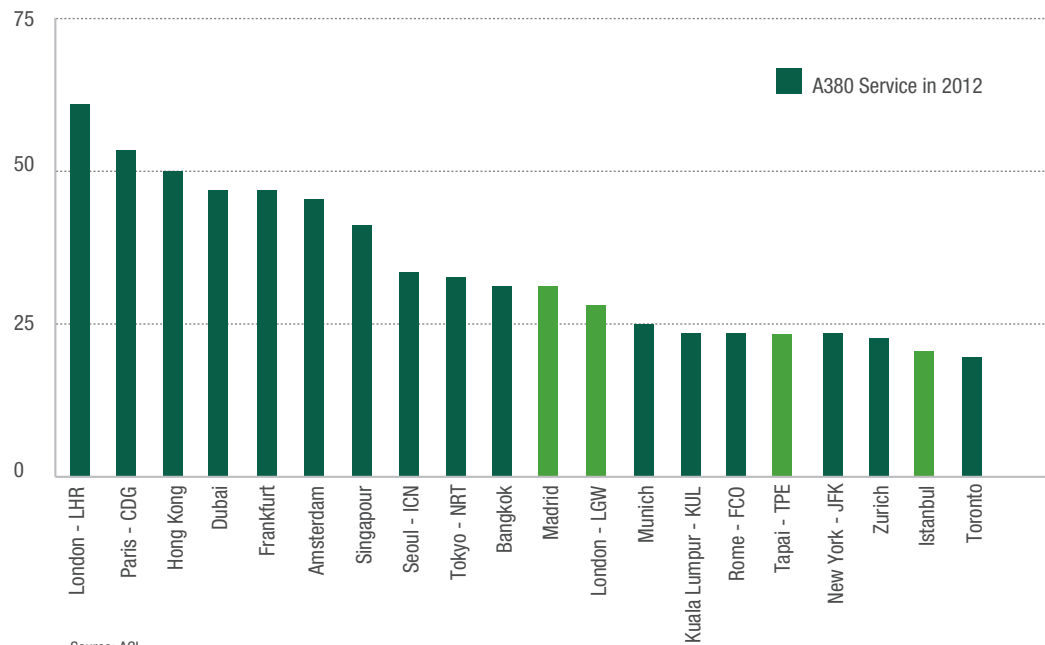


A380 weekly departures: Week 24, June 2012 - Source: OAG

► Over 100 flights per day carrying more than 1m passengers per month

A380s at all of the top 10 international airports...

International Passengers 2010 (mill.)



► ... and at 16 of the top 20. The future has arrived !





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IB

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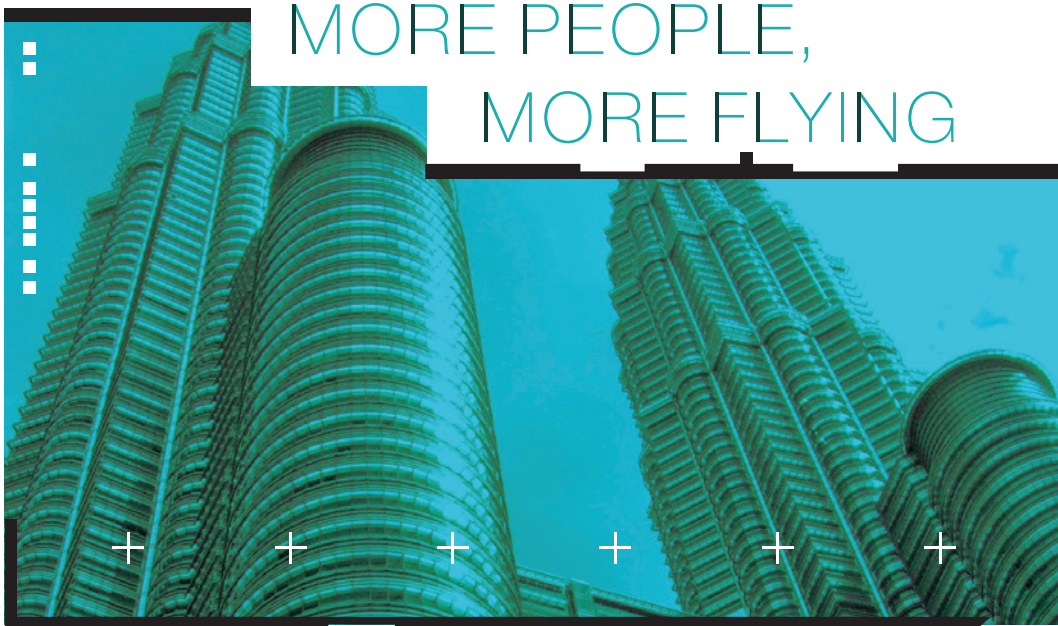
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ASIA-PACIFIC

MORE PEOPLE, MORE FLYING



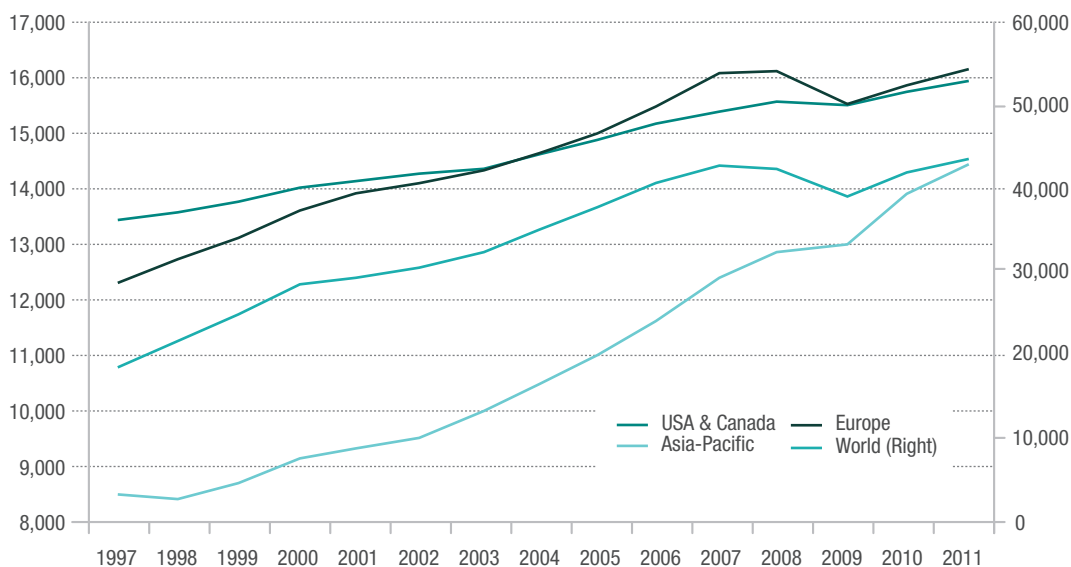
Asia-Pacific continues to be one of the fastest growing regions in the world, and a key component in the world's economy. Representing more than a quarter of the world economy today, Asia-Pacific's economy is growing 2.5 times faster than in Europe or North America, which explains why the region continues to be the main driver of global economic growth and air transport.

Extrapolating the same trend in the future, Asia-Pacific will represent more than one third of the world economy in twenty years time. This new growth will also help other developing regions, such as Africa and Latin America, to find new markets in addition to their more traditional customers.



Asia-Pacific still sports the strongest regional economic performance, powered by China

Evolution of real GDP



Source: IHS Global Insight, Airbus

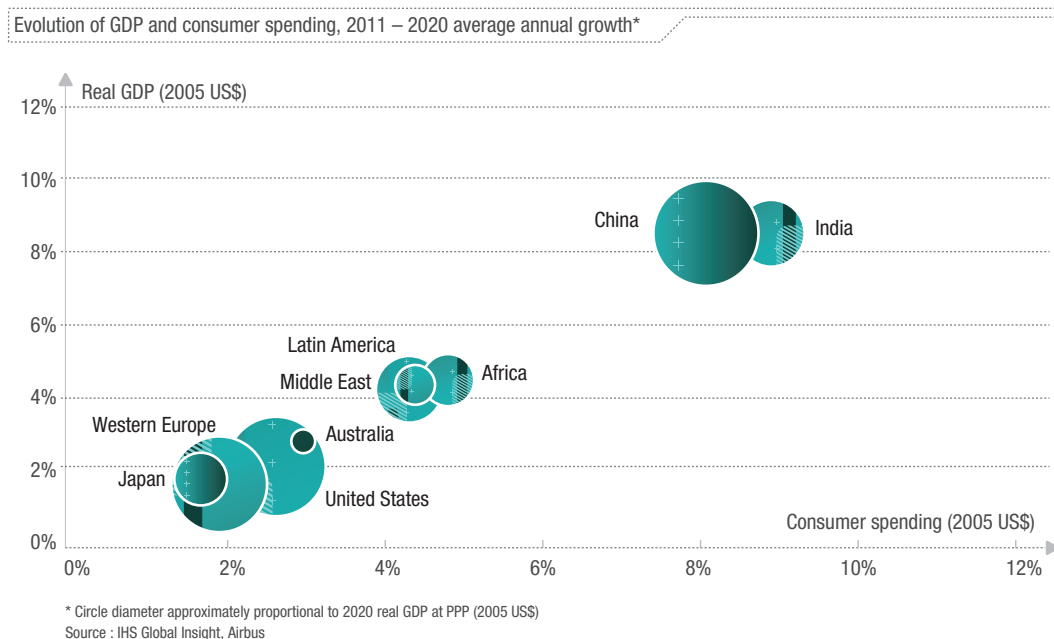
Asia-Pacific, to drive world growth



In Asia-Pacific, the second fastest growing region after CIS, the strong economic performance of the traditional tiger economies continues to be reinforced by the booming Chinese and Indian economies, which today represent 40 %

(30 % and 10 % respectively) of total 2011 regional GDP and are expected to represent 60 % of the same total in the next twenty years (44 % and 16 % respectively).

India and China leading global economic growth

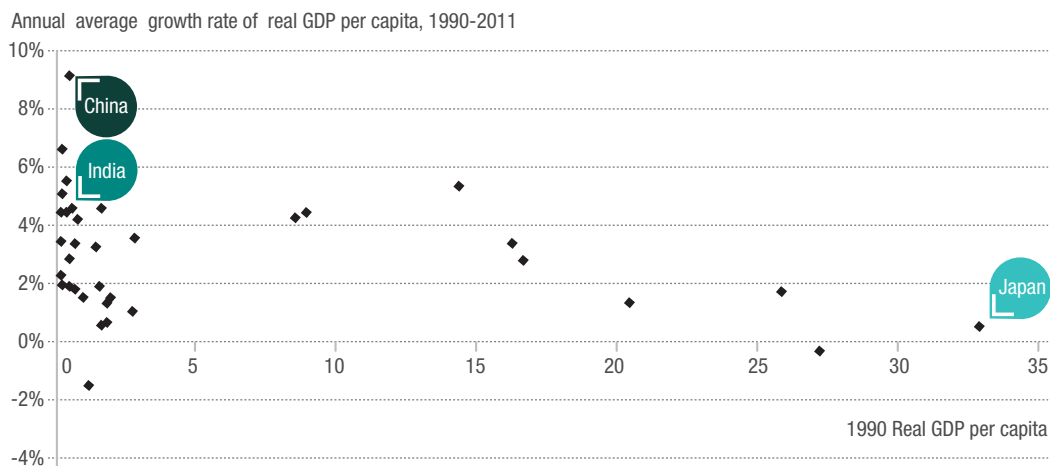


Asia-Pacific provides us with an interesting illustration of the income convergence theory, according to which poorer economies (lower GDP per capita) tend to grow at faster rates

than richer economies. For example, although starting from a much lower real GDP per capita in 1990, China is narrowing the gap that separates it from wealthier economies like Japan.

Asia Pacific, catching up

1990 Real GDP per capita and annual average growth rate of real GDP per capita, 1990-2011



Source: Global Insight and GMF 2012

Nevertheless, because standards of living in Asia-Pacific, as a whole, are still well behind those of developed countries, this regional "catching up" effect will continue in the coming years.

With differences between countries, Asia-Pacific also provides us with an example of how public investment has been used by local government as an instrument to stimulate economic growth. As shown below for airport investment, a significant portion of the region's investment has been made by state-owned enterprises and, in recent years, by private-public partnerships.

PUBLIC INVESTMENT, A KEY DRIVER

Investment in airports, selected countries, 1991-2011

Country	Public	Private
Cambodia	0 %	100 %
China	78 %	22 %
Malaysia	61 %	39 %
Philippines	17 %	83 %
India	39 %	61 %
Thailand	97 %	3 %
Vietnam	0 %	100 %
Total *	65 %	35 %

Source: ADB, the Planning Commission of India, Frost & Sullivan. (*) Excluding India.

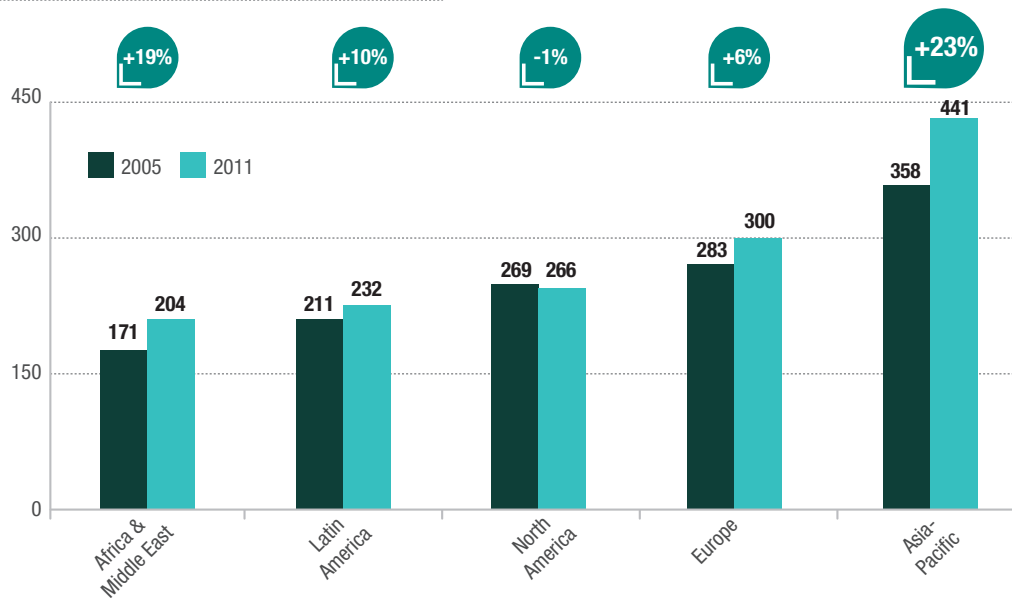
Asia-Pacific's economic prosperity, leading to the steady up scaling in the standard of living of its expanding middle class, combined with a growing population and increasing urbanisation, has and will continue to lead to a higher desire (and ability) to fly. The huge potential for the region's "propensity to travel" to continue increasing is evident. An American makes 1.8 flights per year, a German makes one flight per year, whilst even allowing for significant growth in recent years, people from China and India make a relatively low 0.2 and 0.1 flights per year, respectively. Still growth to come.

While the region's population is expected to represent nearly 60 % of the world's population by 2031, the demand for air travel, as measured by total RPK from/to/within Asia-Pacific, is forecast to grow at a 5.8 % per year over the next 20 years, above the 4.7 % increase in total world demand over the same period.

Another reflection of these positive regional trends, is the fact that air transport in Asia-Pacific is becoming much more accessible, as witnessed by the 23% increase in the number of regularly served cities in Asia-Pacific, between 2005 and 2011, which contrasts to the -1% in North America and the +6% in Europe, over the same period.

Air transport becoming more accessible is Asia-Pacific

Evolution of number of regularly served cities per region



Traffic as of month of September; regular service referring to a minimum of two daily departures on a 150-seater aircraft
Source: OAG, Airbus

Low Cost Carriers

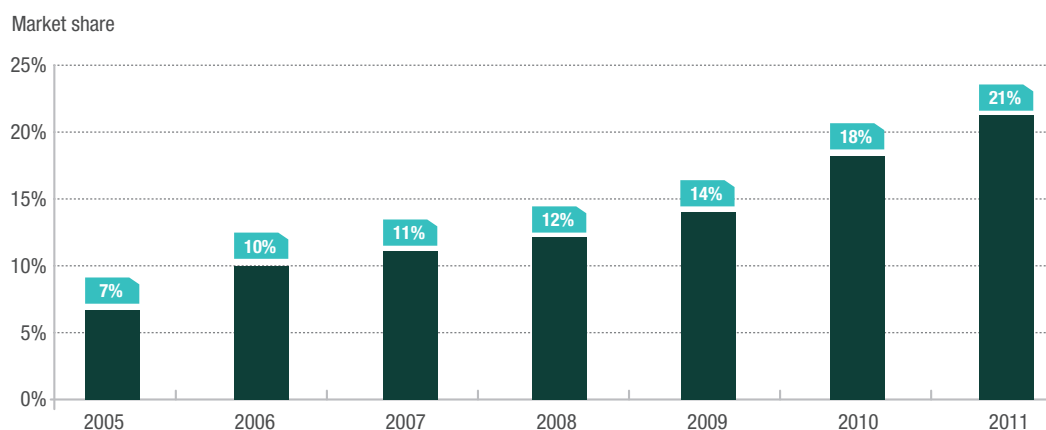
Benefitting from the strong regional economic growth and the resulting improvement in standards of living, Low Cost Carriers (LCCs) in Asia-Pacific have been able to profit from this positive trend by increasing their relative share

of total traffic in Asia-Pacific.

Being a true success story in the industry over the last decade, their market share in terms of seats offered in 2005 increased to more than 20% in 2011.

LCC market share in Asia-Pacific above 20%

Evolution of market share for LCCs in Asia-Pacific (seats offered)



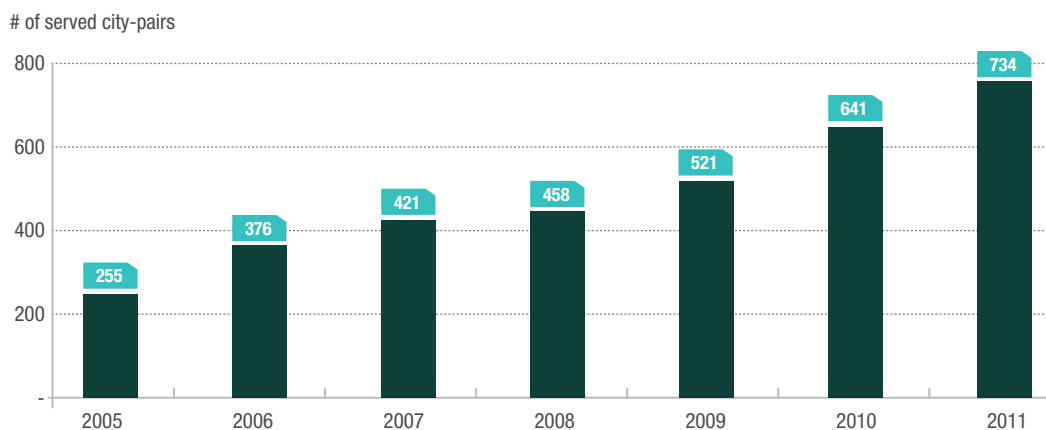
Traffic as of month of September; domestic and international traffic within Asia-Pacific; GMF 2012 airline segmentation
Source: OAG, GMF 2012

Asia-Pacific's LCCs expanded their market presence through both adding capacity on routes that they already serve and through

increasing the number of new routes. In fact, the number of offered city pairs has almost tripled over the last years.

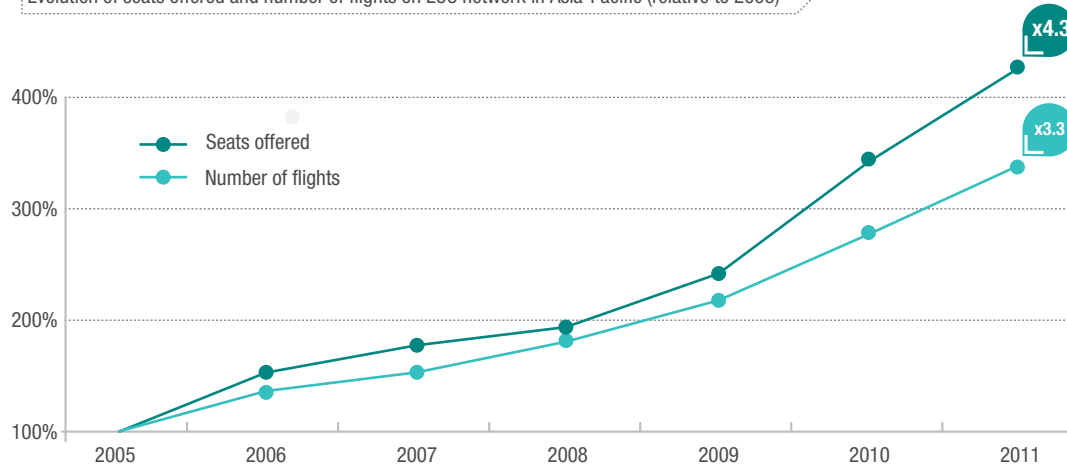
Number of routes served by LCCs has almost tripled over the last years

Evolution of number of city-pairs served by LCCs in Asia-Pacific



Traffic as of month of September; domestic and international traffic within Asia-Pacific; GMF 2012 airline segmentation
Source: OAG, GMF 2012

Evolution of seats offered and number of flights on LCC network in Asia-Pacific (relative to 2005)



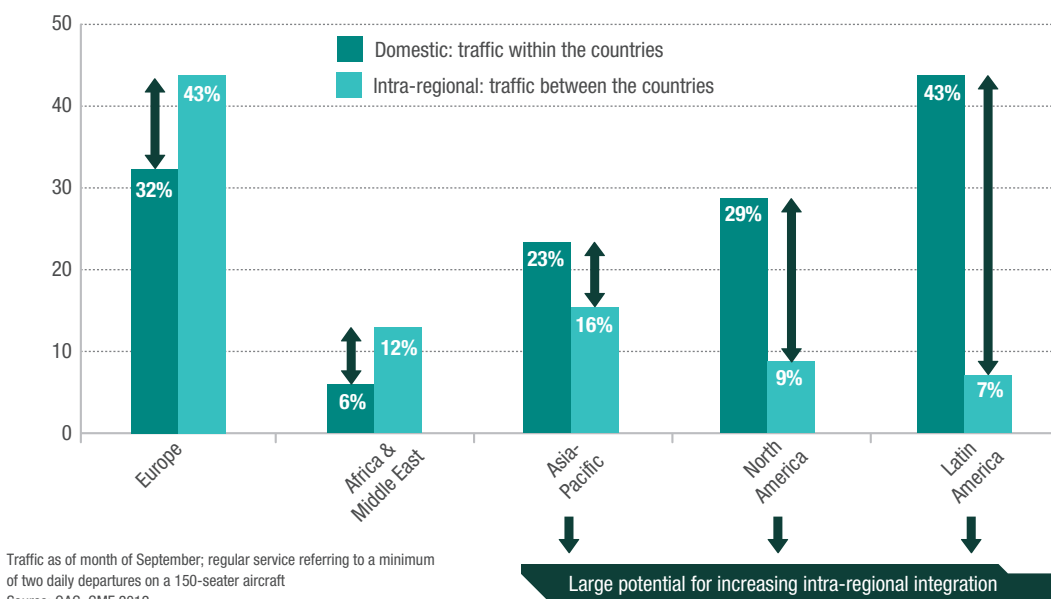
Traffic as of month of September; domestic and international traffic within Asia-Pacific; GMF 2012 airline segmentation
Source: OAG, GMF 2012

LCC traffic in Asia-Pacific is still highly concentrated on domestic relative to intra-regional traffic. The higher relative share of domestic traffic in the Asia-Pacific LCC market in 2011 contrasts with the relative predominance of intra-regional traffic

in the European LCC market (11% difference in favour of intra-Europe traffic) and suggests that if Europe can be considered as the benchmark of a liberalised LCC market, there is large potential for increasing intra-regional integration in Asia-Pacific.

Potential for LCCs to increase intra-regional integration within regions

2011 LCC market share on intraregional traffic per global region (Seats offered)



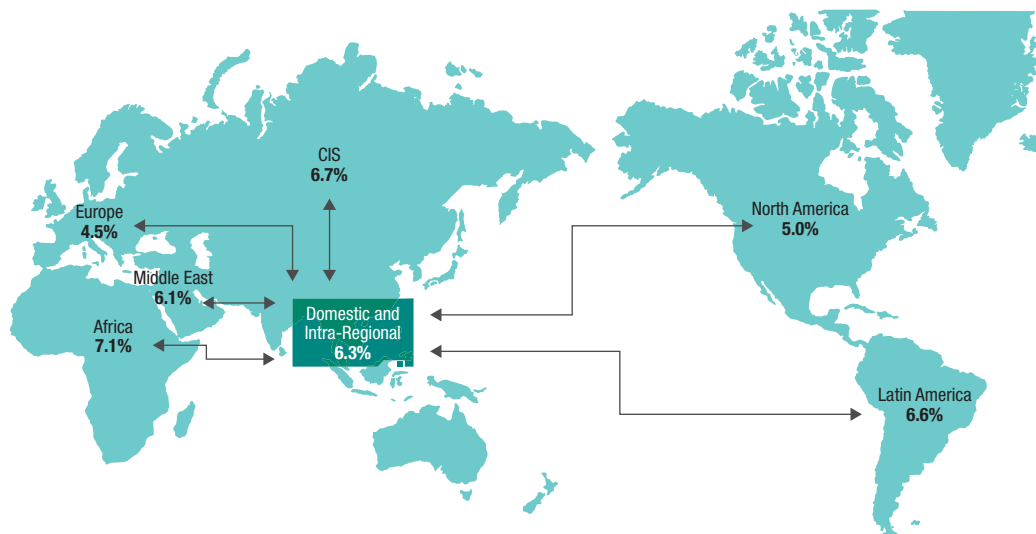
Nevertheless, and despite some past failures, efforts to apply the low-cost model to longer-haul travel have accelerated in the last years, as witnessed in the entrance of new LCCs to the long-haul market, together with the settlement of new subsidiaries and new strategic alliances in the region, such as the recent joint ventures in Japan.

Whether the long-haul, low-cost model succeeds or whether these new strategic

alliances are to be permanent will depend on time. But still, what seems certain for the forthcoming years is that LCC will continue with its previous trend, growing at a higher pace than full service carriers.

Over the next ten years, the region is expected to grow at 6.4% per year, mainly driven by PRC and India, with expected growth rates of 7.7% and 8.6%, respectively.

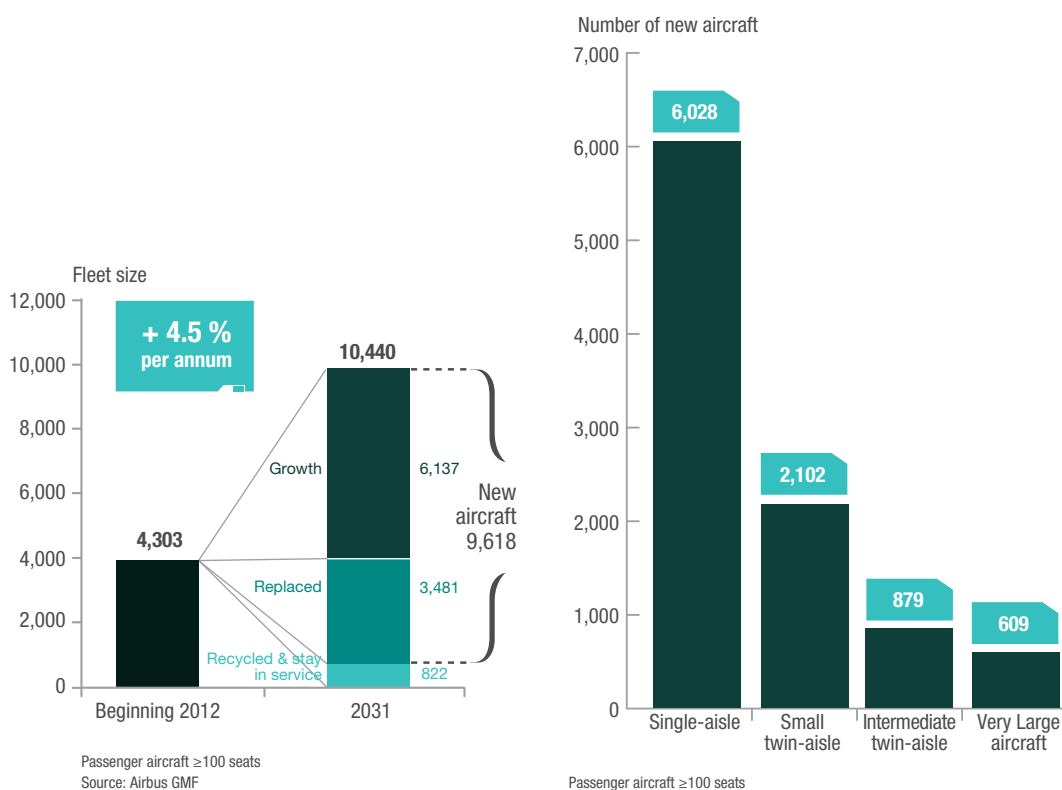
RPK development from/to Asia-Pacific (2012-2031 CAGR)



Asia-Pacific			World		
2012-2021	2022-2031	20-year growth	2012-2021	2022-2031	20-year growth
6.4%	5.2%	5.8%	5.1%	4.4%	4.7%

Over the next twenty years, this very dynamic region, with its large and diverse population centres, will require larger longer range aircraft.

As an example, the region will need more than 600 VLAs, which represents 45% of the total worldwide demand.



Economic and social impacts of aviation in Asia-Pacific

By facilitating and optimising travel across the world, air transport significantly contributes to improving living standards in Asia-Pacific. As aviation enables both direct contact with foreign partners and regular on-site visits, it has significantly fostered investments and outsourcing to the region. For example in China, the development of air cargo (which grew at a 10.7% yearly rate between 1995 and 2011) has further enabled increased production of time-sensitive products such as electronics and perishables. These growing international investments have created jobs and developed

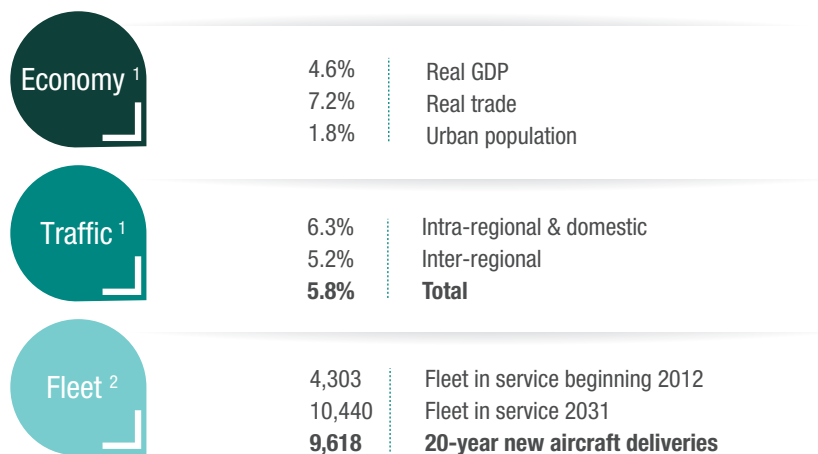
skills across a wide range of sectors in a region where underemployment has long been a social and economic problem.

Aviation yields positive benefit for local economies. In 2010, the air industry generated more than \$258 billion¹ in this region, representing almost 20% of the global aviation GDP. Aviation also supports a total of 6.1 million jobs², split into four categories: airlines (24%), aerospace (10%), airports (6%), and other on-airport activities (60%).

¹ Including direct returns (equal to USD 94 billion) plus indirect and induced impacts.

² Total here refers to the direct, indirect and induced impacts but excludes catalytic impacts.

ASIA-PACIFIC



¹ 2012 – 2031 CAGR - ² Passenger aircraft ≥ 100 seats

RWC 2011 IN NEW ZEALAND

In 2011, the land of the long white cloud held the largest sporting event in its history and one of the biggest sporting events of the year: the Rugby World Cup. Gathering 20 teams from all over the world and thousands of supporters, the cup could only be organised in New Zealand thanks to air travel. Hosting more than 133,000 overseas visitors for this six-week event (against the 65,000 expected), the air transport industry

was crucial in helping supporters get to the event. It increased the international image of the country, thanks to the 2,000 international media attending the event. It also brought economic spillover: ticket sales amounted to over \$224.5 million, accommodation-related spending was \$204.1 million, and food and drinks \$187 million. The fiscal stimulus represented nearly 1.4% of quarterly GDP for New Zealand.

EUROPE

TRAVEL IN THEIR DNA



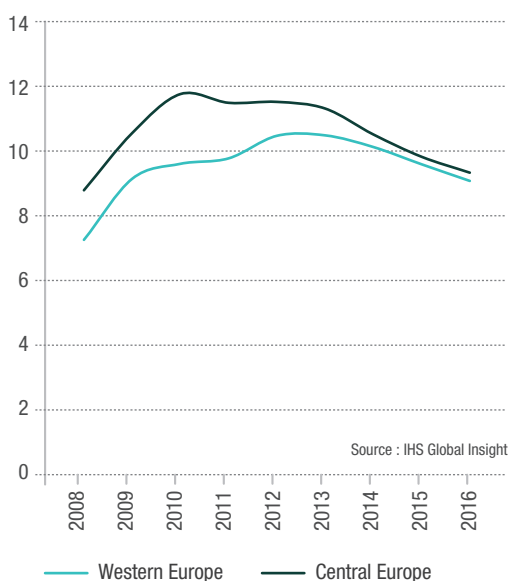
Economic environment

Following the 2008 worldwide financial crisis, European airlines were given little respite. However, 2010 and 2011 were more encouraging than the previous two years, with both positive margins and an increase in passenger traffic. Despite this, 2012 looks much more challenging as Europe's economic environment remains difficult with high

unemployment rates and uncertainties related to the Eurozone sovereign debt crisis.

More positively however, IHS Global Insight forecasts an improvement in the situation over the medium term, with the unemployment rate for example expected to come down to the pre-crisis level by 2016;

Unemployment rate (%)



This wealth increase will directly translate into an increased demand for travel: air traffic from or to Western Europe is forecast to grow at

GDP growth (%)



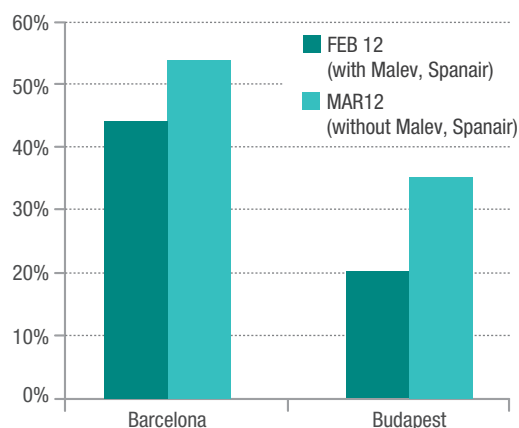
4% and at an even higher rate of 5.6% per annum from or to Central Europe over the next 20 years.

LCC

European LCCs have been able to capitalise on the current economic situation to increase their presence across the region.

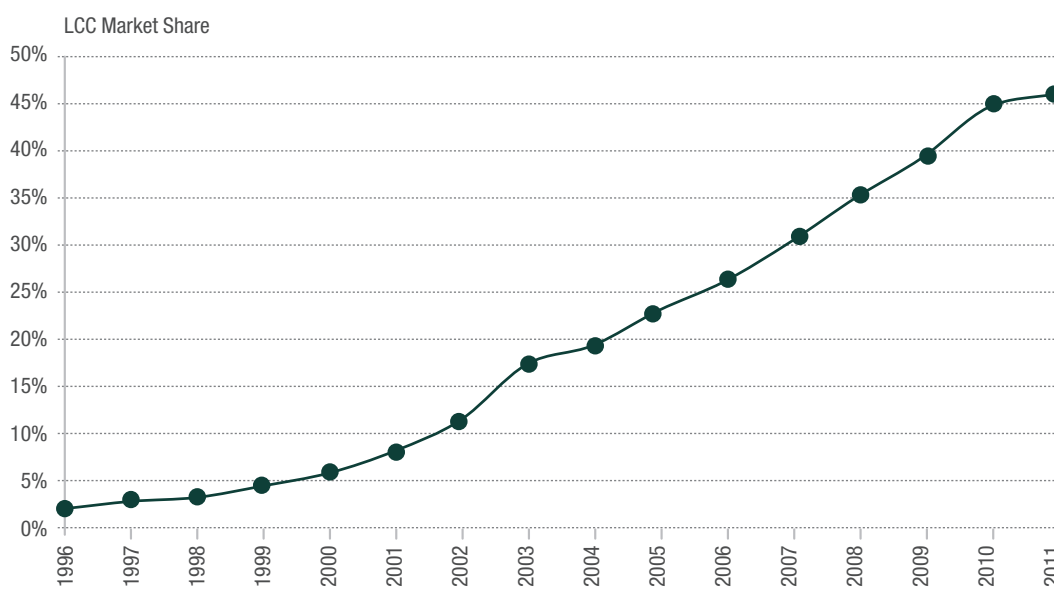
LCCs have continued their expansion initiated 15 years ago, taking market share from full service carriers year by year.

LCC frequency share



Source : OAG

LCC market share within Europe



Source : OAG

The 'Low Cost Carrier' category is a very common and practical way of grouping those airlines that offer low fares, unbundle their product, focus on ancillary revenues and high aircraft utilisation. However, this designation can hide fundamentally different operational philosophies.

Regarding airport types, the most traditional LCCs tend to favour operating from smaller, remote

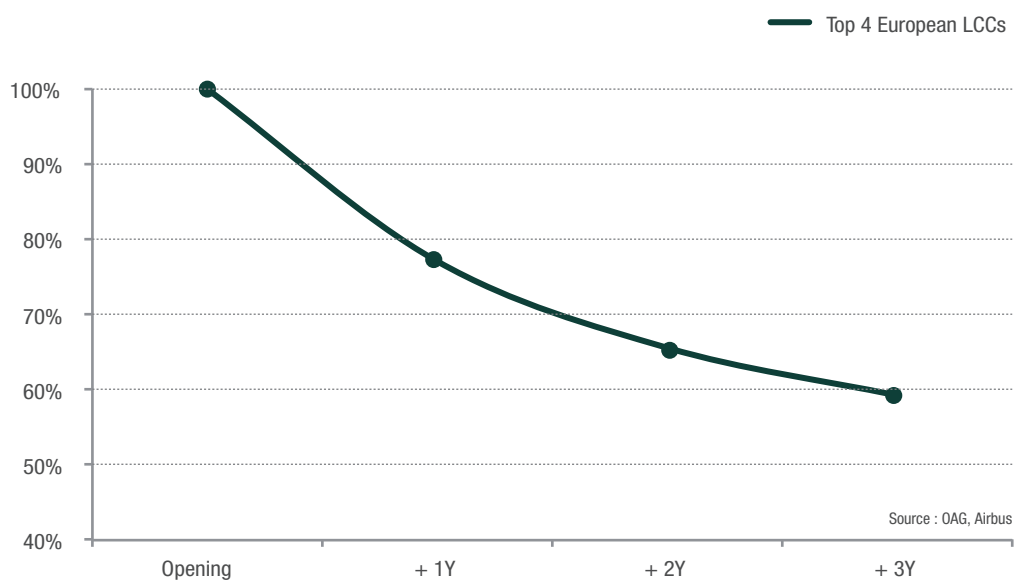
airports where airport charges tend to be lower or incentives are offered, whereas others compete at a city's main airport.

Another element of differentiation is flight frequency. Far from the "at least one flight per day"-Full Service Carriers philosophy, LCCs tend to offer less flights to more destinations for their more leisure oriented customers.

Another characteristic shared by LCCs is their propensity to open new routes. One prominent European low cost operator has opened no less than 1,720 new routes (an average of 22 per month).

However, there does appear to be an element of speculation in some of these route openings: In fact, 48% of them do not survive longer than 3 years.

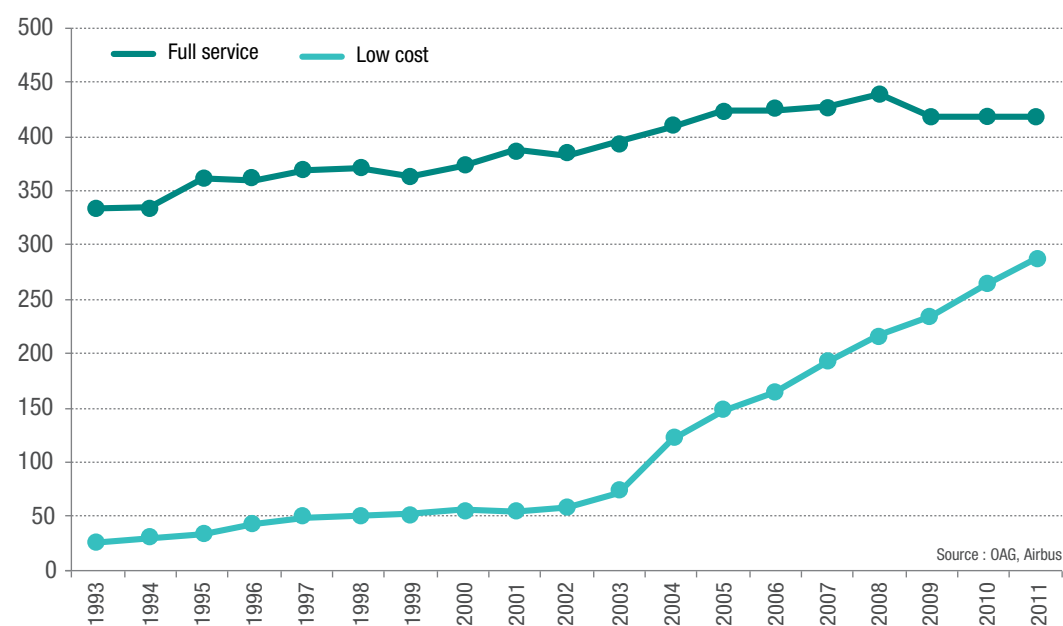
New route survival rate



Nevertheless, the LCC network expansion remains very significant, as European LCCs now cover 33%

of all possible intra-European country pairs in 2011, against only just 6% in 2001.

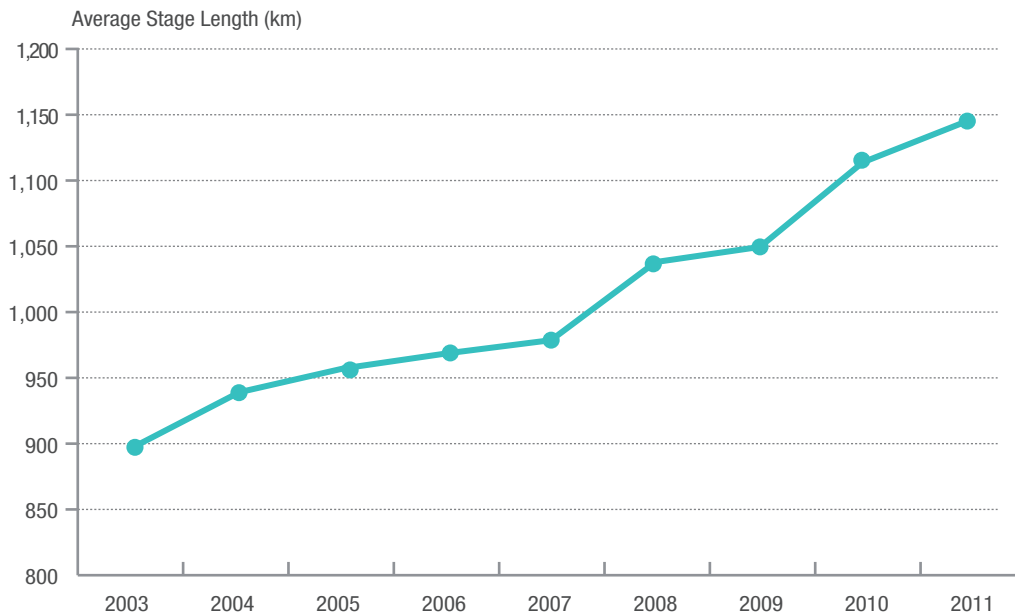
Number of intra-European country pairs served



As coverage grows, the new market opportunities that present themselves have typically been further afield. In recent years, these have included new operations to North Africa,

the Middle East and CIS for example. As a result, average stage lengths have increased dramatically, from ~900 km in 2002 to nearly 1150 km by the end of 2012.

Average stage length of European LCCs



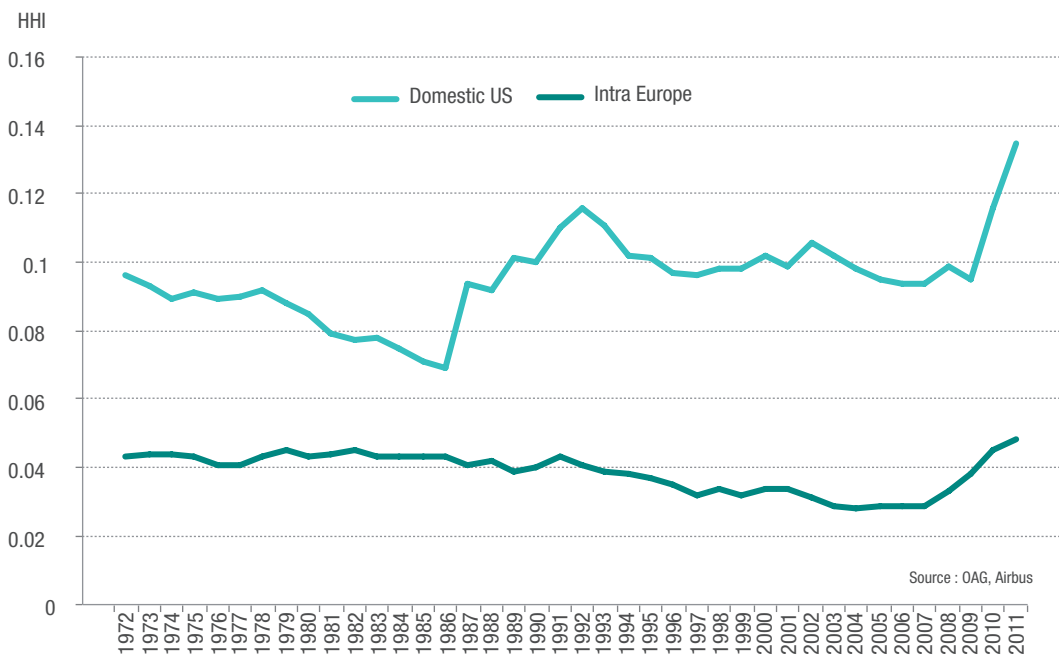
Source : OAG, Airbus

Consolidation

In response to the economic and competitive pressure, as well as efforts to drive costs lower through synergy benefits and economies of scale and scope, a number of traditional major carriers in Europe have chosen consolidation through mergers as a potential solution. The last 8 years have seen a number of mergers and acquisitions that have changed the competitive landscape in the region. This consolidation has taken two forms:

either multiple groups being merged under one operating name or a newly created entity keeping the corporate identities of the former carriers. Despite this shift towards consolidation, it appears that the intra-European market is still significantly fragmented. If compared to the US domestic market, its indicator for level of concentration (as measured by the Herfindahl-Hirschman Index for ASK traffic) is still relatively low.

Market concentration (1)

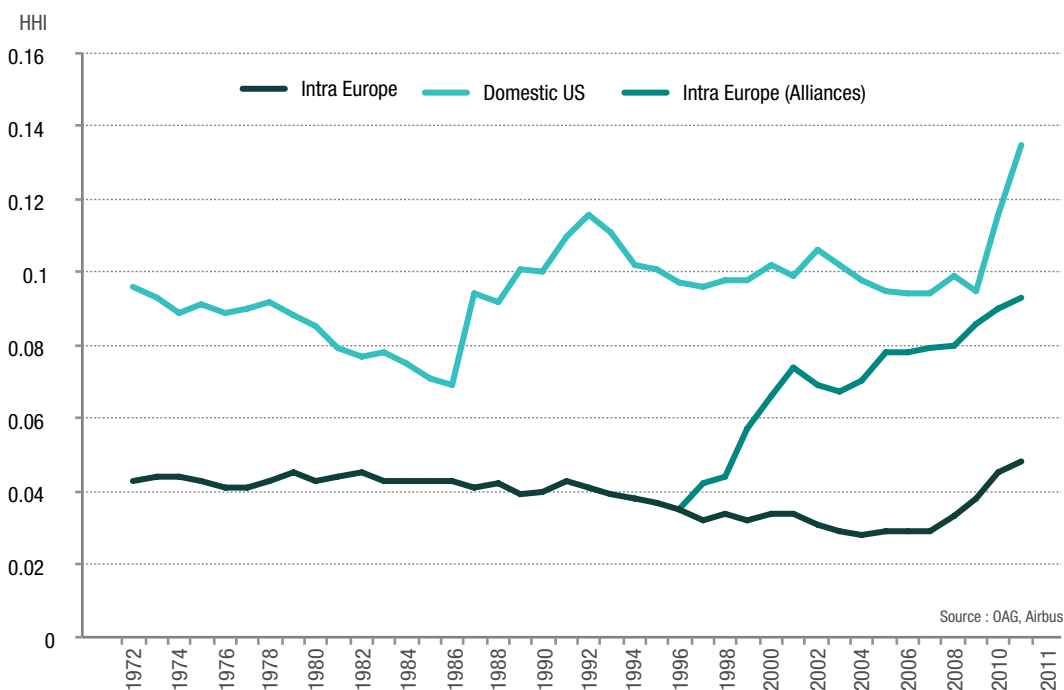


Considering that these two markets are similar in population, the US has the obvious advantage of sharing a single language and culture, where it is potentially easier for a single brand to address

the entire market. Interestingly, if we were to consider the big 3 alliances members as one single airline, we see that the HHI would come close to the US levels.

Market concentration (2)

Considering alliances members as one single airline



Time will tell whether the mergers of the last several years are a start towards further integration between European alliance members and whether

or not it will lead to the economies of scale that European airlines desire.

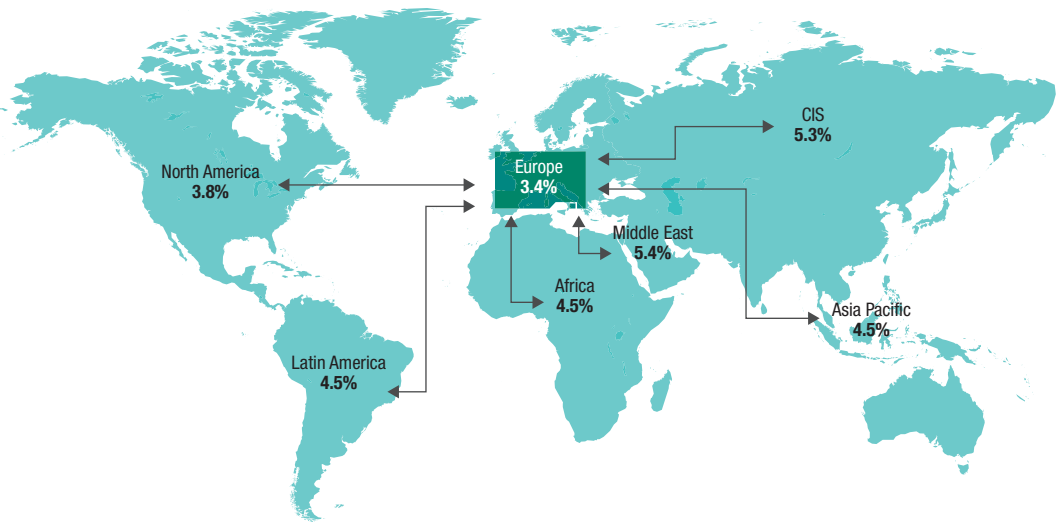
Fleet and deliveries

Despite the strong development of Eastern European countries, the overall European air transport market will continue to mature over the next 20 years. Air traffic within Europe is forecast to grow at the moderate pace of 3.4 % per annum, whereas international traffic will grow at 4.4 % per annum, mainly driven by the dynamism of emerging markets.

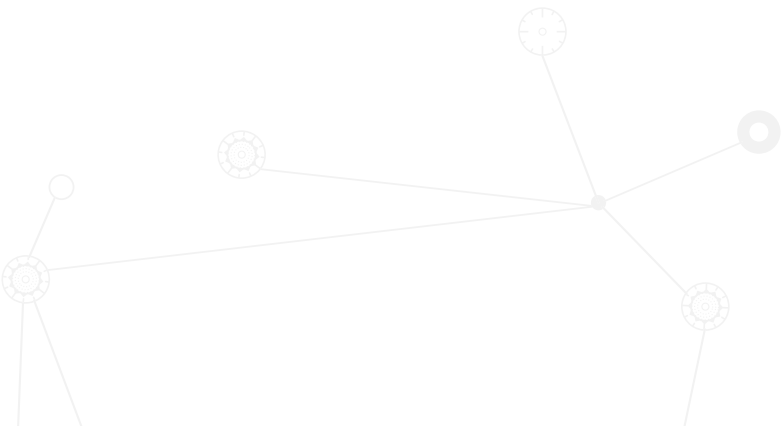
As a result, European airlines will need 5,701 new aircraft by 2031, 76 % of which will be in the Single-Aisle category. The overall fleet in service will grow by 90 %, while average aircraft size will increase from 162 to 190 seats.

Traffic from / to Europe by region

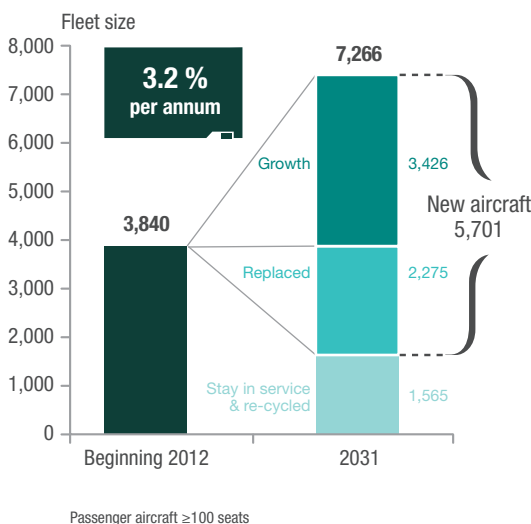
RPK development from / to Europe (2012-2031 CAGR)



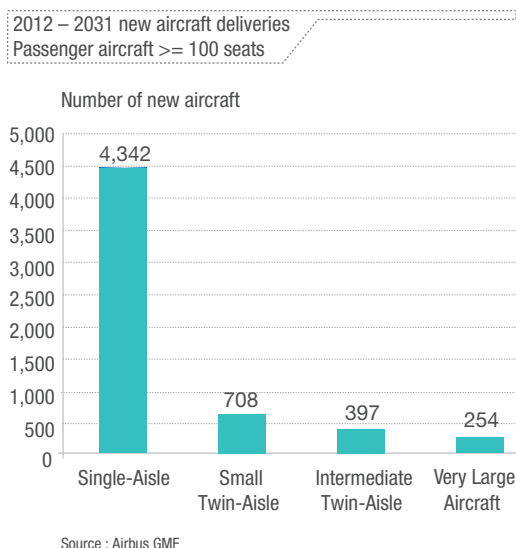
Europe			World		
2012-2021	2022-2031	20-year growth	2012-2021	2022-2031	20-year growth
4.3%	3.8%	4.1%	5.1%	4.4%	4.7%



Fleet in service - Europe Passenger aircraft ≥ 100 seats



2012 – 2031 new aircraft deliveries Passenger aircraft ≥ 100 seats



Economic and social impact of aviation

Most of Europe is a well-developed air market. It is highly mature in the West, while the East is less developed and still has significant growth potential. Accounting for one third of global air transport, aviation employs almost 300,000 highly-skilled workers in the civil aerospace industry, which is equal to 37% of all civil aerospace jobs worldwide. Although Europe is currently facing a job crisis, aviation still provides more than 5.1 million jobs.

Aviation is also a driver of productivity throughout the Old Continent. There is a relationship between business travel and productivity. Over time, a 10% increase in travel corresponds to a 1% increase in productivity.

Air transport also helps the economy by facilitating mobility. Aviation supports regional tourism

throughout Europe, which generates additional income, job creation and skills development. By increasing labour mobility, aviation also helps strengthen the links between European countries and the functioning of the Monetary Union.

The expansion of air transport will continue to positively impact Europe's economy. 840,000 direct jobs will be created over the next 20 years. Aviation's continuous efforts to counterbalance the increase in regulatory burdens and investments in innovation driven by environmental issues will spread to other sectors' R&D. In parallel, the growing need for aviation services, aimed mainly to pre-empt the increased congestion in major European hubs and to ensure efficient connectivity will be a significant source of investment.

EUROPE

Economy ¹	1.9%	Real GDP
	3.5%	Real trade
	0.6%	Urban population
Traffic ²	3.4%	Intra-regional & domestic
	4.4%	Inter-regional
	4.1%	Total
Fleet ³	3,840	Fleet in service beginning 2012
	7,266	Fleet in service 2031
	5,701	20-year new aircraft deliveries

^{1/2} 2012 – 2031 CAGR - ³ Passenger aircraft ≥ 100 seats

NORWAY'S DEPENDENCE ON AIR TRANSPORT: +

Aviation is crucial to Norway due to its size and the fact that other forms of transport, like high-speed train are underdeveloped. In 2020, it is expected that there will be no realistic alternative means of transport for 94 % of the flights compared to 92 % in 2007 (when distance is taken into consideration). As a result, an optimised air transport network places two thirds of Norway's population within one hour of an airport.

Supporting around 65,000 jobs, aviation in Norway accounts for 4 % of the country's GDP. Tourists arriving by air represent 30 % of visitors coming to Norway, and they spend more than \$2bn every year. Aviation is also central to the medical care of the population, as it transports an annual average of 400,000 patients and is vital for emergency operations. Air transport facilitates nationwide gatherings around cultural and sport events in this vast country.

VIENNA'S AIRPORT ATTRACTS MULTINATIONALS: +

Vienna heavily relies on its airport to attract business. Offering connections to anywhere in Europe within three hours, Vienna airport manages to attract around 300 multinationals (among which Coca-Cola, IBM, Ericsson...) to establish their Eastern European headquarters in the Austrian capital. This has enabled the city to benefit from the recent growth in the neighbouring Transition Economies.



NORTH AMERICA

SIMPLY THE BEST WAY FROM A TO B



Today, the domestic US market is the largest single aviation market in the world, with over 115 airlines, with 6,700 aircraft in service and more than 730 million passengers flown to, from and within the US in 2011.

Over the last year, we have seen the replacement of older aircraft beginning. The last year has also been marked by post-merger integration as airlines work on integrating new acquisitions and mergers.



Year-over-year quarterly evolution of GDP of the USA and Canada



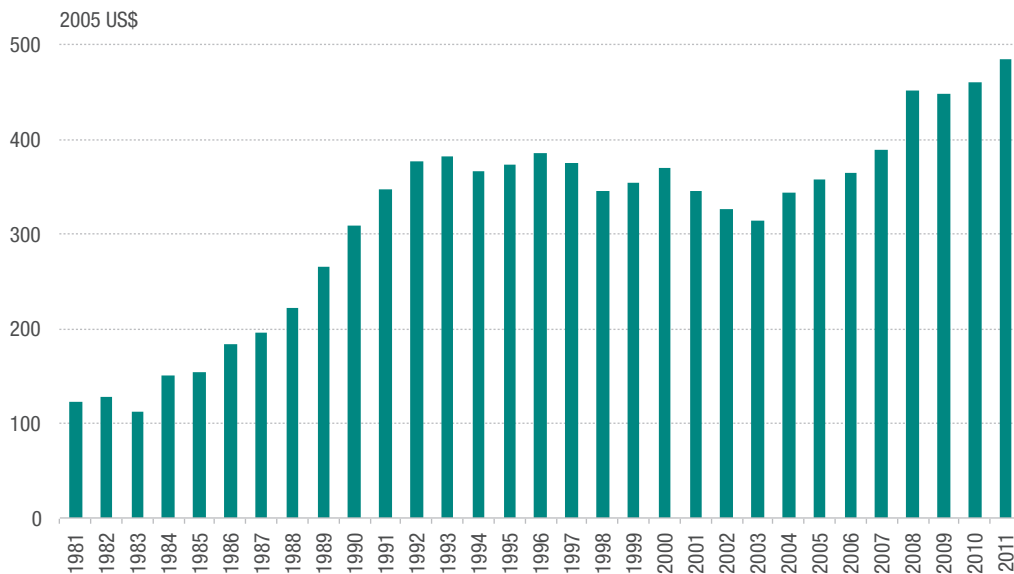
Source: Global Insight, Airbus

Economics

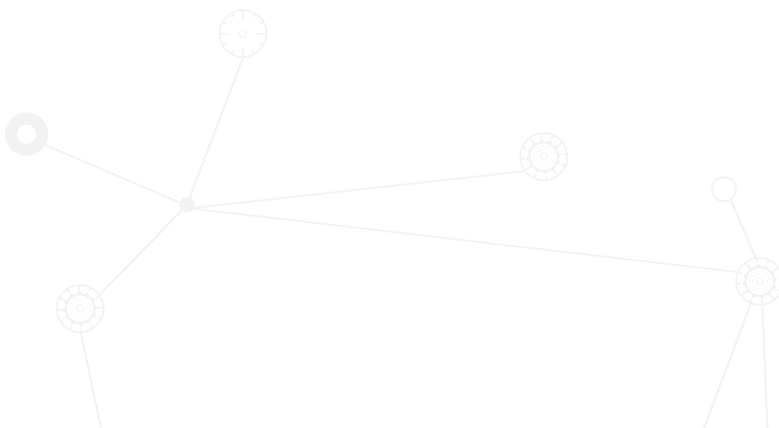
Much of US and Canadian economic growth hinges on the national debt, and how this impacts consumers perceptions and to some extent the on-going financial concerns in Europe. As of August 2012, forecast for the recovery in the US were still positive. IHS Global Insight projects an increase in the GDP growth rate in the US, peaking at 2.7% in the fourth quarter of 2014 before returning to a stable growth rate of about 2% annually.

This growth in the US and Canadian economies has led to a much more positive employment situation. Unemployment rates have receded from the 2009 highs of 10.0% and 8.7% and are now around 8.1% and 7.3% for US and Canada respectively, with unemployment rates projected to continue their decline in the near future. This should lead to greater income levels and larger consumption demands, including for air travel.

Evolution of expenditures for travel per capita in the US



Source: IHS Global Insight, Airbus



Market Trends

Consolidation and the replacement of the region's ageing fleets, are the two most cited topics when the US commercial aerospace market is discussed, and they will likely continue to dominate the conversation for some time to come. Despite the continuing potential for some further mergers, 2011 and beginning of 2012 has been a period of "post-merger integration" as airlines look to most effectively leverage the recent mergers. Several examples of this were United and Continental receiving a single operating certificate in November 2011 and fully merging websites and frequent flyer programs in March 2012; Southwest and AirTran receiving a single operating certificate in March 2012 and Southwest deciding to sell the former AirTran 717s to maintain a consistent fleet of aircraft. Today, seven airlines represent 90% of all domestic US traffic whereas 25 years ago it took 19 airlines to reach 90% of annual traffic. The ageing fleet in North America is beginning to be replaced. Today, North American carriers have one of the oldest fleets in service of any region. On average, the fleet in North America is eleven years old, which is the second oldest in the world, with only Africa's being older, at 12 years old on average.

Looking outside of the Single-Aisle market, the newest sight at several airports across the US is the A380, a VLA (Very Large Aircraft). Although no North American airlines have chosen to adopt the newest super jumbo jet, foreign carriers are using it effectively across the continent. As of June, there is regular A380 service to Los Angeles, New York, Montreal, Toronto, Washington DC and San Francisco with more expected destinations before the end of the year.

Airlines in North America have become very creative in their cost reduction strategies to the extent that today, there is some convergence of business models between LCCs and network carriers. By taking aspects of the LCC business model, including increasing baggage fees and charging for services on flights, and applying this to network carriers' businesses, they have been able to increase their per passenger profit. LCCs on the other hand are looking at what they can leverage from network carriers to increase their profitability, such as maximising benefits from hub-and-spoke networks and even expanding internationally. Due to costs-cutting and expanding revenue streams, airlines in North America have been able to produce some of the highest profits when compared to other regions. IATA states that North America was the second most profitable region in terms of net post-tax profits at \$4.1 billion in 2011, more than double the profitability of European airlines.

Even though the domestic market is one of the largest in the world, the reliance of North American carriers on domestic markets has greatly decreased over the past 10 years. In 2003, 73% of North American carriers' traffic was on domestic and intra-regional routes. Today, this represents 65% of total traffic.

Civil aviation is becoming more affordable for North American populations. Since 1995, the average price per ticket has declined by nearly \$US 50 when you remove the effects of inflation. This decrease in ticket prices has led to greater opportunities for more North Americans to travel.

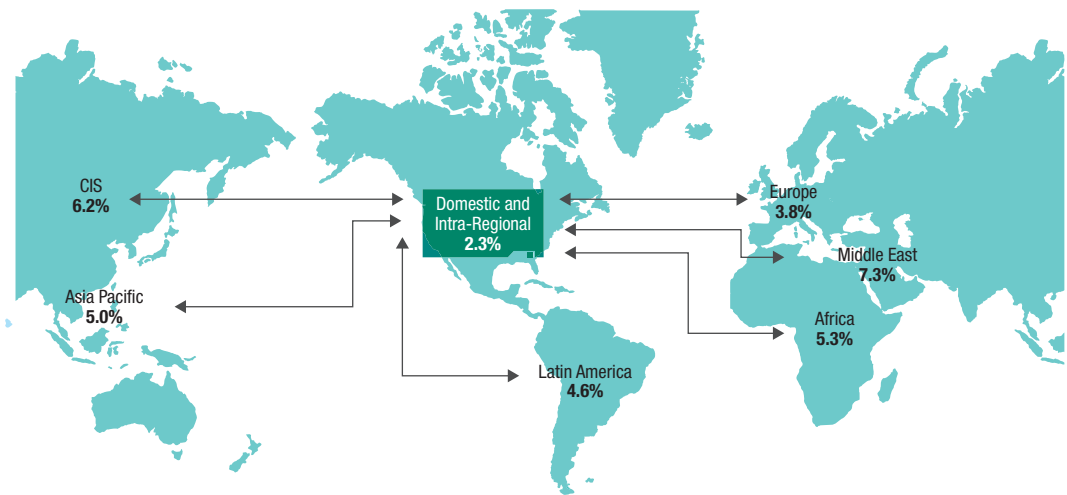


Results

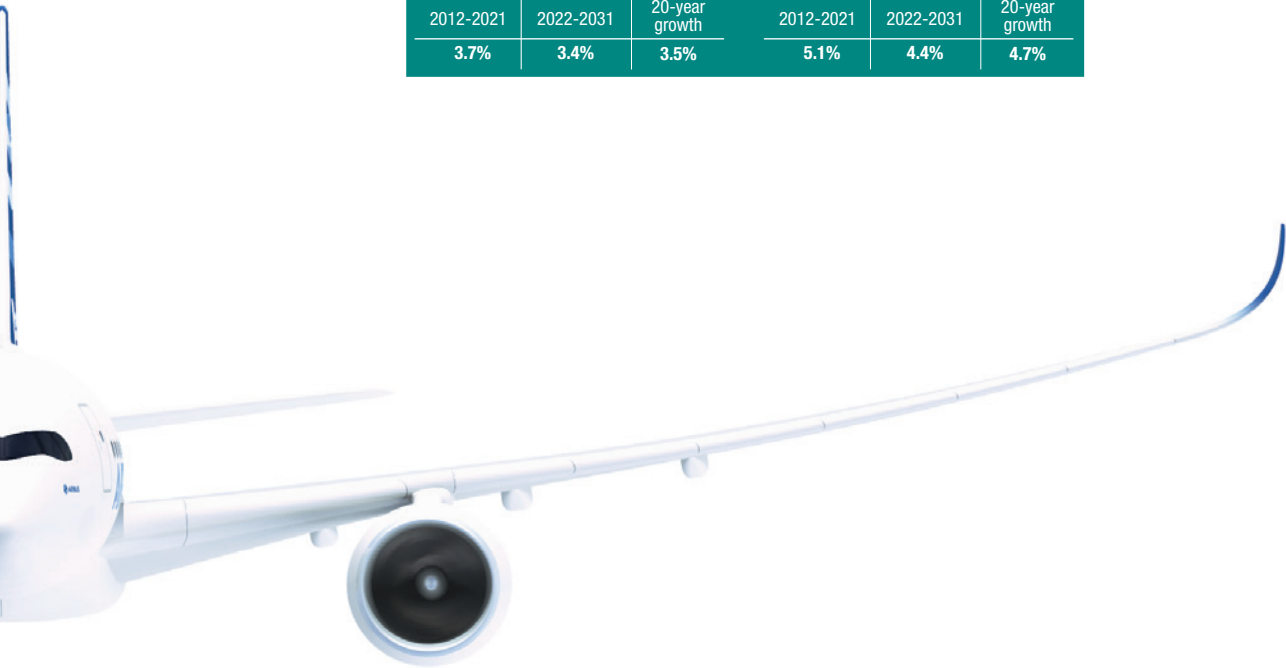
Over the next 20 years, traffic to, from and within North America is expected to grow at 3.5% per year. As can be expected, the strongest growth will to come from routes with the Middle East, the Indian sub-continent, Latin America and PRC.

This growth and the overall market position is leading airlines to invest in their fleets, specifically looking at purchasing the most fuel-efficient aircraft in an attempt to reduce the costs associated with fuel.

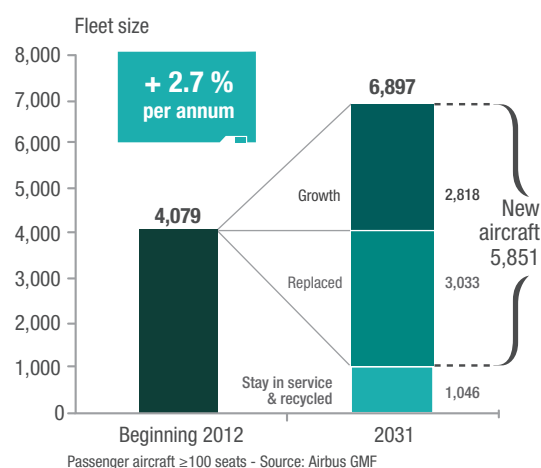
RPK development from/to North America (2012-2031 CAGR)



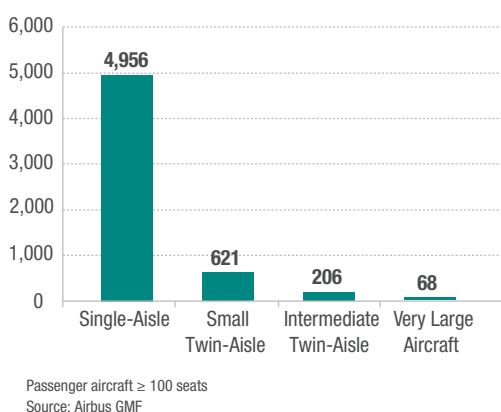
North America			World		
2012-2021	2022-2031	20-year growth	2012-2021	2022-2031	20-year growth
3.7%	3.4%	3.5%	5.1%	4.4%	4.7%



This growth in traffic will be absorbed by almost 6,900 aircraft in service with North American carriers by 2031, which equals an increase of almost 70% compared to the fleet of 4,100 aircraft in service by 2011. Over the coming two decades, the airlines of the region are expected to have a demand for more than 5,800 new aircraft. More than 3,000 aircraft will be needed to replace part of the current aircraft fleet in service today. 2,800 will be needed to accommodate the additional traffic growth for North American carriers.



Number of new aircraft



Close to 85% of the new aircraft demand of airlines in the US and Canada is for aircraft from the Single-Aisle category. A large portion of these aircraft will be needed to renew and expand the fleet serving the domestic US market, which is today and also forecast to be by 2031 one of the largest traffic flow in the world.

Almost 900 aircraft from the Twin-Aisle and Very-large-aircraft category will be needed primarily to serve the large long-haul markets from the US and Canada, including routes on the Trans-Pacific, Trans-Atlantic and traffic to South America.

NORTH AMERICA

Economy ¹

2.6%	Real GDP
5.1%	Real trade
1.0%	Urban population

Traffic ²

2.3%	Intra-regional & domestic
4.6%	Inter-regional
3.5%	Total

Fleet ³

4,079	Fleet in service beginning 2012
6,897	Fleet in service 2031
5,851	20-year new aircraft deliveries

^{1/2} 2012 – 2031 CAGR - ³ Passenger aircraft ≥ 100 seats

Source: IHS Global Insight, Airbus

Aviation benefiting North America

As a result of the size of its air market, the aviation returns in North America are the largest worldwide. The industry generated over \$556 billion and supported more than eight million jobs in 2010, representing 38.5% and 35.7% of GDP and jobs generated by air transport globally. Of these, other on-airport activities provide more than 68% of direct jobs, whereas airline jobs only account for 23.5%.

By 2030, aviation will help to create an additional 874,000 high skilled jobs across the region.

Beyond income and employment, the development of air transport is expected to drive the improvement of infrastructure in North America. In the coming years, one of the drivers will be the transformation of the ground-based air traffic control system into the NextGen satellite-based one. These advancements in ATM will reduce congestion and improve safety, increasing efficiency.

BENEFITS OF BUSINESS TRAVEL IN THE US + + +

Business travel contributes profit and growth. In the US, each dollar invested by a company in business travel drives \$3.80 in profits.

Executives report that business travel helps with:

► KEEPING CUSTOMERS

- **28%:** the average percentage of revenue that executives and business travellers estimated would be lost without in-person meetings with clients.
- **77%:** proportion of customers who prefer in-person meetings with their suppliers and partners
- **81%:** corporate executives who believe that a slow economy calls for more contact with clients and not less.

► CONVERTING PROSPECTS

The rate of conversion of a prospect into a client is around 16% for not in-person meetings, while it is more than 40% with in-person meetings. Around 85% of corporate executives find that in-person meetings with prospective clients are more effective than virtual meetings.

► BUILDING RELATIONAL NETWORKS BOTH INTERNALLY AND EXTERNALLY

Trade shows and internal company meetings



High-impact benefits from external trade show attendance

- Building industry partnerships (75%)
- Garnering industry insights (69%)
- Retaining customers (40%)



High-impact benefits of travel for internal company meetings

- Sharing ideas (76%)
- Strengthening communication (73%)
- Fostering staff morale (66%)

Source: Corporate executives survey (n=300)

► INVESTING IN HUMAN CAPITAL

- **Corporate executives** link travel to the performance and morale of the employees. Nearly 80% of executives believe that incentive travel has a significant impact on employee morale and job satisfaction. 70% of them also indicate that incentive travel has a real impact on employee performance.

Source: The ROI of U.S. Business Travel (Oxford Economics)

MIDDLE EAST

WHERE GEOGRAPHY AND TECHNOLOGY MEET



The aviation industry in the Middle East achieved 8.9% growth in 2011 despite unrest in the region and the hesitant world economy slowed by the European debt crisis. The region's airlines, enjoying high growth, were able to generate \$US 1 billion profit last year and continue their impressive development underlying the strength of their ambitious business models. Backed by massive investments in infrastructures, the Gulf airports are expected to boost their capacity by another 130 million passengers by 2018, benefiting from a unique geographical position at the crossroads between Europe, Asia-Pacific and Africa.

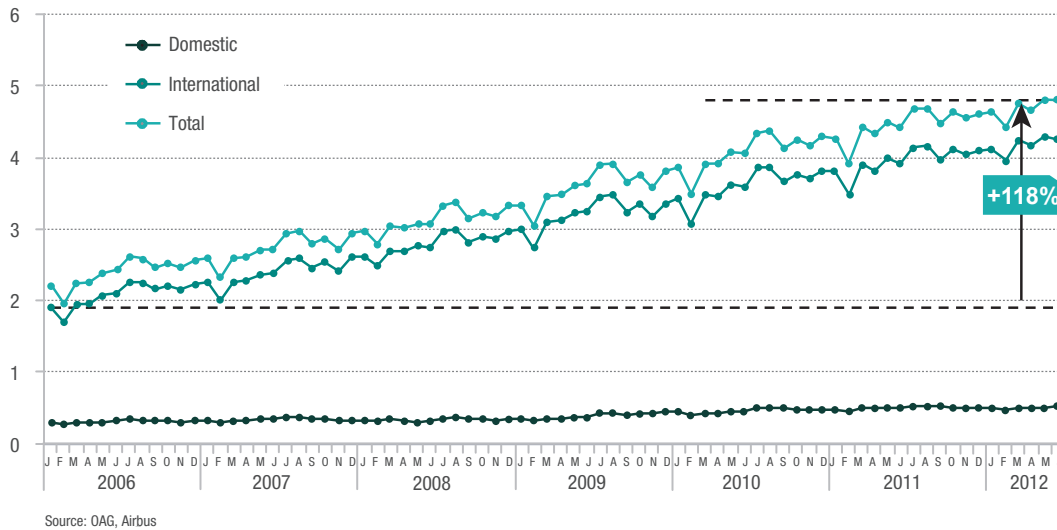
As a result, connectivity and air transport have

become an important enabler in meeting this ambition. Today, Gulf carriers serve more than 600 intercontinental destinations and this number will continue to increase, stimulating the demand for efficient long-haul aircraft such as the A380 or the A350XWB.

The political unrest affecting the region had only a slight impact on economic growth in the region, stimulated by high oil prices. Indeed, the region outpaced the average world economic growth in 2011, reaching 5.5%, whilst IHS Global Insight forecasts a 4.0% growth for 2012. As a consequence, carriers are looking to expand their services in a thriving domestic market which enjoyed a 7.8% growth in 2011.



Yearly ASK (trillions) evolution from / to / within the Middle-East region

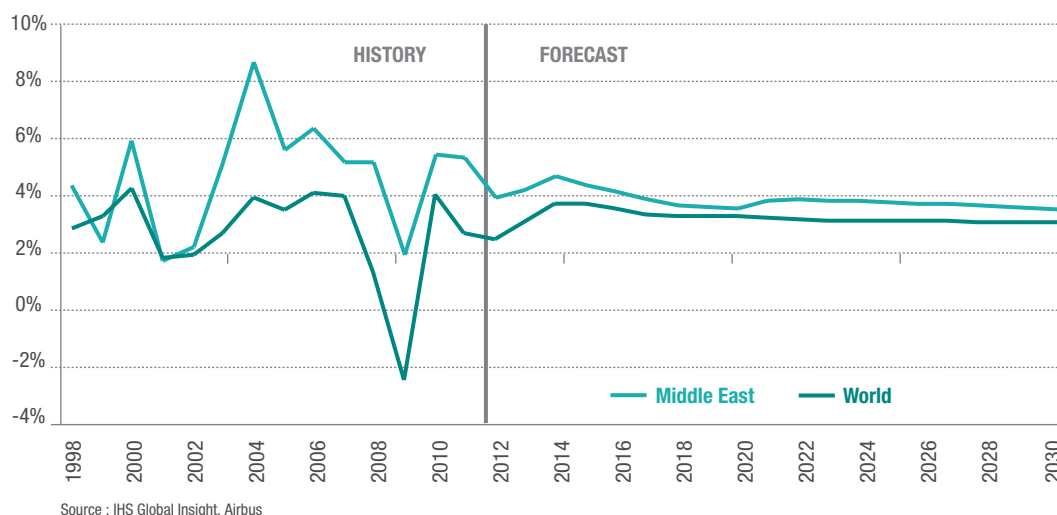


Middle East GDP has grown at 5.2% yearly last decade, 2.5% higher than world GDP

As mentioned, the turmoil that shook the region in 2011 had a short term impact on the economy, as industry levels comparable to those before the Arab Spring were witnessed in early 2012, this was a quicker than expected recovery. Moreover, the events had very little impact on the air traffic of the Middle-East region, since primarily low-density routes were affected.

Middle Eastern countries have built economic and trade relationships with countries all around the world and especially emerging regions. As a consequence, trade with the EU and the US represents only 15% of the gulf country exports. The GCC (Gulf Co-operation Council) countries are also enjoying a comfortable fiscal and current account stance resulting from rising oil revenues and a relatively low population levels. This combination makes it possible for the region to sustain high growth rates, boosting air traffic in the region.

GDP growth rate evolution



Almost 6 billion people are within 8 hours flying time from the gulf countries

Gulf carriers, with their ambitious business model, are determined to take advantage of their central position to expand services to an increasing number of destinations. Indeed, 81% of the world's population is within 8 hours of the three major sixth freedom hubs, Abu Dhabi, Doha and Dubai. Since 2006, they have doubled their traffic and in 2011, these three airports saw a 10.5% traffic growth to reach 73 million passengers,

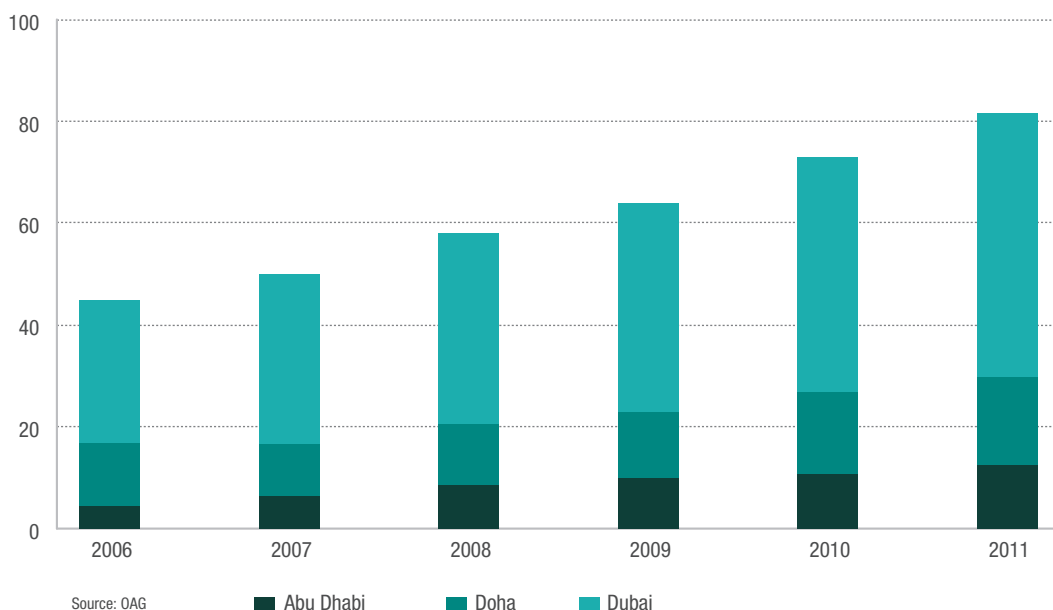
increasing the need for large aircraft such as the A380. Today, Dubai airport is as large as Paris CDG and the authorities are planning a US\$7.8 billion investment to boost their capacity from 60 to 90 million passengers by 2018 in order to accommodate the passengers from the new destinations opened each year by the carriers serving these airports. In fact by 2031, Dubai's airport will rank 2nd in terms of the amount international traffic.



Passengers through Middle Eastern airports growing dramatically

Traffic evolution for the three biggest Middle East airports

Passengers (million)



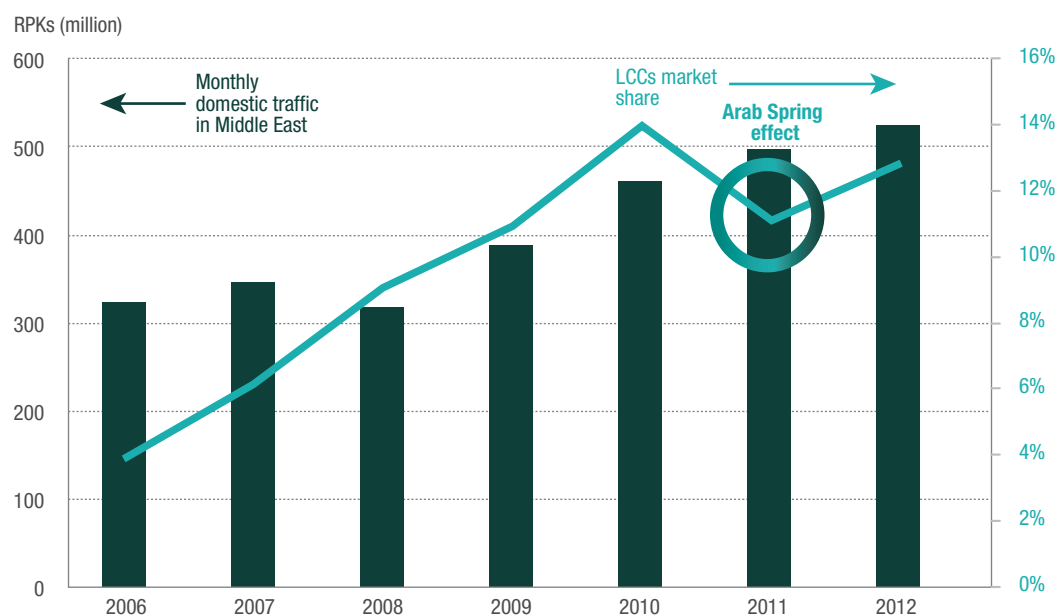
LCCs continue to develop their networks in the region

The domestic and intra-regional market is also booming in the Middle East, as it has enjoyed an average 8.3% growth rate since 2006. Low cost carriers are taking the opportunity of increased mobility of a young population and are developing their networks and today represent almost 13% of the Intra-regional market. Several reasons are behind this impressive traffic surge, amongst them, Gulf tourists travelling increasingly to destinations like Lebanon, Jordan and Turkey.

Another reason is the high proportion of expatriates living in the region: 44% of the population of the Gulf Cooperation Council countries (UAE, Saudi Arabia, Kuwait, Oman, Qatar and Bahrain) are foreigners, mainly from neighbouring Arabic countries or from the Indian Subcontinent. They represent almost 19 million potential travellers flying regularly to and from their home countries, contributing to intra-regional traffic growth which has increased by 150% since 2000.

"A young and increasingly mobile population helping to drive travel within the region"

LCCs presence in the domestic traffic in Middle East



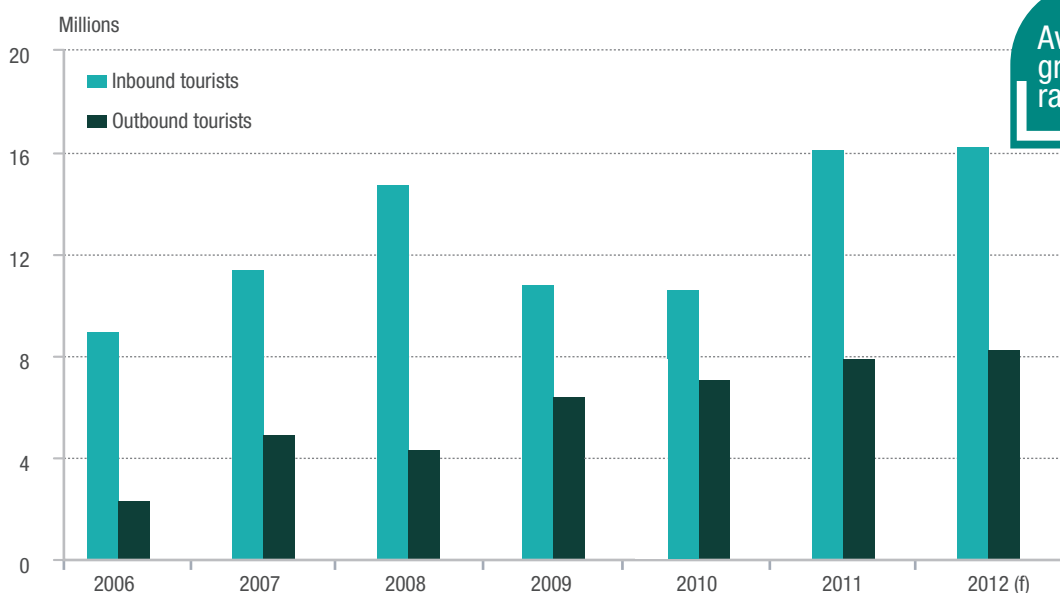
Source: OAG, Airbus

Focus on Saudi Arabia

With 29 million inhabitants, including an estimate six million expatriates, Saudi Arabia is the largest country in the Arabian Peninsula, with a GDP expected to grow at the rate of 4.4% through to the end of the decade. Aware of the huge potential offered by their international and domestic air transport industry, Saudi authorities announced recently plans to open their skies to new foreign airlines for their domestic market. In parallel, the kingdom will invest US\$600 billion between 2010 and 2020 on transportation, retail environment, real estate... including more than US\$20 billion to expand or build 23 new airports throughout the country.

Some 16 million tourists visited Saudi Arabia in 2011, largely due to business tourism and pilgrims travelling to Mecca. However, steps to encourage cultural and leisure tourism are ongoing, among them relaxations in visa regulations have been created. As a consequence, the World Travel and Tourism Council expects the revenues from tourism to double in 10 years from \$US39 billion in 2011 to \$US81.6 billion in 2020.

Tourists in Saudi Arabia evolution



Source: World Tourism Organisation, Airbus



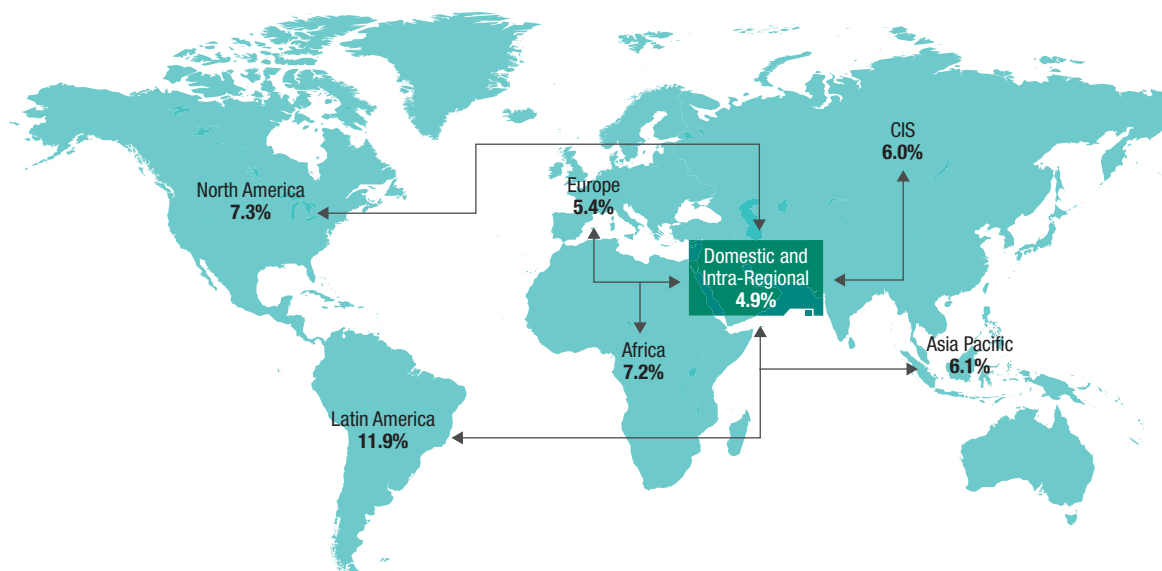
Forecast

International traffic will continue to be a key driver of growth during the next twenty years in the region, with an average growth rate of 6.2%. Continuing to take advantage of their ideal geographic position, the Middle Eastern global carriers will need more than 1,100 Twin-Aisle aircraft to expand their network, especially towards emerging markets such as those in Asia or Latin America, which is expected to grow at 11.9% per year. On the domestic and intra-regional side, traffic will continue to forge ahead with a growth rate of 4.9% thanks to the liberalisation of the market and the development of LCCs.

This traffic growth will require the region's airlines to acquire 1,906 new aircraft with 100 seats or more over the next twenty years, resulting in a fleet in service in 2031 that is more than two and a half times the fleet today. As discussed previously, a major focus for Middle Eastern carriers is on connecting regions, such as Asia-Pacific and Europe. To accommodate this emphasis, Middle Eastern carriers will purchase more Twin-Aisle and VLA aircraft than Single-Aisle aircraft, resulting in demand for 1,114 Twin-Aisle and VLA aircraft over the next 20 years.

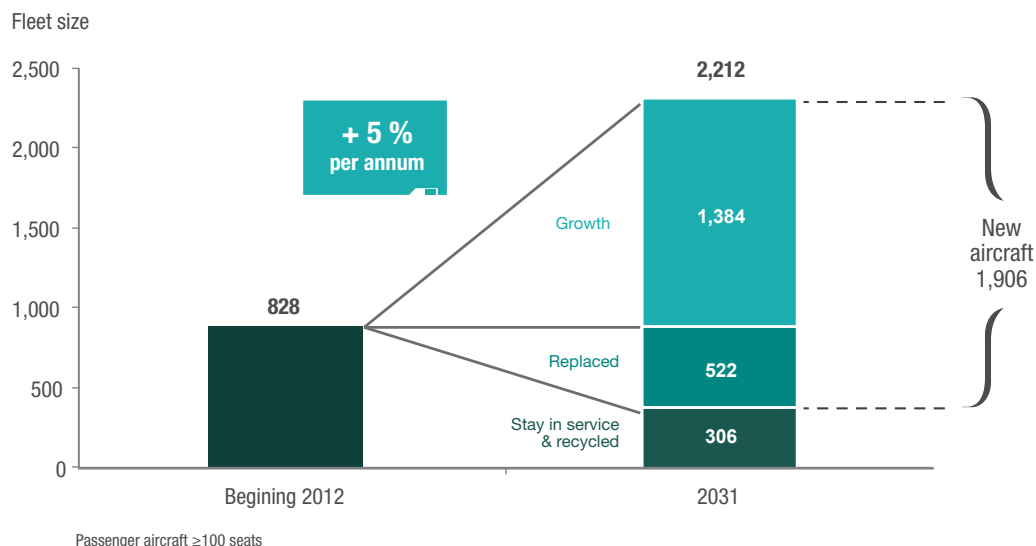
Traffic from/to Middle East by region

RPK development from/to Middle East (2012-2031 CAGR)

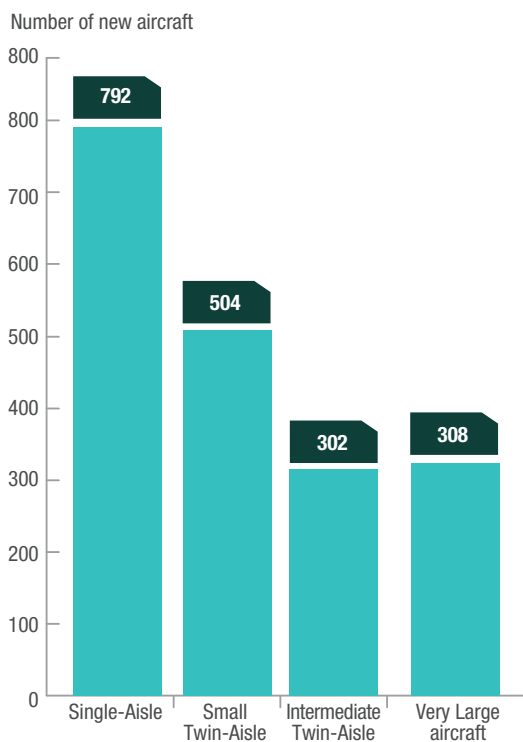


Middle East			World		
2012-2021	2022-2031	20-year growth	2012-2021	2022-2031	20-year growth
7%	5.5%	6.2%	5.1%	4.4%	4.7%

Middle East – Fleet in service evolution for aircraft with more than 100 seats



Middle East total new deliveries

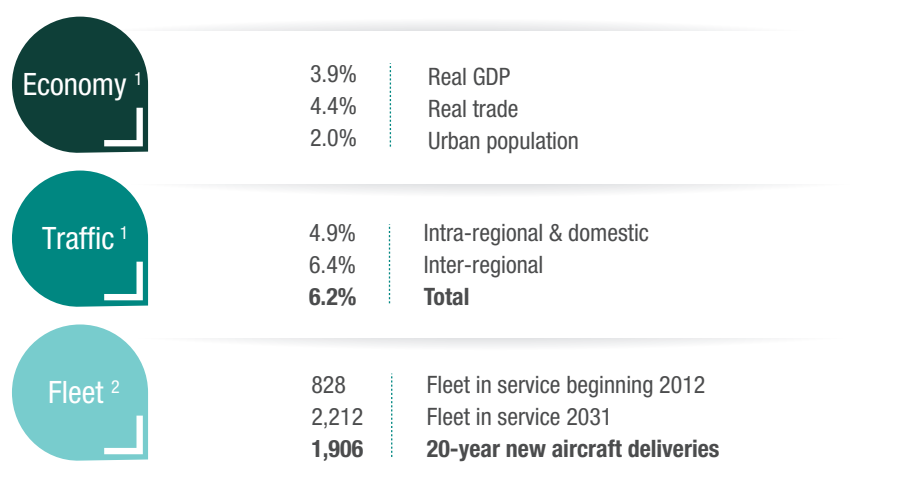


DUBAI'S AVIATION SECTOR, UNITED ARAB EMIRATES

Aviation is the main driver for growth in Dubai. 19% of jobs in the Emirate and 28% of GDP were supported by the sector in 2011. The industry drives Dubai's high level of tourism. Aviation also increased connectivity between Dubai and other cities and markets which attracted both talent and investments.

In the future, aviation will continue to play a vital role in Dubai's economy. In 2020, up to 22% of jobs could be supported by the industry.

MIDDLE EAST



¹ 2012 – 2031 CAGR - ² Passenger aircraft ≥ 100 seats

Economic Impact

Aviation is a major force for economic development in the Middle East. Slightly over a million jobs are currently supported ¹ by the industry, with the main part of direct jobs being with airlines, handling crew or on-site jobs at airports. There are an additional 1.6 million jobs created by the catalytic impacts of travel and tourism.

Tourism and other indirect and induced impacts of aviation make a notable social and economic contribution to the Middle East. The United Arab Emirates' economy for instance has been boosted by aviation, with over 206,000 scheduled international flights departing from the country each year to 178 different airports. Many projects carried out in the Middle East are aiming to transform the region into a knowledge-driven economy and luxury hub for tourists. Developing air transport has therefore become central to the region's leaders.

The impact of aviation on the region's economy is set to increase over the next twenty years. Considerable growth in passenger and cargo traffic will directly help to create almost 300,000 new jobs across the region.

The expansion of air transport will support regional tourism, which will lead to an increase in employment and skills. There will be an increased need for investment in infrastructure as the Gulf's airports are expected to boost their capacity by another 130 million passengers by 2018. Regulatory reform will also enable the region to achieve its full potential by encouraging regional competition.

In 2025, the number of tourists to Mecca and Medina is expected to rise to 17 million. Jeddah's airport capacity will rise from 15 to 30 million passengers in 2012 before reaching 80 million in capacity when it completed. This increased capacity mainly results from the hundreds of daily flights that bring the estimated total of 12 million pilgrims to Saudi Arabia each year. During the Hajj for example, regular flights are suspended while about 5,000 special "pilgrim flights" operate around the clock.

¹ Whether directly, indirectly or induced

LATIN AMERICA

BENEFITS OF FLIGHT WELL UNDERSTOOD



Economy and business

Aviation in Latin America has a very long tradition. Pioneers in bold but fragile flying machines were not limited to Europe or the US; many remarkable aviators originated in Latin America.

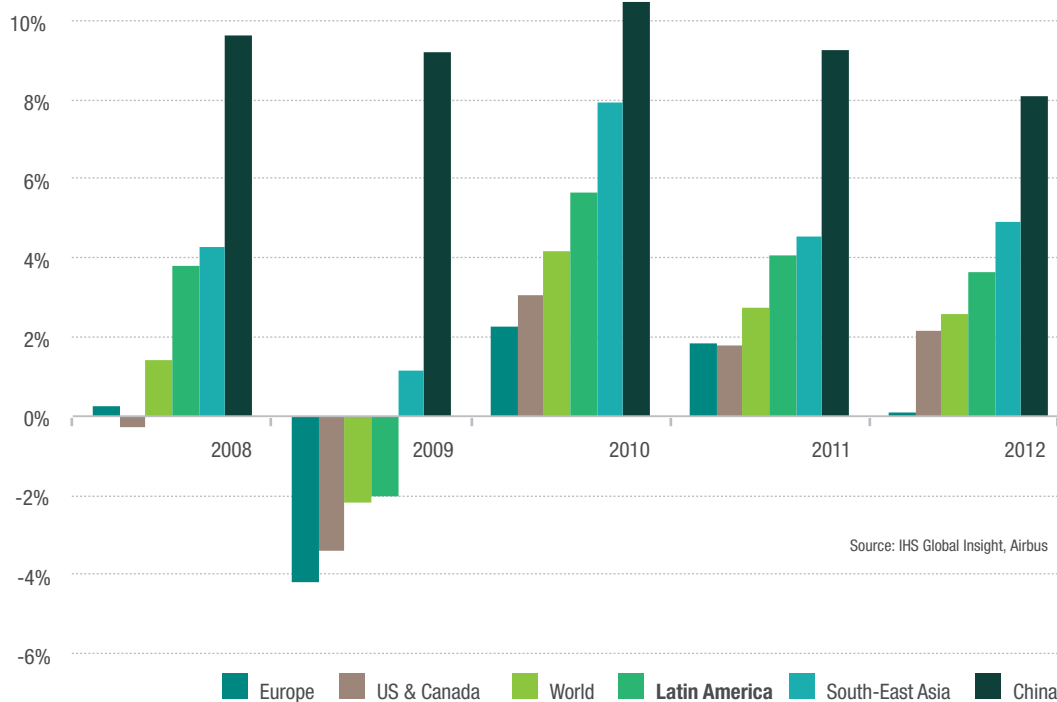
Names like Alberto Santos-Dumont or Jorge Chàvez have made it into our history books with spectacular flight demonstrations more than 100 years ago. Their legacy is visible in places like the “Aeroporto Santos-Dumont” in Rio de Janeiro or the “Aeropuerto Internacional Jorge Chàvez” in Lima.

Aviation was chosen in the region many years ago as the preferred mode of transport to

traverse the region's thick forests, wide plains and high mountains. Therefore it should be no surprise that some of the world's oldest and most active airlines are found in countries like Brazil, Colombia, Venezuela or Chile.

Examining recent economic development shows that Latin America's economy has also been impacted by the last economic crisis, although it has fared better than the world average. The advanced economies in Europe and North America lost up to 4% of real GDP at the peak of the financial crisis in 2009. Latin America however went into the negative by only 2%, slightly better than the world average of -2.2%.

Year-over-year evolution of real GDP per global region (2005 US\$)

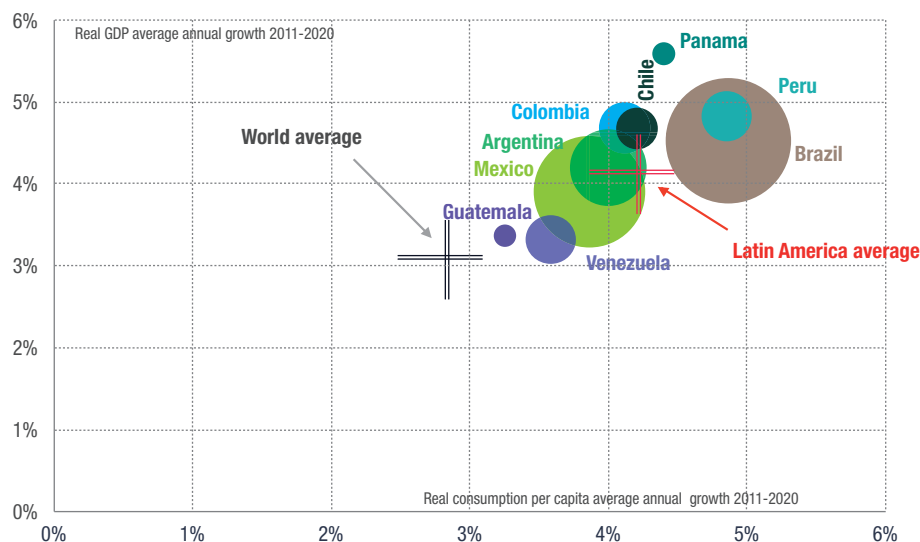


The current economic outlook up until 2020 projects that Latin America will again be amongst the regions performing well above the world average. Latin America's economic growth is expected to be in the same range as other highly dynamic regions including the Middle East, Africa and South-East Asia.

Average annual growth from 2011 to 2020 is forecast to be at 2.9% for real consumption and 3.3% for real GDP on a global scale. Latin America clearly outperforms these growth figures with a forecast 4.2% compound annual growth for both consumption and GDP.

The Latin American countries shown in the next graphic represent more than 90% of the region's real GDP. Each one is expected to grow in terms of both consumption and real GDP above the world average until 2020. A precise look at some of Latin America's economies gives interesting details: Brazil, for example, even though already the region's largest economy, is forecast to grow not only above the world average, but even above Latin America's average. A forecast meaning that aviation will continue to be an important component of Latin America's transport system as it was in the past.

Evolution of real GDP at consumer spending 2011-2020 in Latin America per country



Bubble diameter proportional to real GDP at PPP (Purchasing Power Parity) in bn. US\$ in 2020. Source: IHS Global Insight, Airbus

Traffic and fleet

The airlines of Latin America have made huge progress in terms of fleet development over the past decade. In 2000, the Latin American airliner fleet was one of the oldest in the world with an average aircraft age of almost 16 years.

Since then, the fleet in service has not only increased by almost 40% from some 800 to more than 1,100 aircraft, but, has also reduced the average age by 35% down to slightly above 10 years. Today, the average age of Latin America's aircraft in service is even slightly below the world average, putting it in a similar age range as Europe's fleet.

Evolution of average fleet age (years)



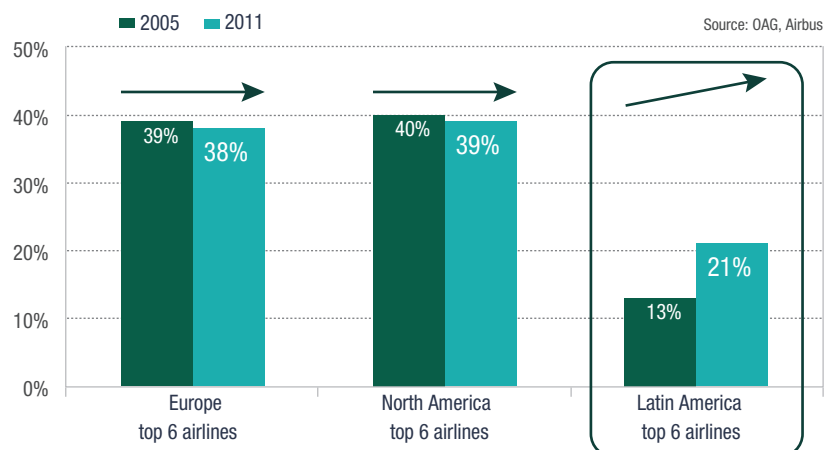
Passenger and Combi aircraft ≥ 100 seats; fleet as end of respective year
Source: ASCEND, Airbus

The influx of new fuel efficient aircraft into the region's airlines has helped to increase their market share by eight percentage points to 21% since 2005.

Even though this has largely been pent-up demand after the pullback of one of the major players in the region, it also demonstrates the carriers' capability to grow in a highly competitive environment.

Latin American airlines have a huge potential to increase their market share on long-haul routes

Market share evolution of the top 6 airlines on interregional long-haul traffic per region, 2005 and 2011 (ASK traffic)*



Source: OAG, Airbus

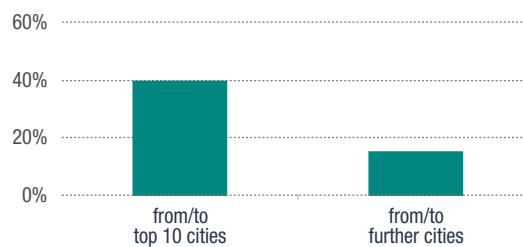
*Traffic as month of September; long-haul traffic: GC distance $> 2,000$ nm, excl. domestic traffic; respective top 6 carriers per region as of 09/2011

2011 top 10 Latin American cities in seats offered on departing and arriving flights;
2011 vs. 2005 evolution of traffic per route from/to/between the top 10 cities

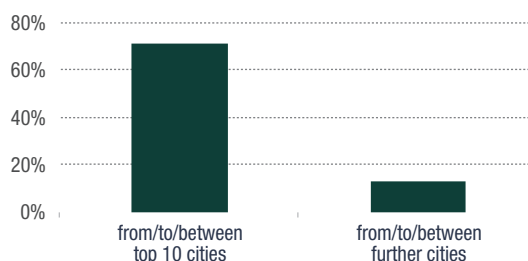


Traffic as month of September; long-haul traffic: GC distance > 2,000nm, excl. domestic traffic; respective top 6 carriers per region as of 09/2011
Source: OAG, Airbus

Long-haul traffic from/to Latin America, 2011 vs. 2005



Traffic within Latin America, 2011 vs. 2005



The capacity offered on departing and arriving flights at Latin America's airports has increased by more than 40% since 2005. The share of total offered capacity to/from the 10 largest cities by 2011 was at 42%.

On the long-haul market to and from Latin America, the offered capacity increased by almost 30%. Routes to and from the top 10 cities have seen an above-average growth of 40% compared to 15% growth on routes to other destinations in Latin America.

On the intra-regional market within Latin America, the contribution to growth of the largest airports has been even more significant. At an average capacity growth of almost 50%, the capacity offered on routes to, from and between the top 10 cities has increased by more than 70%.

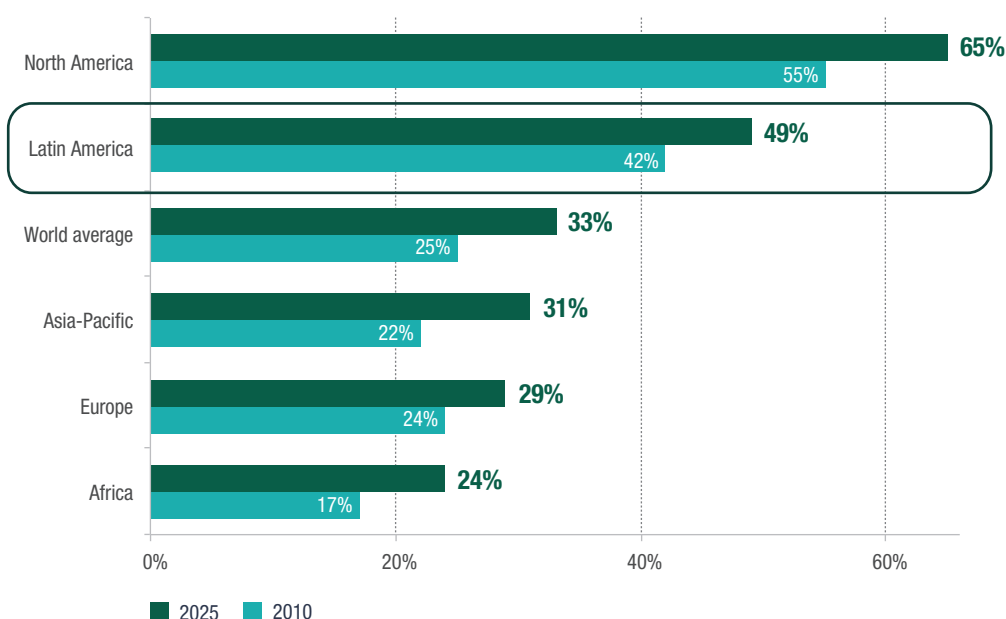


Cities and air transport

By 2010, more than 40% of Latin America's population lived in cities and agglomerations with more than 500,000 inhabitants. This is the second highest percentage in the world, and greatly exceeds the world average of 25% and almost twice as high as in Asia-Pacific.

The urban population of cities and agglomerations in Latin America is expected to grow rapidly. It is projected that almost 50% of Latin America's population will live in cities and agglomerations of more than half a million inhabitants by 2025.

Share of population living in agglomerations of 500,000+ inhabitants, 2010 and 2025



Source: United Nations, Department of Economic and Social Affairs, Population Division, 2011 revision

Cities and agglomerations in Europe, North America and Latin America with more than 5,000,000 inhabitants (2025)



● more than 10 million inhabitants ● 5 to 10 million inhabitants

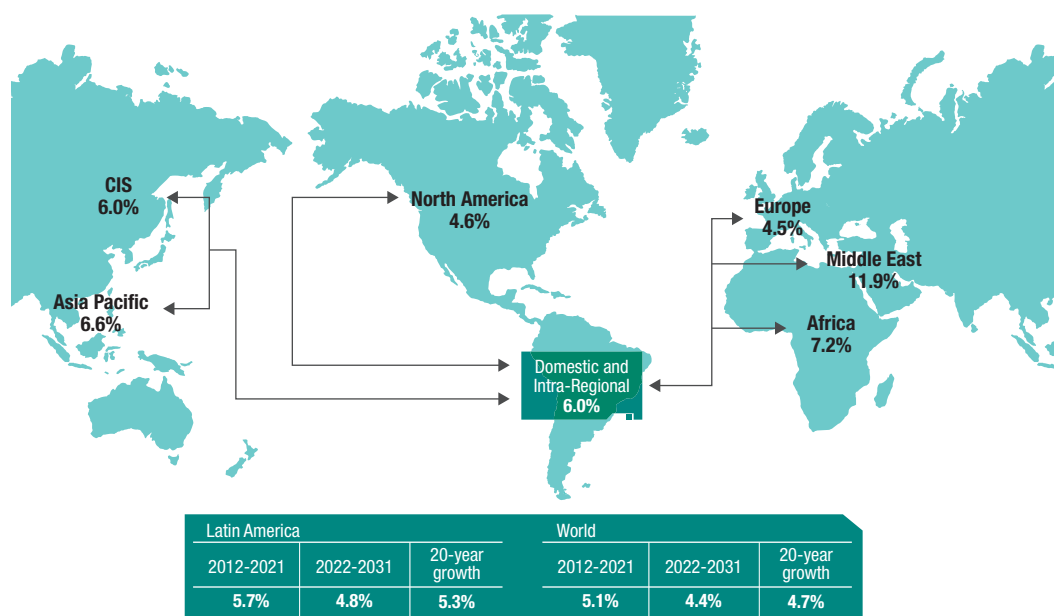
By 2010, Europe, North America and Latin America had 19 cities and agglomerations with more than five million inhabitants out of which eight were in Latin America. The number of cities or agglomerations with more than five million inhabitants is expected to increase from 19 to 27 by 2025 and from 8 to 11 in Latin America.

These large cities and agglomerations play an important role in the air transport network in the region. The cities in Latin America with more than 5,000,000 inhabitants will be key destinations within the region:

► More than 50% of origin-destination passenger traffic to, from and within Latin America is either to, from or between one of these 11 cities.

Fleet and traffic forecast

RPK development from/to Latin America (2012-2031 CAGR)



The region's air traffic is expected to grow at 5.3% annually over the coming 20 years and therefore above the world average at 4.7%.

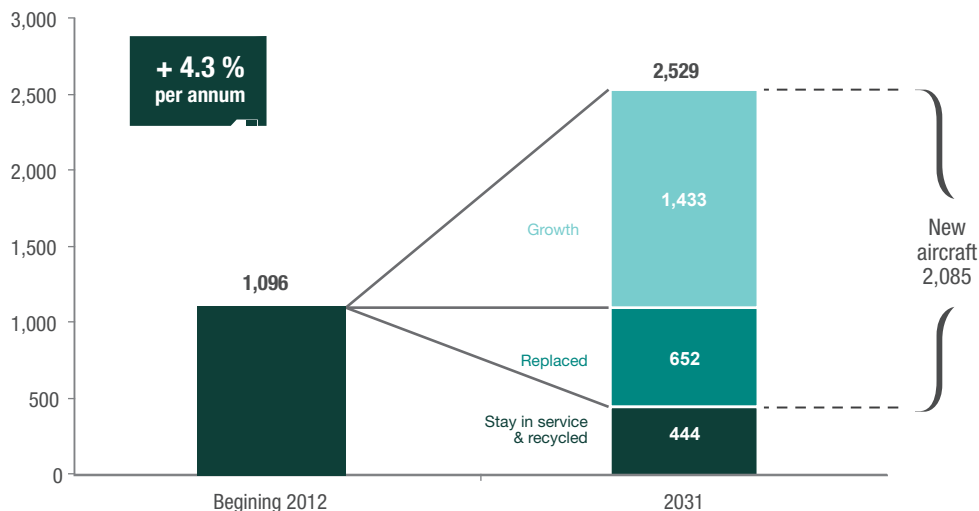
Traffic within the region is forecast to grow at 6.0% per year. The largest of the intra-regional traffic flows is Domestic Brazil, which already accounts for more than 40% of total traffic within Latin America. It is expected to have continued strong growth at 6.5% over the next 20 years. Further growth above the intra-regional average of 6.0% is expected to be on traffic flows connecting the countries of Latin America, further reinforcing the integration within the region. Traffic to and from Latin America is forecast to grow at 4.9% annually.

Within inter-regional traffic, the two single largest traffic markets for Latin America are Europe and North America, which account for more than 90% of traffic today. Despite growth slightly below the international average (4.5% and 4.6% compared to 4.9%) their relative contribution to total traffic to and from the region will still be close to 90% by 2031.

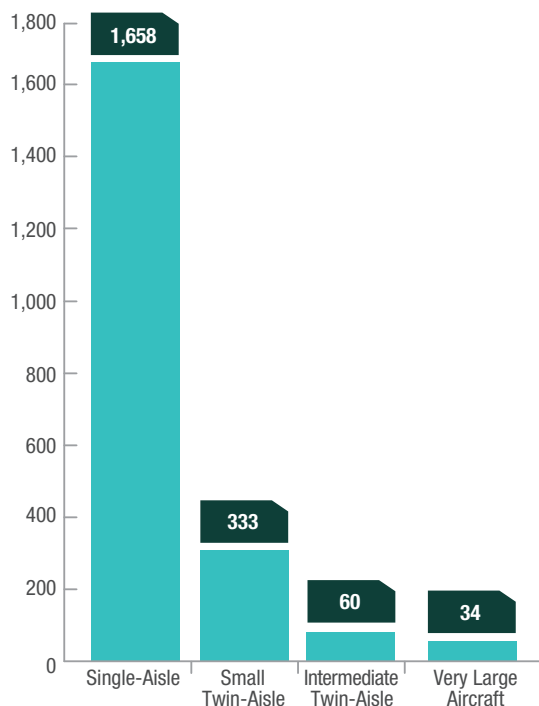
Rapid growth is expected to come from traffic to the emerging economies in Africa, Asia-Pacific, the Middle East and the CIS, which will grow at at least 6% per year over the coming two decades.

Latin America fleet in service

Fleet size



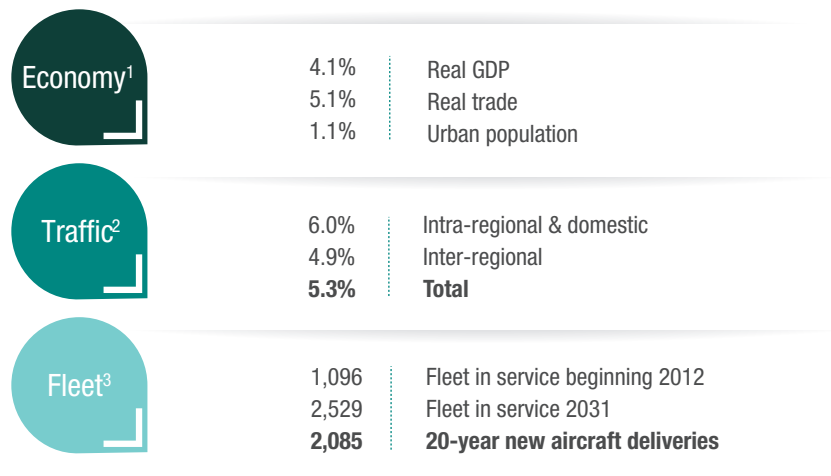
Number of new aircraft



The aircraft fleet in service with in Latin American carriers is expected to grow by 4.3% per year over the coming 20 years. Out of the almost 2,100 new aircraft, more than 650 will be needed to replace older, less efficient aircraft, and another more than 1,400 to satisfy the expected traffic growth.

Almost 80% of the new deliveries will be aircraft in the Single-Aisle category that predominately serve routes within the Latin America. A total of 20% of new deliveries are Twin-Aisle aircraft that will mainly be needed to serve long-haul markets and to help Latin America's to further regain international market share.

LATIN AMERICA



^{1/2} 2012 – 2031 CAGR - ³ Passenger aircraft ≥ 100 seats

Benefits of aviation

More than a million jobs in Latin America and the Caribbean have been created by the aviation industry, and a further 3.5 million are supported by its catalytic impact. Air transport has stimulated these regions' economies by enabling tourism in areas that were previously inaccessible. Productivity in the industry is three times higher than in the economy as a whole.

The development of aviation has had a lasting effect on business in the region. It has opened foreign markets to exports and has increased the flexibility of labour supply. Aviation has also enabled countries in the region to speed up the adoption of management practices such as just-in-time that rely on the fast delivery of supplies. These practices increase the region's global competitiveness.

Aviation will likely have an increasing impact in the future. By 2030, an additional 294,000 jobs will have been directly created.

To ensure further growth in aviation, investment in infrastructure, particularly in runways and other airport facilities, will be necessary, also creating opportunity. This will in turn contribute to the increase in job creation induced by the industry.

EL CALAFATE, PATAGONIA

The development of an airport in El Calafate, Patagonia transformed the city. It was previously difficult to access and the presence of the airport increased both tourism and the amount of time and money people spent in the region. In 1999, only 60,000 visitors visited the town whereas in 2006, 408,000 passengers arrived at the airport. In the same timeframe, the local population multiplied by four, which in turn has boosted investment in local infrastructure.

CIS

FLYING TOWARDS DIVERSIFICATION



The Commonwealth of Independent States (CIS) was formed in 1991. This GMF region is composed of twelve countries: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

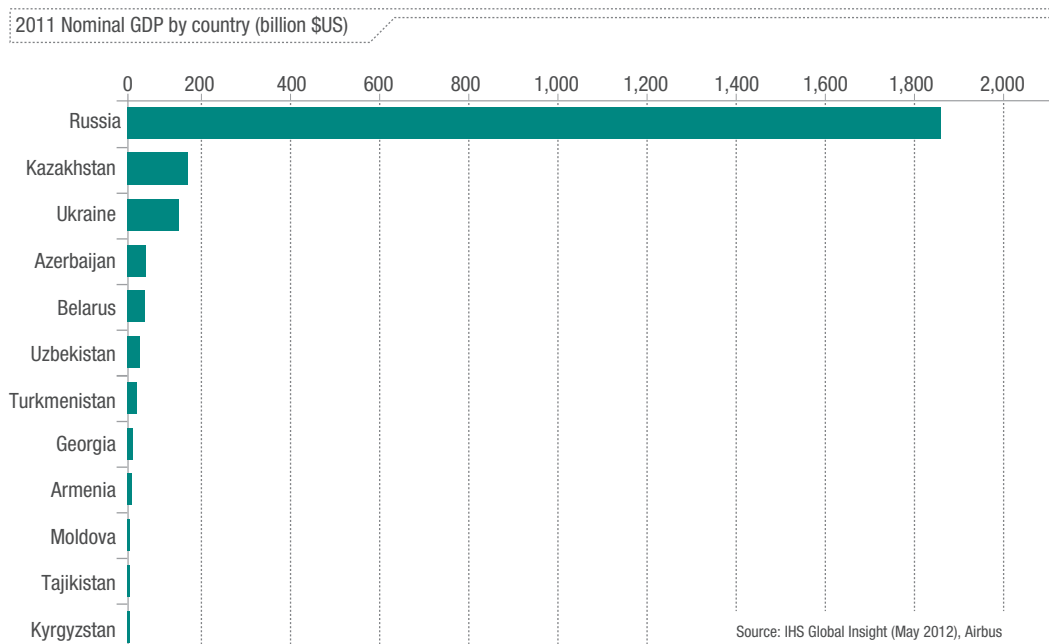
The aim of this organisation is to maintain political links between the different states so as to smooth the progressive transition from a centrally planned economy to a market economy.

Despite some economic difficulties in its early years, over the 13 years since 1998, the region's total real GDP has grown at 5.6% per year.

Russia is the biggest country in the CIS, with a GDP of almost 2 trillion \$US in 2011, the ninth largest globally, eighth in terms of population with almost 150 million inhabitants in 2011, and with an area of 17 million km², it is the largest country in the world.



Russia is by far the biggest economy in the CIS



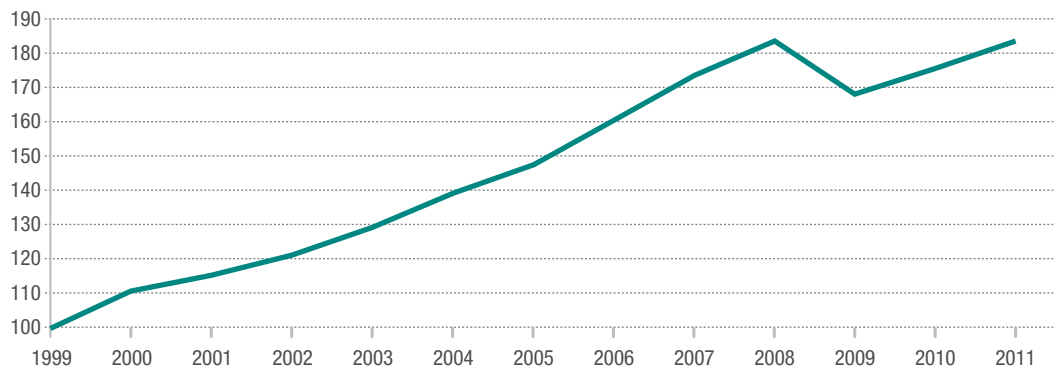
Source: IHS Global Insight (May 2012), Airbus

Fast economic growth in Russia in the last decade

Between 1999 and 2011, Russia was characterised by a fast growing economy, giving it membership

in the BRIC (Brazil, Russia, India, and China) group of emerging countries and economies.

Russia real GDP growth (Base 100 in 1999)



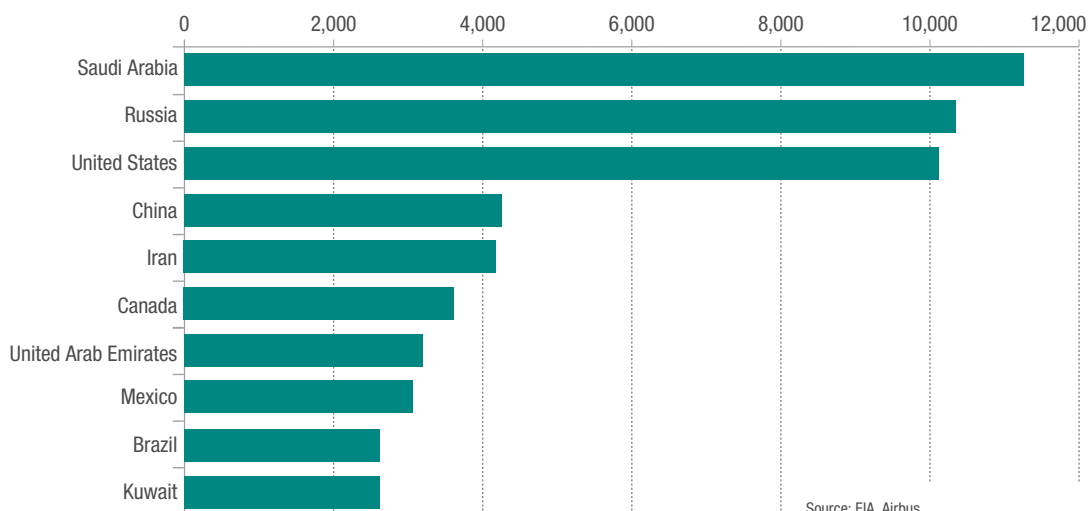
Source: IHS Global Insight (May 2012), Airbus

Russia's economy is underpinned by a wealth of natural resources, owning 25 % of all proven natural gas reserves and 6.3 % of all proven oil reserves. In 2011, according to the US Energy Information Administration (EIA), it was the second

largest oil producer in the world behind Saudi Arabia. This having been said, Russia is keen to diversify its economy and is looking to aviation to help this transition.

Russia is the second largest oil producer in the world

Top ten oil producers in 2011 (000's barrels/day)



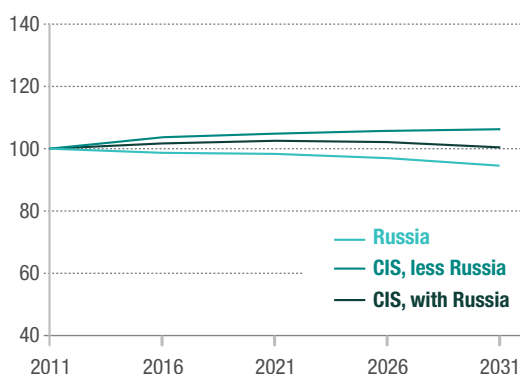
Source: EIA, Airbus

IHS Global Insight predicts that the total Russian population will likely decline between today's level and 2031, but this will likely be offset by the increases in population by the other countries in the region. Looking at the data, with 2011 as the

base year, we see that the population of CIS will largely remain constant as other countries grow. By 2020, the total population of CIS countries, excluding Russia, will surpass Russia's total population.

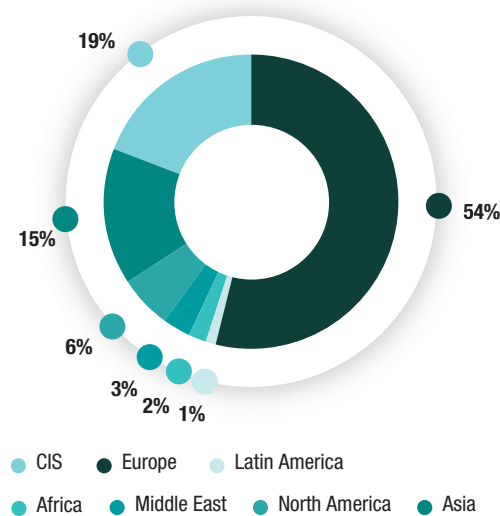
Population and trading partners

Forecasted population evolution



Source: IHS Global Insight (May 2012), Airbus
Note: Base year 2011=100

Merchandise exports from CIS by region (share of total)



Source: WTO, Airbus

Europe is the main trading partner of the CIS: according to the WTO, 54 % of merchandise exports were to Europe in 2010. According to Eurostat, more than 40 % of Europe's oil and gas imports came from CIS in 2007. This trade with Europe has been an important component of the region's economic progress.

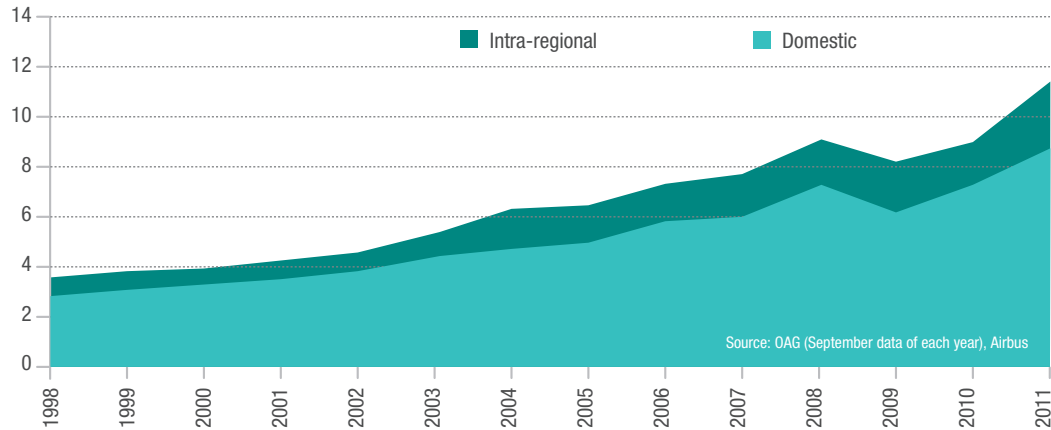
As previously stated, the real GDP annual growth rate for the whole CIS region for the period

1998-2011, was 5.6 % and is expected to grow at 0.2% faster than the world average, at 3.4 % from 2011-2031. Over the same period, 1998-2011, domestic and intra-CIS passenger ASK traffic increased at an annual average growth rate of 9.1 %.

However, demand in domestic and intra-CIS, outside of Russia, has been slower and opportunity still exists for the greater regional integration of air traffic.

Strong growth of domestic and intra-regional traffic

Domestic and intra-regional traffic in CIS (billion ASK)

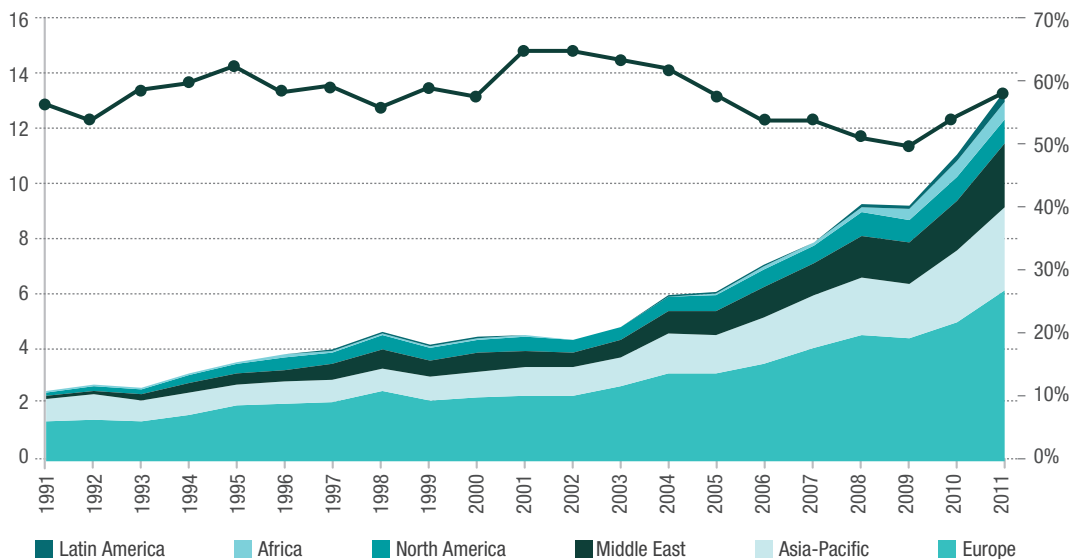


Reflecting trade flows, booming intercontinental traffic from / to CIS has been dominated by Europe and Asia-Pacific. With this growth,

CIS airlines' have succeeded in keeping a high market share on these intercontinental flows, this remaining fairly stable at 60 %.

Strong growth of international traffic from/to CIS

Inter-continental traffic from/to CIS by region (billion ASK)

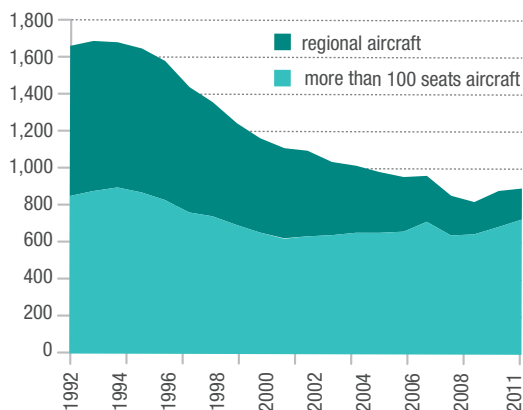


More recently, traffic to Africa and the Middle East has developed quickly. From 2009, Middle East low-cost carriers have opened more than 20 routes to the CIS, stimulating demand for religious tourism. In 2011, low-cost market share on the CIS - Middle East flow reached 8 % of total ASKs.

Huge productivity improvements have resulted in the number of aircraft operated by CIS airlines to actually decrease, whilst traffic has increased. This phenomenon was common to all aircraft types, but was more noticeable for regional aircraft.

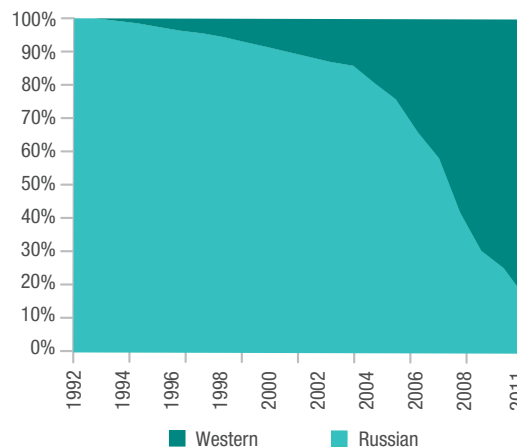
Fleet in service evolution in CIS

CIS fleet in service evolution by aircraft type



Source: Ascend (data as of end of each year), Airbus

CIS fleet in service by manufacturer region

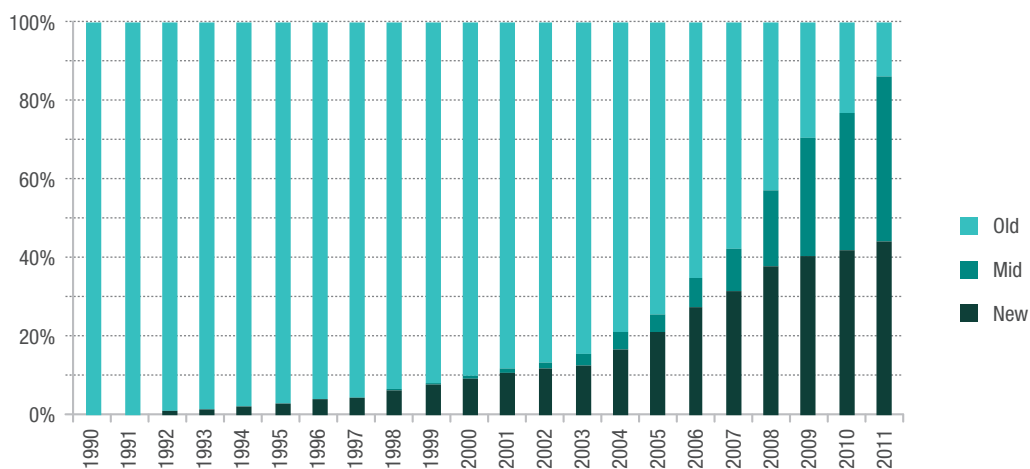


Over the past 20 years, the penetration of western built aircraft has greatly increased. In 1990, 100 % of the fleet in the CIS were Russian or Ukrainian-built aircraft. Today, western-built aircraft represent more than 80 % of the fleet in service in CIS.

The generation of the aircraft being flown in the CIS is also leading to greater efficiency. In 2006, more than 60 % of the fleet were older generation types. Today, these aircraft represent less than 15 % of the fleet. That being said, efficiency improvements can still be realised, as at the end of 2011, new generation aircraft only account for 40 % of the fleet-in-service.

Fleet in service evolution by aircraft generation

CIS fleet evolution by generation (share of total)

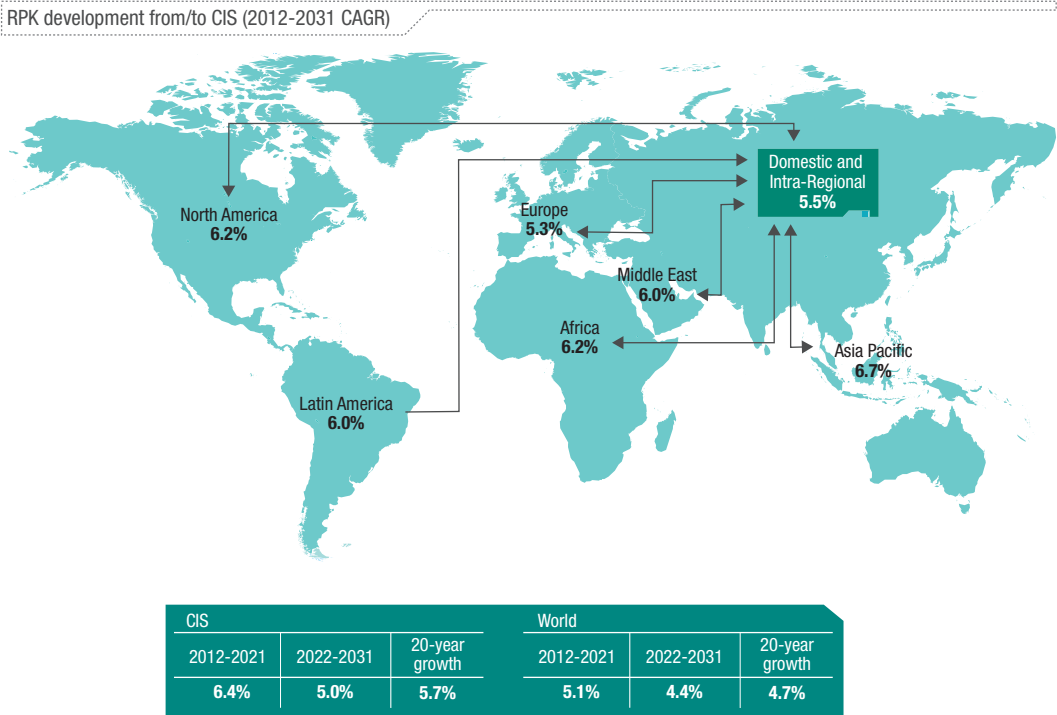


Source: Ascend (data as end of each year), Airbus

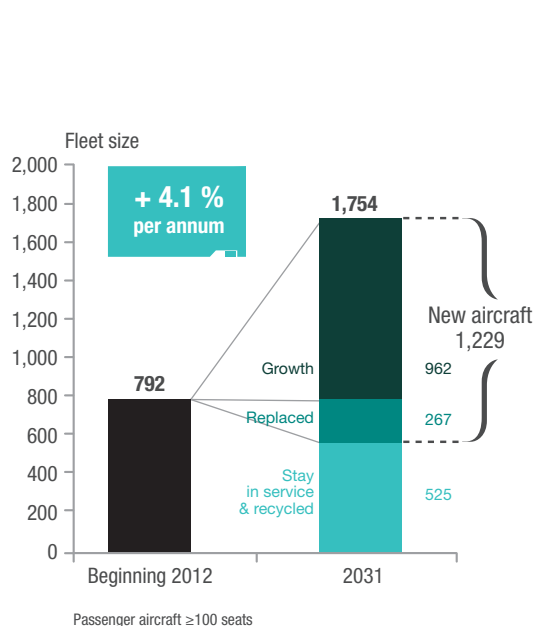
Based on these trends and the high economic growth forecast for the CIS region, the GMF predicts a 5.7% average annual RPK growth rate for traffic from/to within CIS for the next twenty years. Inter-regional traffic is expected to grow at 5.9%, with domestic and intra-regional growing at 5.5% over the forecast period. The highest traffic growth for the CIS region is expected to be in connection with the People's Republic of China, where growth is projected to be 7.6% annually over the next 20 years.

This traffic growth will translate into a demand for 1,229 aircraft with over 100 seats by 2031. Some 78 % of this demand will come from growth in the region, while only 267 aircraft will be for replacement. The great majority of this demand, 83 % in units, will come from the Single-Aisle market with a large part of this demand servicing intra-regional and traffic to and from Europe. Overall, the fleet in service will more than double over the forecast period growing at 4.1% per annum.

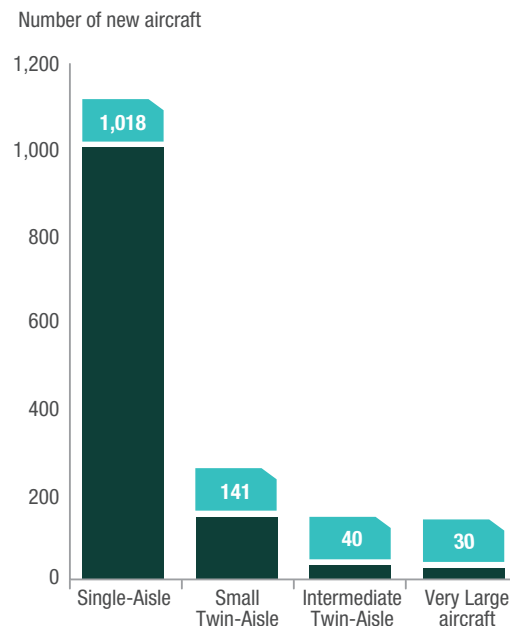
Traffic from/to CIS by region



Fleet in service evolution Greater or equal to 100 seats



CIS total new deliveries



Economic Impact

The aviation industry and aviation technology was an area of great interest to and investment under the USSR and continues to be an area of great

economic interest today in the region. Below is one example of how aviation plays a key role in the lives of Russians today.

CIS

Economy ¹

3.5%	Real GDP
3.3%	Real trade
0.3%	Urban population

Traffic ¹

5.5%	Intra-regional & domestic
5.9%	Inter-regional
5.7%	Total

Fleet ²

792	Fleet in service beginning 2012
1,754	Fleet in service 2031
1,229	20-year new aircraft deliveries

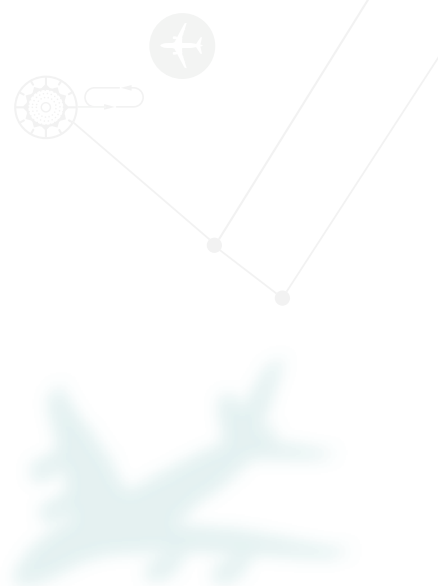
¹ 2012 – 2031 CAGR - ² Passenger aircraft ≥ 100 seats

EXCITEMENT ABOUT AN AIR BRIDGE BETWEEN KAMCHATKA AND ALASKA

In 2012, flights between Alaska and Kamchatka begins. There had been flights on this route in the past, and there is great excitement about their reintroduction.

Without these flights, the only way to get to the Kamchatka peninsula from Alaska was via Moscow.

The air bridge will reduce travel time by a day, enabling expatriates to return home a lot more frequently. In addition, this route will bring fishing and hunting tourism back to Kamchatka. When the route was cancelled in 2008, tourism dropped by almost 20%. Its re-opening will provide the needed boost to the local economy.



AFRICA

MORE WEALTH, MORE FLYING,
MORE DEVELOPMENT
KE NAKO!



If there is one region where the benefits of aviation are suited, it is Africa. It is the second largest continent, covering 6% of the world's surface area, more than 20% of its land mass, covering 11.7 million square miles. It is a hugely diverse region, home to more than a billion people today with more than 2,000 languages.

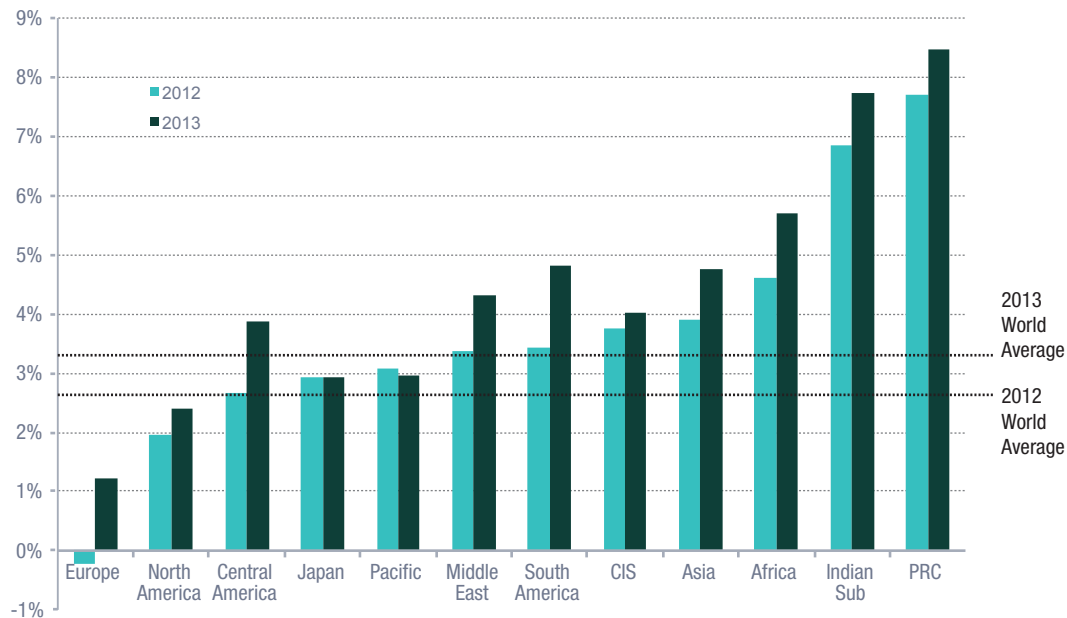
Economic growth in the region has been strong, even at a time when more mature economies are growing at very low levels or have faced recession. In the short term, Africa is expected to grow even faster than Asia, and in the longer term, is forecast by IHS Global Insight to grow at 4.4% per year. Combined with a population that will grow to some 1.5 billion people by 2031, and who will increasingly live in the region's cities, driving wealth

and as a result a growing middle class, the need for aviation is expected to continue to develop strongly. If further evidence were needed of Africa's continued development, South Africa, one of the largest and most influential countries in the region in terms of air transportation, was inducted into the BRIC group of leading emerging economies late in 2010, joining Brazil, Russia, India and China.

Now the BRICS, with the South Africa giving the "S" to the acronym, has a combined population over 3 billion people and a GDP of some \$14.7 trillion dollars. In 2010, the phrase 'Ke Nako' – 'it's time' was used to herald the coming of the world cup to Africa. Perhaps 'it's time' for aviation to really take off in Africa as it has in other emerging markets.

Today Africa's GDP growing faster than Asia

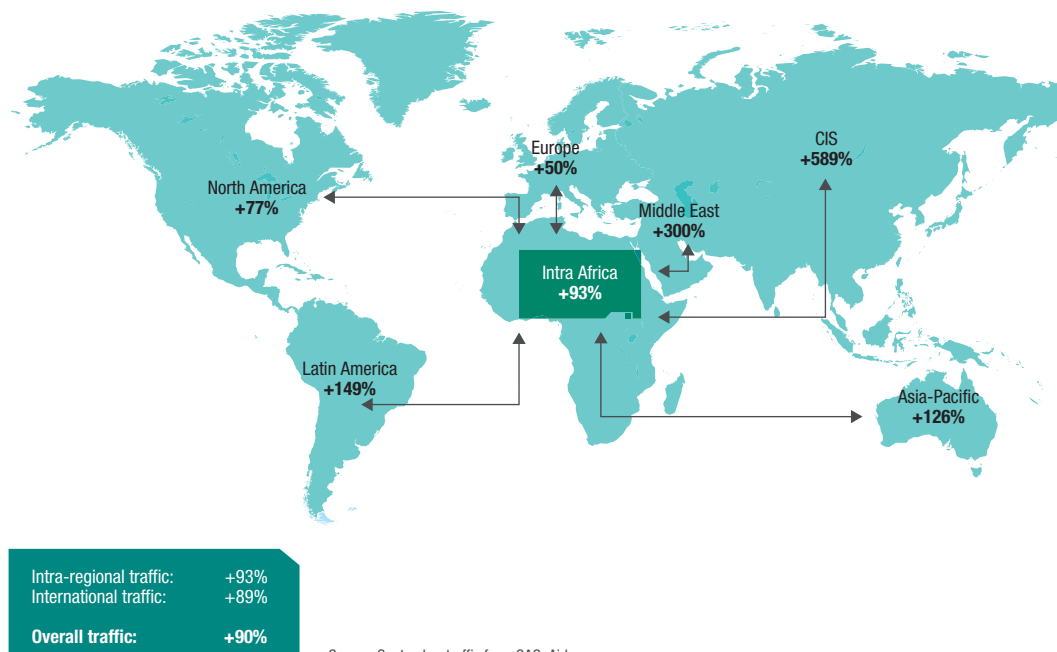
2012 and 2013 real GDP forecast by region



Since 2000, capacity to, from and within Africa has increased dramatically. Intra-regional flying has grown more than 90%, with capacity to Asia/Pacific and Latin America growing 126% and 149% respectively. Traffic to and from the Middle East has grown by more than 300%, partly through natural demand and partly as airlines from the

Middle East seek additional business opportunities through additional connectivity within Africa and from the region to the rest of the world. Whilst this could be considered a challenge competitively for the region's own airlines, whose share has been falling in recent years, it is also acting as a real stimulus for traffic growth within the region.

Traffic to/from/within Africa (ASKs), 2011 vs. 2000

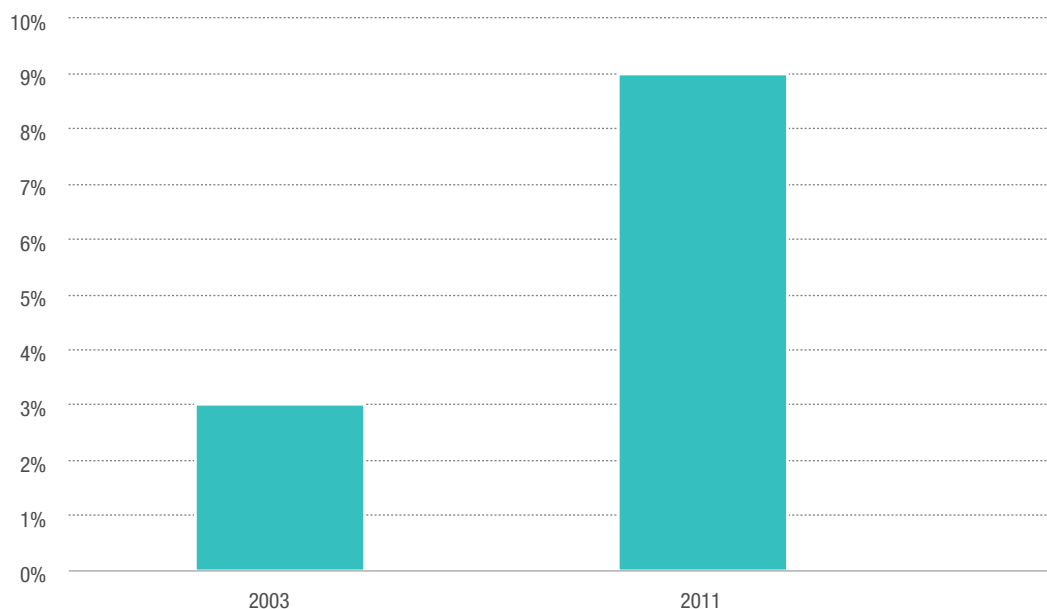


The low cost airline model has helped to stimulate traffic growth in other regions of the world, notably North America and Europe, where its share of seats is now more than 30%. This airline model itself was stimulated when markets were liberalised or at least became liberal enough for their successful operation; a process we are now seeing in parts of Asia. In Africa, the share of low cost ASKs is around 9% of the total.

This is low compared to Europe and North America, but considerably more than just 10 years ago, when low cost airline seats totalled just 3%. Today, new African low cost ventures are on the horizon, with passengers in this region no doubt as keen as those in other areas of the world to sample their service and low ticket prices.

Large potential for low-cost carrier development

LCC share of domestic and intra-regional African traffic (ASKs)

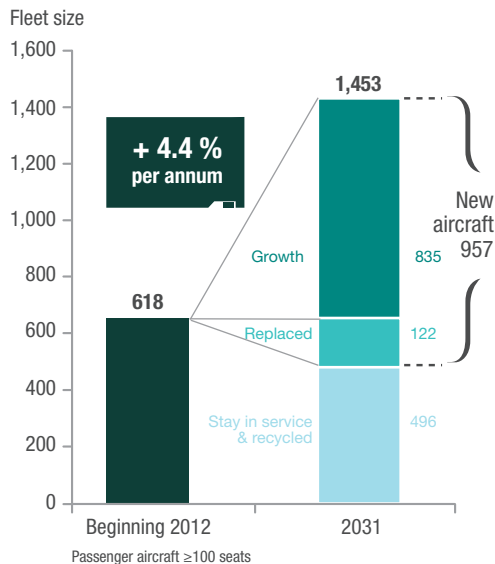


Source: September traffic from OAG, Airbus

The growth in inbound tourism to Africa is also expected to contribute to growth, with the UNWTO (UN World Tourism Organisation) expecting 5.0% growth per annum to 2030, growing from 50 to 134 million annual international tourist arrivals. This will represent an increased share of global tourism of 7% by 2030 (up from 3% in 1980).

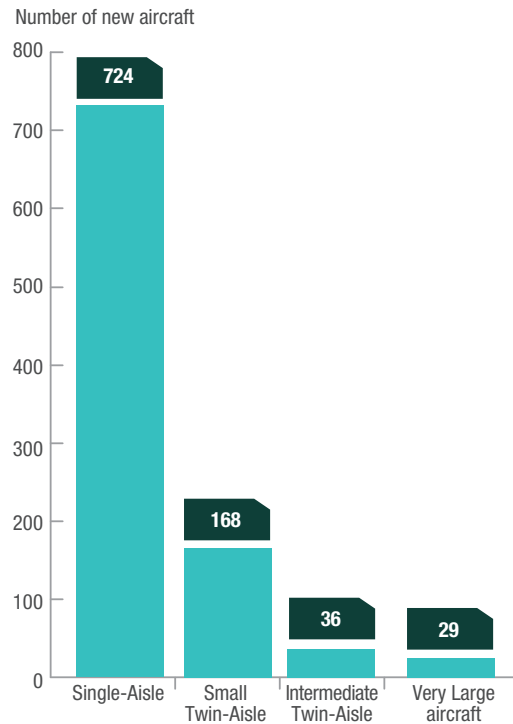
With these developments, economic, social, network and airline, it is expected that air traffic will grow well above the world average, with 5.7% growth per annum to 2031 forecast. Flying within Africa is forecast to grow at an average rate of 6.2%, with international flights forecast to grow at 5.6%.

Growth will drive the fleet to nearly 1,500 aircraft



As a result, the fleet of aircraft in Africa will more than double to 1,450 aircraft, nearly 960 new aircraft will be needed to meet demand from both growth in the region's aviation industry, but also from the replacement of older, less fuel efficient types. Already today, the fleet of aircraft consists of more than 50% new generation aircraft like the A320, this increasing from 20% just ten years ago. Adding mid generation types means that less than 10% of the fleet can be considered old generation or are out of production types.

Africa total new deliveries



Some 75% of the new deliveries to African airlines will be Single-Aisle types like the A320 or the Neo, with the remaining 230 aircraft being Twin-Aisle types like the A330/A350XWB or the A380.

Economic Impact

Africa has benefited from aviation thanks to increased tourism and trade. In 2010, air transport contributed over \$21 billion to African GDP. Although it is one of the regions in the world where the fewest jobs have been directly created by the industry, the catalytic impacts of travel and tourism have created six million additional jobs. An increasing number of foreign tourists arriving by air support growth by spending in the region. Air transport has enabled the continent to export perishable goods to European countries. However, the jobs generated by the industry are unevenly distributed across the continent. In 2010, over 56,000 of the 257,000 jobs directly created were in South Africa.

The continent's economy will benefit further from the industry in the coming twenty years as passenger and cargo traffic will both increase. An extra 66,000 jobs will be created directly by the industry between 2010 and 2030, and this number rises to 879,000 if we also take into account its catalytic impact. This rate of growth will require development of a qualified workforce. South Africa is already on the right path and has created an aerospace cluster near Pretoria which is set to grow further in the coming years.

AFRICA

Economy ¹	4.4%	Real GDP
	5.4%	Real trade
	3.1%	Urban population
Traffic ¹	6.2%	Intra-regional & domestic
	5.6%	Inter-regional
	5.7%	Total
Fleet ²	618	Fleet in service beginning 2012
	1,453	Fleet in service 2031
	957	20-year new aircraft deliveries

¹ 2012 – 2031 CAGR - ² Passenger aircraft ≥ 100 seats
Source: Global Insight, United Nations, Airbus GMF

FÈS, MOROCCO

Tourism in Fès, Morocco's second largest city, is highly dependent on aviation. The city is a UN World Heritage Site and hosts the Festival of World Sacred Music every year. However, the city's potential for tourism is under exploited. Investing in aviation is a key part of the government's plans.

More point-to-point flights to European airports need to be introduced, and existing routes will have to multiply the number of flights if Fès is to become the major city-break destination Morocco wants it to be.



DX02

IA

IC 90-043



TRANSMITTAL OF KNOWLEDGE



42%

35%

35%

DX02

STATUS: OK
IB



FREIGHT FORECAST

FREIGHT IS GREAT

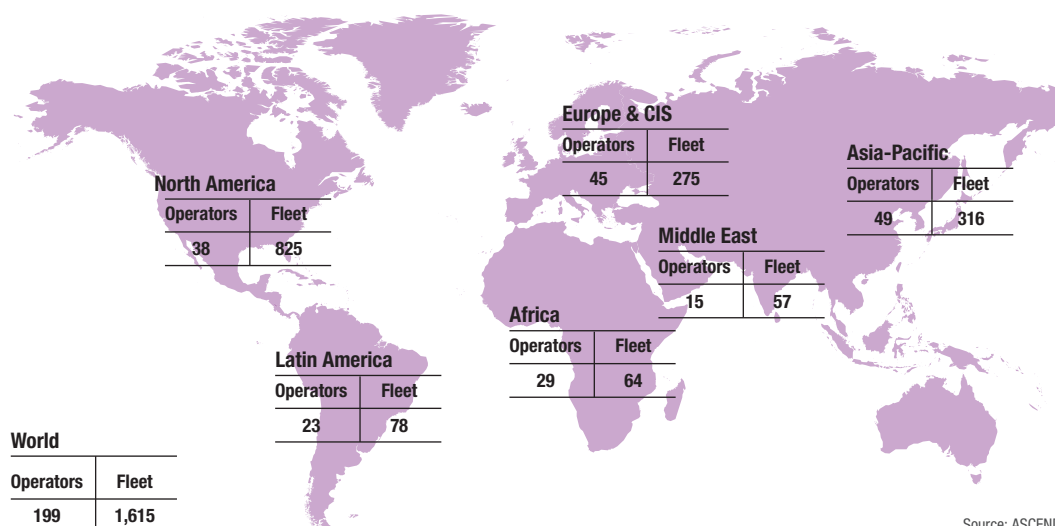


Today, there are more than 1,600 freighter aircraft in service with a cargo hold of at least 10 tons, carrying 22 million tons of cargo per year. This is performed by around 200 airlines, some of which handle both passengers and freight. Almost every industry, at some place in the supply-chain, depends on air transportation; industries who need the ability to quickly transport products and sub-components from one side of the planet to another. Today, the semiconductor/high technology and telecommunications industries are the largest users of air freight in terms of

the value of transported goods. Semiconductors alone accounted for 17 % of the value of all goods transported in 2011. These goods were closely followed by "valuables" and pharmaceuticals. In terms of weight, the fresh foods industry is the largest contributor to the air freight industry. All in all, the air cargo industry carried \$2.9 trillion in cargo value in 2011, according to Seabury. Taking the vast number of products that rely on air freight and the extensive value that is carried by the industry, freight is obviously of key importance to both trade and economic growth.



2012 freighter operators and fleet

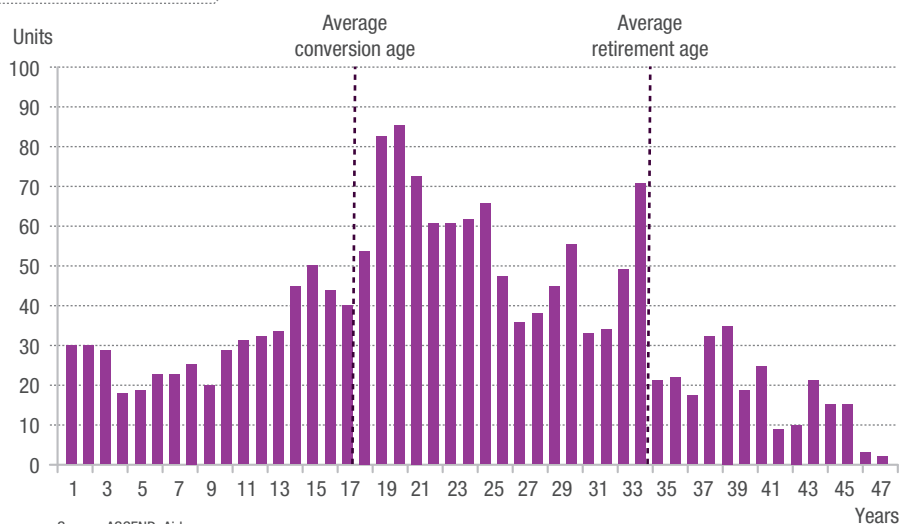


INTRODUCTION

The combination of high fuel prices and the economic downturn have forced many airlines to retire the oldest aircraft from their fleet, aircraft such as the “DCs” or old 747s, bringing down the world fleet to 1,615 aircraft compared to the 1,731 units two years earlier. These retirements have been followed by an increasing interest in newly built aircraft, as they provide fuel efficiency and better reliability. Interestingly, the integrators/express carriers have been the most resilient to the crisis.

North American integrators/express carriers have even increased their fleet by 15 units since last year, proving once more the sustainability of this market space. With nearly 600 aircraft from US integrators/express carriers and 100 aircraft from other express carriers, more than 40 % of the fleet is dedicated to serving this market. We also expect new express markets to boom over the next two decades, especially in China, India and Brazil, where the demand for this service is growing continually.

Freighters fleet age in 2012



Inter-continental airlines from emerging markets are also expected to play an increasing role in world air cargo, as it is expected their fleets will more than double over the next 20 years. Carriers in Asia-Pacific are anticipated to take advantage of the strong growth of their market, which is driven by trade with developed and emerging regions.

The Middle Eastern carriers' freight business is also expected to develop. As a result, their fleets is expected to increase more than two fold in the next two decades.

The Airbus GMF assumes that a freighter's economic life will depend largely on its size, while

small aircraft retire on average at the age of 34 years, larger aircraft are withdrawn from service when they reach 32 years on average.

Today, there exists a huge age discrepancy between small and large aircraft. The average age of small cargo jets in service today is 30 years; whereas, mid-size and large aircraft are much younger, respectively 23 and 15 years old on average. As such, almost all small aircraft will be replaced before the end of the forecast. Since the average age of mid-size and large freighters is considerably less, it can be expected that ~80 % of today's freighter fleet will be retired by 2031.

MARKET TRENDS / ECONOMIES

The inter-dependence between the economy / trade and the air cargo industry means that any volatility or difficulty in the global economy or regional economies has a direct effect on the air cargo market. The most recent economic crisis starting in 2008, and the increasing cost of jet fuel have led to a period of difficulty in the cargo market. Even with this period of crisis, the total number of Freight Ton Kilometres (FTKs) in 2011 was 7 % above the pre-crisis high in 2007 and 23 % higher than the low in 2009. There are 21 flows that were studied for the forecast did not have a single year of decline from 2007 to 2011, and these flows represented 12 % of all of the traffic in 2011.

The largest example of this is the Europe to PRC flow, which grew at 4.5 % per year from 2007 to 2009 and was more than 64 % higher in 2011 when compared to 2007. The fastest growing flow from 2007 to 2011, also not recording a year of decline, was the CIS to PRC flow which experienced growth of 84 % over the same four year period.

Over the forecast period, the world economy is expected to grow at 3.2 % per year, allowing for much opportunity for recovery and growth in the air cargo market.

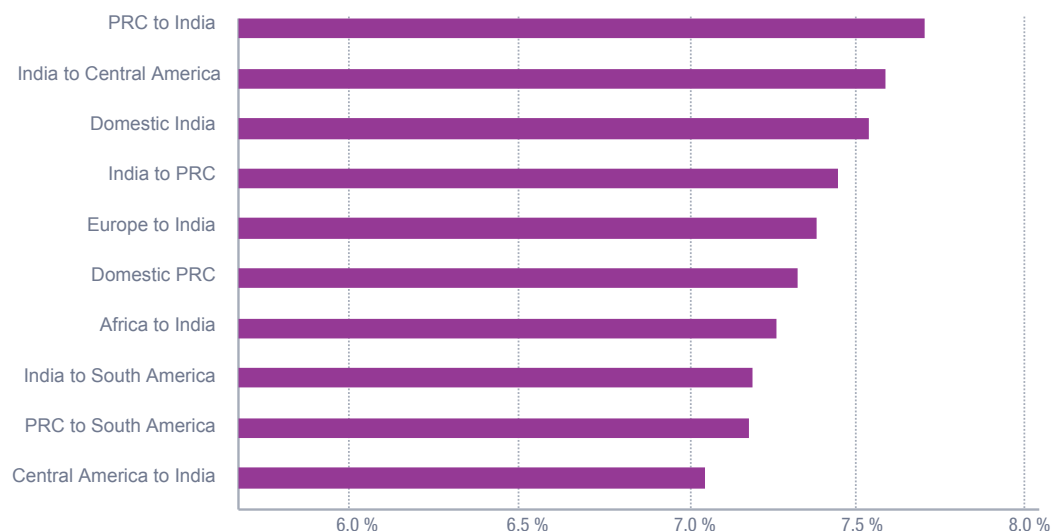
One driver of economic growth and air cargo demand is the growth in Foreign Direct Investment (FDI) flows. During the economic crisis FDI markets have been negatively impacted, but in 2011 FDI flows reached above the average of 2005-2007 according to the UNCTAD. FDI has historically focused on the flow of capital from developed economies to developing and occasionally from emerging economies.

Today, there is more FDI flowing from developing to developing or developing to emerging.

The US and Europe have been the drivers of investment internationally, but now China, other Asian countries and the Middle East have displayed the largest growth in outward FDI flows.

On top of a change in the source of flows, the type of investment is also shifting. In the past, the bulk of investment was in extractive services (i.e. oil and gas, precious metals, etc.). Even though today extractive services are a relatively high component of FDI, its percentage versus technology or manufacturing is on the decline. This shift is creating further demand for air cargo as products and sub-components are manufactured in more diverse regions, while the continued investment in extractive services allows for the persistence of their requirements in air cargo.

Top 10 fastest growing flows (2012-2031)



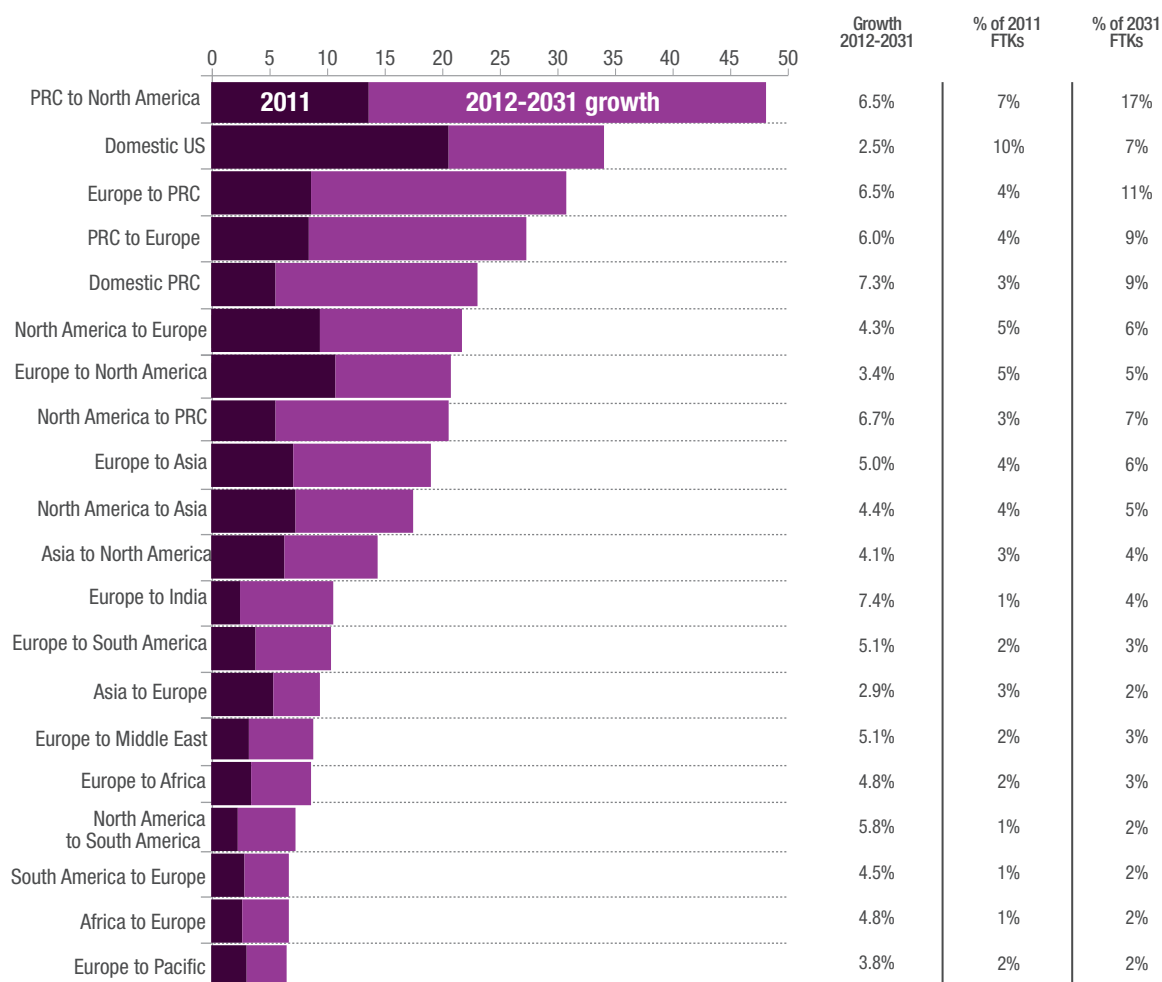
Source: CAGR % 2012 - 2031

FREIGHT TRAFFIC FORECAST

For the period 2011-2031, worldwide air freight is expected to grow at 4.9% per year. The structure of the top ten flows in volume of today will greatly change over the forecast period. In fact, the 10th ranked flow, Domestic PRC, will be the 5th largest flow by 2031 and traffic from PRC to North

America will surpass that of the Domestic US. These changes are indicative of the changes in the face of the global economy as Asia-Pacific and particularly PRC not only continue their global role in manufacturing but also increase their role as one of the largest consumer regions by 2031.

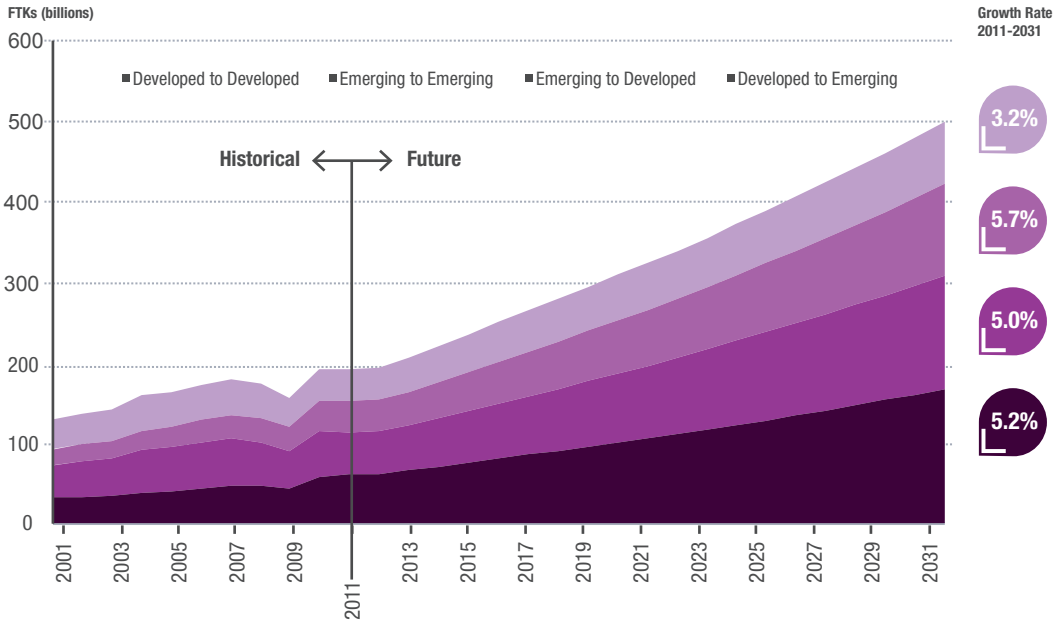
Traffic Evolution: Top Ten largest flows in billions of FTKs



It is clear that traffic between and within emerging economies will experience the highest growth rates, reaching 5.7 % per annum over the 20 year period. This is followed by traffic from developed

regions to emerging regions, growing at 5.2 % per year. Even the most mature flows, between and within developed regions, will still benefit from growth at 3.2 % over the next 20 years.

Fastest growth coming from traffic between and within emerging regions



REGIONAL OVERVIEWS

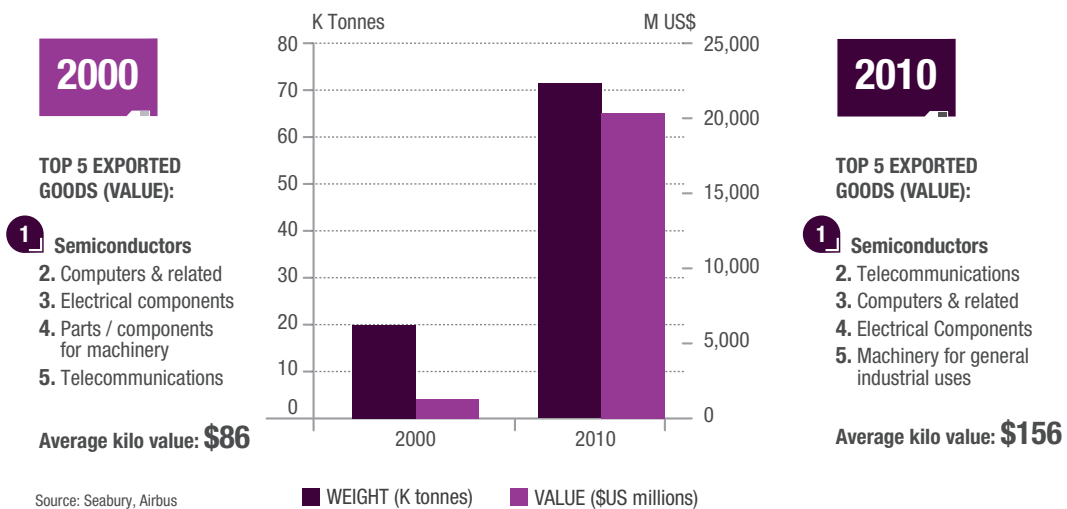
Asia-Pacific

Developments in Asia-Pacific will be one of the largest drivers of freight traffic. In 2011, traffic originating or ending in Asia-Pacific accounted for more than 60 % of all global air traffic in terms of FTKs. Not only is manufacturing in Asia-Pacific driving demand, but it is quickly becoming one of the key drivers of capital markets globally, heavily investing in many regions across the world. Specifically, Chinese and Indian investments into Latin America and Africa are beginning to contribute to demand for traffic in each of

those regions, as Chinese and Indian companies develop manufacturing and infrastructure and use the opportunity to bring Asian products to these markets. Intra-Asian traffic is also on the rise with increasing capacity and demand on many of these internal flows. As an example, traffic between Malaysia and China grew at 32 % per annum from 2000 to 2010 and the value per ton has nearly doubled over that period. Looking at the region, there are numerous examples of strong growth in intra Asia-Pacific traffic.

Malaysia to China

Exports from Malaysia to China grew by 32% annually from 2000 to 2010



Even with the potential slowdown of the Chinese economy, the overall demand to and from this market is key to the air cargo market. In 2011, traffic to, from and within PRC represented 26 % of the global air traffic market. On top of the overall size of the market, it is also on 6 out of the top 10 fastest growing flows within the region.

Like its neighbouring BRICS country, India has also been a strong area of growth. In fact, trade between the two countries has been one of the fastest growing flows for both India and China. Traffic from India to China has grown at 35 % per year over the last ten years.

The value of goods transported from China to India has been multiplied by 15 over the last ten years and now represents 18 % of the value of all goods transported to China.

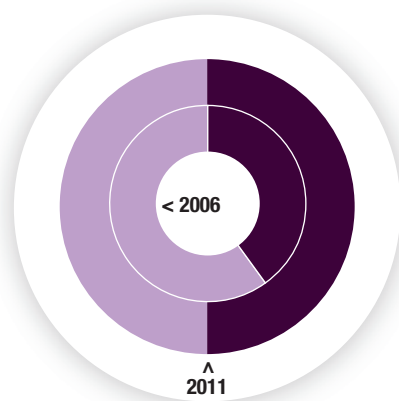
Between 2011 and 2031, traffic to, from, or within the region is expected to grow at 5.3 % per year, well above the 4.9 % projected for worldwide FTKs. Unsurprisingly, the 10 fastest growing flows of the world (each with an annual growth rate of 7 %) are expected to be in connection with India and/or PRC. Two of the fastest are PRC to India, growing at 7.7 % annually and India to PRC, growing at 7.4 % over the next 20 years.

North America

Air cargo began in the US, with the first air cargo delivery on November 7, 1910, performed by the Wright Company over a distance of 65km and cost \$5,000 for only few kilograms of freight. One century later, North America is still by far the largest market for air cargo aircraft in the world. American carriers represent 51 % of the fleet while the traffic from and to North America accounts for nearly 40 % of the world traffic, this boosted by the two largest express carriers, UPS and FedEx which combined are responsible for 50 % of all the traffic generated by US carriers. The Express market in the US is the most mature express market in the world, and the carriers are continually expanding their global footprint both in product offerings and geographical locations. Today, North American express carriers have expanded their product offering to the extent that they provide

both express and general cargo services when needed. According to ACMG, express carriers made up 77 % of 2010's domestic US traffic and they are continuously increasing their network, especially to international destinations. In 2003, 45 % of US cargo traffic was domestic traffic; in 2011, domestic traffic represented only 33 % of all US carriers' cargo traffic. This movement toward the international market is partially caused by the globalization of the industrial production. Today, a typical "high tech" product includes parts coming from at least half a dozen countries worldwide, with new products entering the market as frequently as every six months. Air transportation is critical in the supply chain, especially toward the number one consumer market in the world, North America.

US freight traffic for the top 2 carriers



● All other US carriers ● Top 2 express Carriers

Over the next 20 years, traffic to, from and within North America is expected to grow at 4.4 % per year. The two fastest growing flows for the region are for traffic from North America to PRC and PRC to North America, with growth rates of 6.7 % and 6.5 % annually respectively. Outside of traffic with PRC, traffic from North America to India, South America, CIS and Africa make up the next group of fastest growing flows. By 2031, this traffic growth will result in a demand for more than 400 new aircraft, with 265 of these coming from the mid-sized freighter segment.

Europe

In terms of the value of products transported, nearly 25 % of all air cargo originated from Europe in 2011. The economic crisis had a significant impact on the flows with Europe, but they have recovered with some strength. Before the crisis, air cargo traffic to, from and within Europe reached over 75 billion FTKs in 2007, dropping to 64 billion FTKs in 2009. Since 2009, the recovery in terms of FTKs has been strong and fast. The total market grew by 30 % from the lows of 2009 to 2011, reaching 82 billion FTKs in 2011. This recovery has in part been driven by a shift in economic prowess in the region. Central Europe is playing a much larger role in the global economy and therefore the air traffic market. Today, we can see a major growth in manufacturing output in Central Europe driving this demand. This is most clearly identifiable in the expected growth rates of Western and Central Europe, where GDP growth is anticipated at 1.6% and 3.6% annually over the forecast period.

With nearly 400 million inhabitants from middle or higher classes, Europe will still be one of the most important consumer markets in the world, and the European air cargo traffic is predicted to grow at 4.8 %, close to the worldwide average. Also, as middle and upper classes grow in regions such as Asia-Pacific, demand for European products will continue to expand, traffic to India and China for example is expected to grow at 7.4 % and 6.5 % respectively over the next 20 years.

On the domestic side, the railroad network is continuously improving, and multi-modal means of transportation are gaining in importance in order to cut the energy bill. However due to the multiple natural barriers, air transport will still have an important role, especially for on-time deliveries. Therefore, the traffic within Europe is expected to grow at 4 % per annum over the next two decades.

Middle East

Over the last ten years, freight traffic to, from and within the Middle East has grown at 6.7 % per year. The vast majority of this growth has come from traffic flows into the Middle East from other regions, which grew at 8.8% per year. As in the passenger market, Middle East carriers are looking to leverage their strategic geographic positioning to establish themselves as “great connectors”. To this end, Middle Eastern carriers have launched new routes to and from Asia-Pacific, Europe and Africa.

In leveraging their geographic positioning for success in air cargo, Middle East carriers have developed a business model around a mix of mid-sized and large freighters. This has allowed the carriers to use large freighters on high density flows, and to use mid-sized jets to access new markets at a lower risk. This is a business model that we see today being studied and/or implemented by other carriers across the globe.

In recent years, the companies and individuals in the Middle East have been actively diversifying their economic activity, focusing more and more on financial services and foreign direct investment outside of extractive services. This is in part in a desire to hedge the risks of volatile oil and gas prices, but also to deploy the available capital that is currently held in the Middle East. This investment, coupled with the Middle East's investment in the aviation industry, is providing a strong platform of growth for Middle East carriers.

Traffic to, from and within the region is expected to grow at 5 % per annum, slightly above the world average. The largest flow with the Middle East today and in 2031 is Europe to the Middle East which represents 31 % of all traffic to, from or within the region today. As expected, growth with Asia-Pacific is the fastest of any other regions. Traffic between Asia-Pacific and the Middle East will grow at 5.5 % over the next 20 years.

Latin America

Increasing economic and trade ties between Latin America and other regions of the world has led to impressive growth opportunities for air cargo in Latin America. Inflows of FDI (Foreign Direct Investment) from North America, Europe, the Middle East and Asia-Pacific will continue to provide growth possibilities in Latin America. In fact, FDI into Latin America and the Caribbean experienced 35% growth between 2010 and 2011 according to UNCTAD. Over the next 10 years, it is estimated that Brazil alone will receive over 10 billion US\$ in FDI.

Due to these drivers and the continued demand for fresh food products and flowers from Latin America to both North America and Europe, we project that traffic to, from and within Latin America will grow at 5.2 % per annum over the next 20 years. Interestingly, the flows with Europe, which are the biggest in volume, will continue to enjoy a high growth rate of 4.8 %. Another of Latin America's fastest growing and largest flows is from North America to South America which is expected to grow at 5.8 % per annum over the next 20 years.



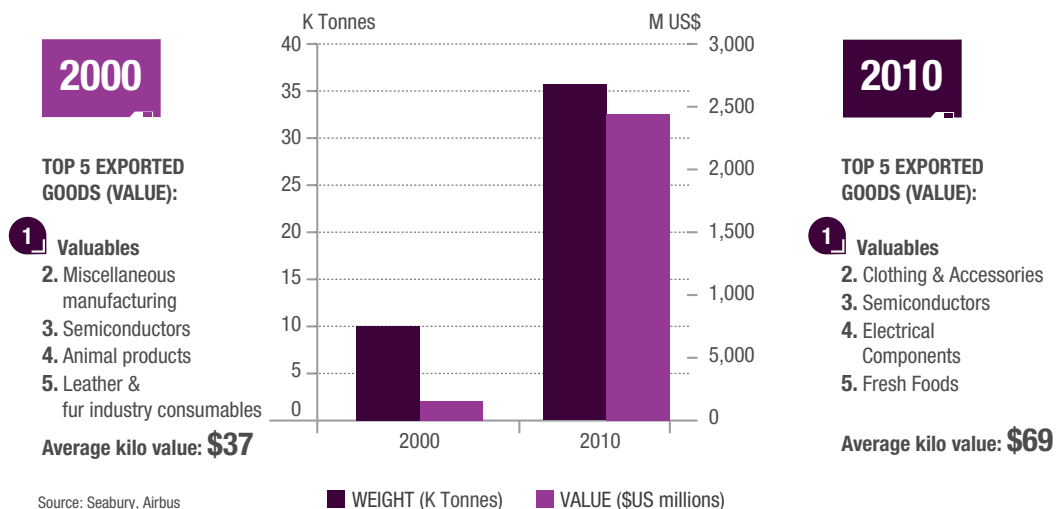
Africa

Africa is the second most populous continent after Asia, with more than a billion inhabitants. It is also larger, in terms of population than both North America and Latin America combined. In terms of land size, Africa represents nearly 25 % of the total world land mass and 25 % of the world's agricultural land. Increased geopolitical stabilization in Africa has led to magnificent economic growth rates over the last 10 years. Between 2000 and 2010, 8 African countries outpaced the combined BRIC GDP growth rate. Over the next 10 years, the economies of Africa are predicted to enjoy GDP growth of 4.8 % per year.

Much like Latin America, FDI inflows are increasing the rate of globalisation in the region which is shifting away from traditional extractive services, to be more focused on higher value-added goods and services. Specifically, investments in business and financial services have been two of the largest growth areas according to a report published by Ernst & Young. The economic and trade growth to and from Africa has encouraged a large number of airlines, especially from Europe, the Middle East and Asia-Pacific to invest in more air cargo capacity to Africa. Historically, South Africa has been the largest source of air cargo traffic in Africa, but today more and more capacity is focused on East and West Africa, which are now increasing their role in the air cargo market.

Africa to China

Value of goods shipped from Africa to China is growing faster than the weight of shipped items



Based on the trends affecting the African air cargo market today, Airbus forecasts a growth in traffic of 5.1 % per year over the forecast period. Today, traffic between Africa and Europe represents 55 % of all traffic to, from and within Africa and is expected to grow at 4.8 % over the next 20 years, representing 51 % of traffic in 2031.

The fastest growing flow in the region is expected to be from Africa to India, which will grow at 7.2 % per annum. The high growth between Africa and India, and the high growth between Latin America and Africa may also present the opportunity for a new traffic flow between Latin America and India through the continent of Africa.

FLEET EVOLUTION

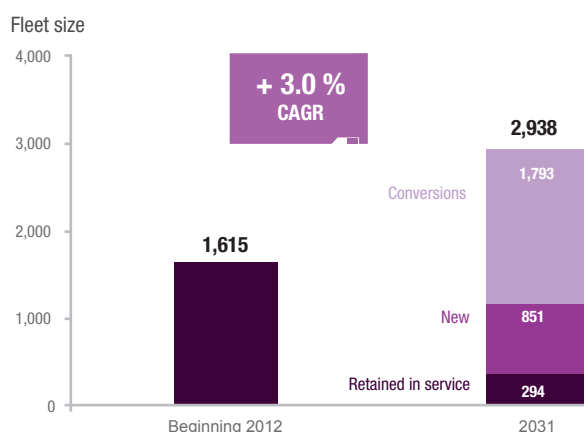
Converted vs. New Built

The choice between a new built or a converted cargo aircraft depends on several factors, such as the capital available to the airline, the utilisation required, available delivery dates and feedstock availability. On high density routes where aircraft are expected to fly at high utilisation rates, airlines often prefer new, more fuel efficient aircraft which

provide a lower operating cost and greater reliability. Airlines with less capital availability, lower utilisation requirements or airlines looking to convert their existing passenger aircraft to freighter aircraft will often choose the converted aircraft option. Today, there is a large delta in the ratio of new built aircraft in small and larger aircraft. Indeed, smaller aircraft

fly on shorter distances and usually less dense routes and stay longer on the ground, while bigger aircraft are operated on the denser and occasionally longer-range flows with a much higher daily utilization which can justify the investment in new built cargo jets. Therefore, today the fleet in service of small cargo aircraft includes only 5 % of new built jets, while the fleet of larger aircraft comprises 41 % of new built aircraft. Over the forecast period, there is a forecast demand for nearly 1,800 converted aircraft and nearly 900 new aircraft.

2012-2031 freighter fleet evolution



Source: Airbus

Small jets

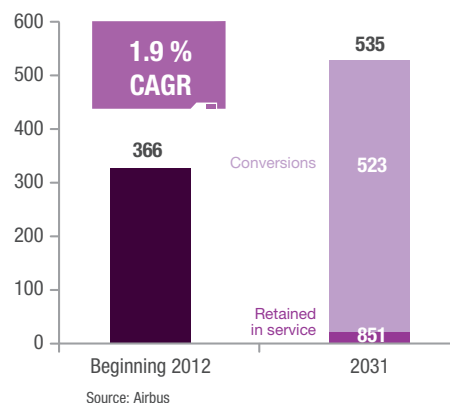
Historically, small jets have been used to accommodate the domestic or short-haul demand for mail transportation and small shipments. The development of alternative transportation, such as the belly hold of passenger aircraft or freight trucks and trains, have contributed to the reduction of this category. Aircraft in the segment today are mainly used by express carriers or for ease of use by other carriers between islands or over geographic difficulties such as mountains.

In 2011, almost 60 old generation small cargo jets were retired permanently from service bringing down the fleet to ~370 aircraft, half of it concentrated in the US and Europe.

In twenty years, the fleet of small cargo aircraft is expected to grow to 535 units, mainly driven by the domestic market of PRC and India, which will grow at an annual rate of 7.3% and 7.5% respectively over the next two decades.

The market will be dominated by converted aircraft as there are no new built small cargo aircraft over 10 tons being manufactured today to supply this category.

2012-2031 small freighter fleet evolution



Regional and Long-haul

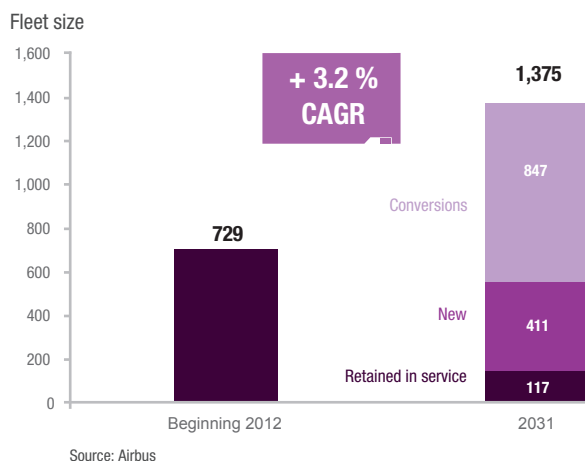
This very dynamic segment will see a 3.2 % growth rate over the next 20 years, driven largely by express companies. In fact, over 50% of the 730 units which were flying in 2011 belonged to integrators/express carriers.

The fleet in this segment is expected to increase to 1,375 aircraft by 2031, partially thanks to the development of the express markets in China

and India, where integrators/express carriers will need more capable aircraft to serve an increasing demand from customers in a limited time frame. In addition to the express carriers, a number of general cargo carriers are displaying interest in this segment as they look to expand their networks on less dense routes with a lower level of risk. Intra-regional flows, especially in emerging markets, are expected to experience a very high growth rate,

where regional cargo jets offer a good solution from a range and payload point of view to accommodate these.

2012-2031 Mid-sized freighter fleet evolution



This segment is also gaining interest from operators of large freighters, as their size is increasingly being seen as the lower risk option, particularly during slow downs of the type we have witnessed recently.

Among those 1,375 aircraft, 411 are forecast to be new built jets, like the A330-200F, and another 847 will be for converted aircraft like the A330P2F.

Large freighters

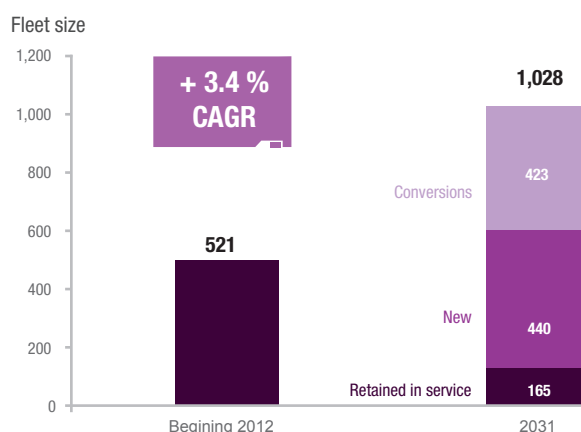
Large freighters are in general used on long distance routes overseas where the benefit of speed provided by air shipments overcomes the costs, or if it is the only suitable mean of transport, such as for perishable goods. They are therefore often needed to accommodate the traffic on the major intercontinental flows.

The fleet of large freighters is also expected to nearly double over the next 20 years, growing from 521 units in 2011 to over 1,000 in 2031. This growth is mainly driven by the highest density flows, such as those linking Asia-Pacific with Europe and North America. The airlines operating on these flows will require bigger aircraft to accommodate the increasing demand, as they can provide higher yields if they can overcome low load factors.

Major and imbalanced flows can be an issue due to higher per trip costs if the airlines cannot reach a high enough load factor.

Just over 50 % of the demand for large aircraft will be for new built aircraft reaching 440 new deliveries in this category.

2012-2031 large freighter fleet evolution



Source: Airbus

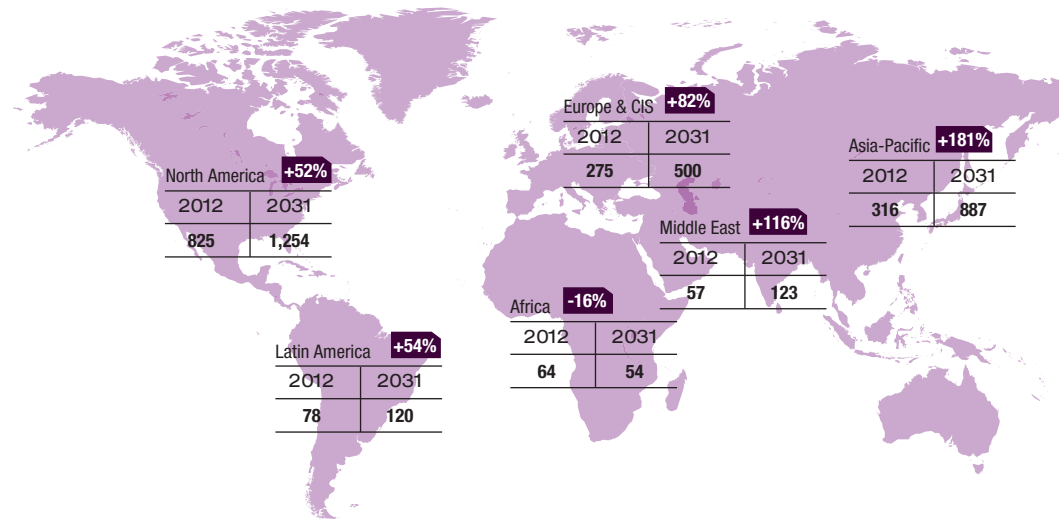
Conclusion

By 2031, traffic, in FTKs, for the air cargo market will be more than double the current market size. To accommodate this growth, the dedicated cargo aircraft fleet is expected to increase globally from over 1,600 aircraft in 2012 to nearly 3,000 aircraft in 2031. The fastest growing segments contributing to this are express/integrators and traffic between and within emerging regions and from developed to emerging regions. Even with a lower growth rate of 2.1 %, North America will be the largest centre of demand with approximately 1,150 new or converted aircraft to be delivered in large part to replace older aircraft currently in service.

Asia with the PRC, will continue its impressive growth stimulated by an increasing demand for goods produced in the region, both from developed regions and emerging regions. By 2031, the region will need nearly 800 new or converted deliveries to accommodate these growth opportunities.

In terms of market value, the worldwide demand for nearly 900 new freighters will be worth \$211 billion at current list prices, 35 % of this coming from the regional and long range segment and 65 % from the large freighter segment.

Freighter fleet evolution forecast

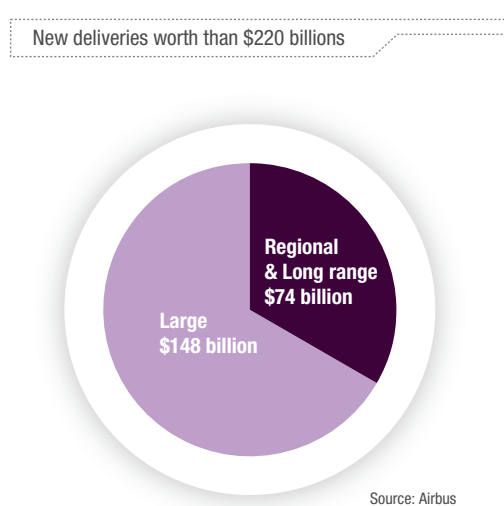


World	+82%
2012	2031
1,615	2,938

2012-2031 freighter demand



2012-2031 new delivery freighter business volume





STATUS: OK
IB



SUMMARY OF RESULTS

Passenger Traffic Flow

Passenger Traffic Flow	CAGR 2012-2031	Passenger Traffic Flow	CAGR 2012-2031
Sub-Saharan Africa - Asia	6.0%	Australia/NZ - Western Europe	2.4%
Sub-Saharan Africa - Australia/NZ	3.8%	Canada - Caribbean	6.1%
Sub-Saharan Africa - Caribbean	7.7%	Canada - Central America	7.9%
Sub-Saharan Africa - Indian Sub	6.6%	Canada - Central Europe	4.9%
Sub-Saharan Africa - Middle East	7.1%	Canada - CIS	5.6%
Sub-Saharan Africa - North Africa	7.9%	Canada - Indian Sub	8.3%
Sub-Saharan Africa - PRC	8.3%	Canada - Japan	2.4%
Sub-Saharan Africa - Russia	4.0%	Canada - Middle East	8.2%
Sub-Saharan Africa - South Africa	5.8%	Canada - North Africa	4.7%
Sub-Saharan Africa - South America	7.9%	Canada - PRC	7.1%
Sub-Saharan Africa - United States	6.5%	Canada - Russia	4.4%
Sub-Saharan Africa - Western Europe	4.0%	Canada - South America	6.7%
Asia - Australia/NZ	4.6%	Canada - United States	3.0%
Asia - Canada	4.1%	Canada - Western Europe	4.3%
Asia - Central Europe	5.8%	Caribbean - Central America	5.2%
Asia - CIS	6.3%	Caribbean - Russia	6.0%
Asia - Indian Sub	8.0%	Caribbean - South America	3.1%
Asia - Japan	2.6%	Caribbean - United States	2.3%
Asia - Middle East	5.6%	Caribbean - Western Europe	3.2%
Asia - North Africa	5.9%	Central America - Japan	6.0%
Asia - Pacific	5.4%	Central America - PRC	6.7%
Asia - PRC	6.5%	Central America - Russia	6.4%
Asia - Russia	6.0%	Central America - South America	6.9%
Asia - South Africa	6.6%	Central America - United States	4.7%
Asia - South America	6.7%	Central America - Western Europe	4.3%
Asia - United States	4.3%	Central Europe - CIS	6.3%
Asia - Western Europe	4.1%	Central Europe - Middle East	5.7%
Australia/NZ - Canada	5.2%	Central Europe - North Africa	5.0%
Australia/NZ - Indian Sub	4.9%	Central Europe - PRC	5.0%
Australia/NZ - Japan	2.7%	Central Europe - Russia	6.7%
Australia/NZ - Middle East	6.1%	Central Europe - United States	3.7%
Australia/NZ - Pacific	5.1%	Central Europe - Western Europe	5.6%
Australia/NZ - PRC	6.5%	CIS - Indian Sub	4.1%
Australia/NZ - South Africa	5.6%	CIS - Japan	4.9%
Australia/NZ - South America	7.1%	CIS - Middle East	6.5%
Australia/NZ - United States	3.9%	CIS - North Africa	6.3%

Passenger Traffic Flow

CAGR 2012-2031

CIS - PRC	8.0%
CIS - Russia	6.8%
CIS - United States	5.5%
CIS - Western Europe	5.3%
Domestic Africa Sub Sahara	6.4%
Domestic Asia	5.4%
Domestic Australia/NZ	4.1%
Domestic Brazil	6.5%
Domestic Canada	2.5%
Domestic Caribbean	1.6%
Domestic Central America	6.9%
Domestic Central Europe	3.8%
Domestic CIS	5.1%
Domestic India	9.9%
Domestic Indian Sub	4.1%
Domestic Japan	1.9%
Domestic Mexico	5.2%
Domestic Middle East	3.7%
Domestic North Africa	5.5%
Domestic Pacific	4.5%
Domestic PRC	7.0%
Domestic Russia	5.0%
Domestic South Africa	5.6%
Domestic South America	3.8%
Domestic Turkey	5.5%
Domestic United States	2.2%
Domestic Western Europe	2.6%
Indian Sub - Japan	5.4%
Indian Sub - Middle East	6.5%
Indian Sub - North Africa	6.3%
Indian Sub - PRC	8.9%
Indian Sub - Russia	4.7%
Indian Sub - South Africa	7.1%
Indian Sub - United States	7.9%
Indian Sub - Western Europe	5.7%
Intra Africa Sub Sahara	5.9%
Intra Asia	6.0%
Intra Australia/NZ	3.4%
Intra Caribbean	2.1%
Intra Central America	6.3%
Intra Central Europe	6.1%
Intra CIS	5.8%
Intra Indian Sub	6.5%

Passenger Traffic Flow

CAGR 2012-2031

Intra Middle East	5.5%
Intra North Africa	6.2%
Intra Pacific	5.6%
Intra South America	6.5%
Intra Western Europe	3.1%
Japan - Middle East	6.1%
Japan - Pacific	3.3%
Japan - PRC	6.0%
Japan - Russia	4.0%
Japan - United States	3.7%
Japan - Western Europe	2.6%
Mexico - United States	4.4%
Middle East - North Africa	6.8%
Middle East - PRC	7.0%
Middle East - Russia	5.5%
Middle East - South Africa	8.3%
Middle East - South America	11.9%
Middle East - United States	7.2%
Middle East - Western Europe	5.4%
North Africa - PRC	8.3%
North Africa - Russia	6.2%
North Africa - South Africa	8.2%
North Africa - United States	6.4%
North Africa - Western Europe	5.2%
Pacific - PRC	7.9%
Pacific - South America	4.0%
Pacific - United States	2.8%
Pacific - Western Europe	3.7%
PRC - Russia	7.5%
PRC - South Africa	7.3%
PRC - South America	6.3%
PRC - United States	6.2%
PRC - Western Europe	5.7%
Russia - South America	6.4%
Russia - United States	6.4%
Russia - Western Europe	4.9%
South Africa - South America	6.7%
South Africa - United States	3.1%
South Africa - Western Europe	3.9%
South America - United States	4.9%
South America - Western Europe	5.1%
United States - Western Europe	3.7%

Freight Traffic Flow

Freight Traffic Flow	CAGR 2012-2031	Freight Traffic Flow	CAGR 2012-2031
Africa to Asia	4.1%	CIS to North America	3.2%
Africa to Central America	5.9%	CIS to Pacific	4.0%
Africa to CIS	4.3%	CIS to PRC	6.4%
Africa to Europe	4.8%	CIS to South America	3.9%
Africa to India	7.2%	Domestic Brazil	4.5%
Africa to Japan	2.7%	Domestic India	7.5%
Africa to Middle East	5.4%	Domestic PRC	7.3%
Africa to North America	4.6%	Domestic USA	2.5%
Africa to Pacific	3.6%	Europe to Africa	4.8%
Africa to PRC	6.6%	Europe to Asia	5.0%
Africa to South America	4.8%	Europe to Central America	4.9%
Asia to Africa	4.6%	Europe to CIS	4.6%
Asia to Central America	6.0%	Europe to India	7.4%
Asia to CIS	5.3%	Europe to Japan	2.7%
Asia to Europe	2.9%	Europe to Middle East	5.1%
Asia to India	6.3%	Europe to North America	3.4%
Asia to Japan	2.9%	Europe to Pacific	3.8%
Asia to Middle East	3.8%	Europe to PRC	6.5%
Asia to North America	4.1%	Europe to South America	5.1%
Asia to Pacific	3.3%	India to Africa	6.4%
Asia to PRC	5.4%	India to Asia	6.4%
Asia to South America	5.3%	India to Central America	7.6%
Central America to Africa	4.9%	India to CIS	4.1%
Central America to Asia	5.0%	India to Europe	5.4%
Central America to CIS	3.3%	India to Japan	4.3%
Central America to Europe	4.4%	India to Middle East	6.6%
Central America to India	7.1%	India to North America	4.5%
Central America to Japan	4.0%	India to Pacific	4.3%
Central America to Middle East	4.0%	India to PRC	7.4%
Central America to North America	2.4%	India to South America	7.2%
Central America to Pacific	5.6%	Intra Africa	4.4%
Central America to PRC	5.4%	Intra Asia	4.7%
Central America to South America	4.7%	Intra Central America	4.6%
CIS to Africa	3.2%	Intra CIS	4.3%
CIS to Asia	4.1%	Intra Europe	4.1%
CIS to Central America	4.4%	Intra India	5.1%
CIS to Europe	3.2%	Intra Middle East	3.7%
CIS to India	4.1%	Intra North America	2.8%
CIS to Japan	3.3%	Intra Pacific	2.3%
CIS to Middle East	4.1%	Intra South America	5.8%

Freight Traffic Flow

CAGR 2012-2031

Japan to Africa	4.7%
Japan to Asia	3.7%
Japan to Central America	4.0%
Japan to CIS	4.7%
Japan to Europe	2.1%
Japan to India	4.4%
Japan to Middle East	4.3%
Japan to North America	3.2%
Japan to Pacific	4.0%
Japan to PRC	4.0%
Japan to South America	2.7%
Middle East to Africa	4.6%
Middle East to Asia	3.9%
Middle East to Central America	5.2%
Middle East to CIS	4.4%
Middle East to Europe	2.0%
Middle East to India	6.8%
Middle East to Japan	2.4%
Middle East to North America	4.1%
Middle East to Pacific	4.0%
Middle East to PRC	5.8%
Middle East to South America	4.5%
North America to Africa	5.7%
North America to Asia	4.4%
North America to Central America	2.3%
North America to CIS	5.2%
North America to Europe	4.3%
North America to India	6.2%
North America to Japan	1.6%
North America to Middle East	4.9%
North America to Pacific	3.2%
North America to PRC	6.7%
North America to South America	5.8%
Pacific to Africa	4.0%
Pacific to Asia	3.7%
Pacific to Central America	5.7%
Pacific to CIS	5.0%
Pacific to Europe	2.6%
Pacific to India	4.1%
Pacific to Japan	3.7%

Freight Traffic Flow

CAGR 2012-2031

Pacific to Middle East	5.0%
Pacific to North America	2.1%
Pacific to PRC	3.4%
Pacific to South America	6.3%
PRC to Africa	6.5%
PRC to Asia	5.6%
PRC to Central America	6.6%
PRC to CIS	5.8%
PRC to Europe	6.0%
PRC to India	7.7%
PRC to Japan	4.3%
PRC to Middle East	6.8%
PRC to North America	6.5%
PRC to Pacific	6.3%
PRC to South America	7.2%
South America to Africa	5.0%
South America to Asia	5.6%
South America to Central America	5.6%
South America to CIS	4.9%
South America to Europe	4.5%
South America to India	6.6%
South America to Japan	4.0%
South America to Middle East	4.7%
South America to North America	4.2%
South America to Pacific	4.1%
South America to PRC	7.0%

Summary data

New passenger aircraft deliveries by region

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Single-Aisle	724	6,028	1,018	4,342	1,658	792	4,956	19,518
Small Twin-Aisle	168	2,102	141	708	333	504	621	4,577
Intermediate Twin-Aisle	36	879	40	397	60	302	206	1,920
Very Large	29	609	30	254	34	308	68	1,332
TOTAL	957	9,618	1,229	5,701	2,085	1,906	5,851	27,347

New passenger & freight aircraft deliveries by region

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Single-Aisle	724	6,028	1,018	4,342	1,658	792	4,956	19,518
Twin-Aisle	213	3,078	187	1,174	417	826	1,079	6,974
Very Large	38	763	34	323	35	345	168	1,706
TOTAL	975	9,869	1,239	5,839	2,110	1,963	6,203	28,198

Passenger aircraft >100 seats and freight aircraft >10 tons

New freight aircraft deliveries by region

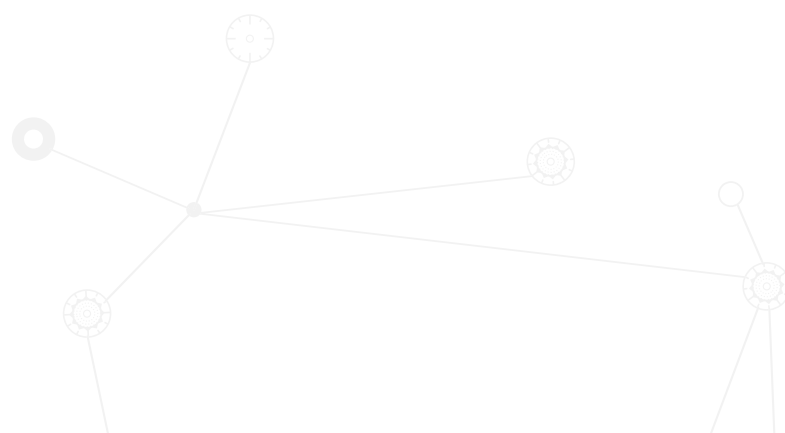
	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Small	0	0	0	0	0	0	0	0
Regional	7	71	5	57	24	13	234	411
Large	11	180	5	81	1	44	118	440
TOTAL	18	251	10	138	25	57	352	851

Converted freight aircraft deliveries by region

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Small	5	273	7	55	43	1	139	523
Regional	18	116	15	152	38	25	483	847
Large	12	144	9	58	1	23	176	423
TOTAL	35	533	31	265	82	49	798	1,793

Total freight aircraft deliveries by region

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Small	5	273	7	55	43	1	139	523
Regional	25	187	20	209	62	38	717	1,258
Large	23	324	14	139	2	67	294	863
TOTAL	53	784	41	403	107	106	1,150	2,644



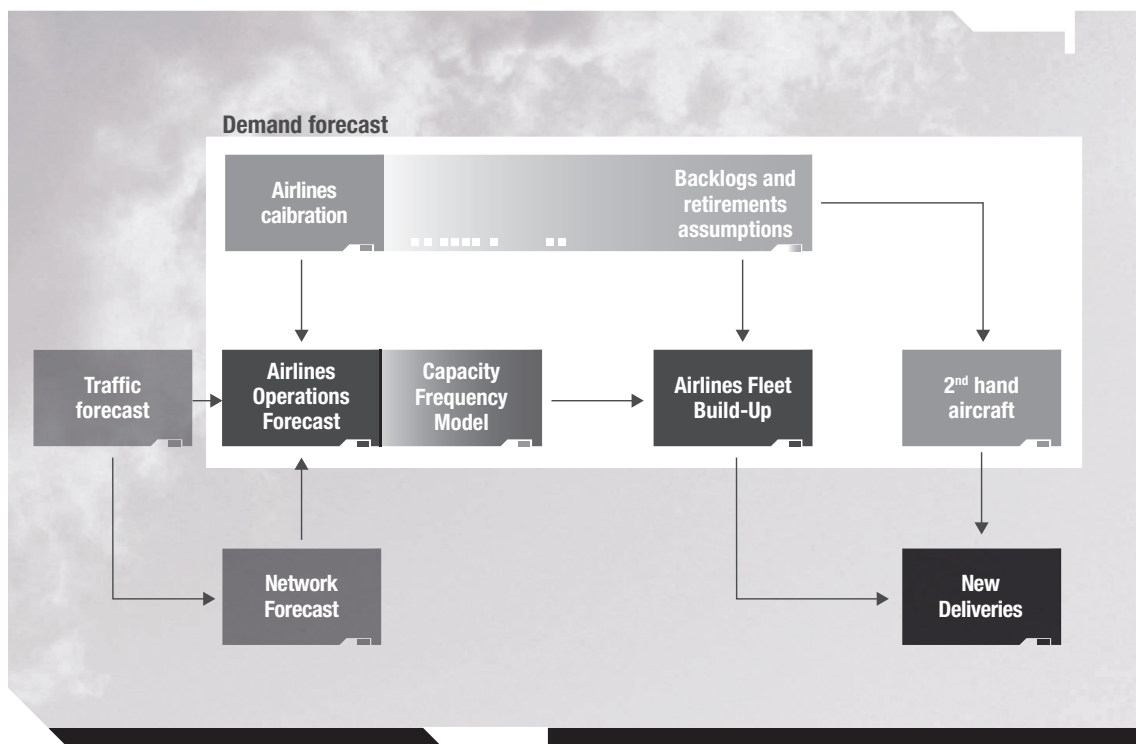
PASSENGER METHODOLOGY

The making of the Airbus Global Market Forecast follows a process which has been continuously improved upon for more than 20 years. Each major change in the industry (such as the appearance of low cost business models or the strong development of hub and spoke operations) have been the occasion for Airbus to refine and improve its modelling in order to best identify and forecast current and future trends.

The GMF process consists of three main steps: the traffic forecast giving the overall shape of traffic evolution, the network forecast identifying the future evolution of the airlines networks, and the demand forecast estimating the number of aircraft which will be required to accommodate the traffic growth.



GMF Process steps



Forecasting traffic

The objective of the traffic forecast is to assess the quantity of passengers travelling by air. Initially, all countries are grouped into 19 traffic regions, based on geographical proximity and level of socio-economic development. Each region pair defines a non-oriented traffic flow, assuming that outbound and inbound passenger traffic is balanced. Whenever a part of a traffic region develops significantly different from the rest of the region, a new, specific flow is created, taking into consideration more country-related specific characteristics. This process resulted in 157 flows for the GMF 2012. The main input data for the traffic forecast are historical traffic volumes as well as large sets of historical and forecast socio-economic data from external data providers.

For each traffic flow several socio-economic variables are selected and input in econometric equations with the aim of identifying the one set or combination of variables that explains best the historical traffic evolution. Once the model and variables with the best fit are identified, the forecast economic data are used to derive the future traffic volume.

Forecasting Aircraft demand

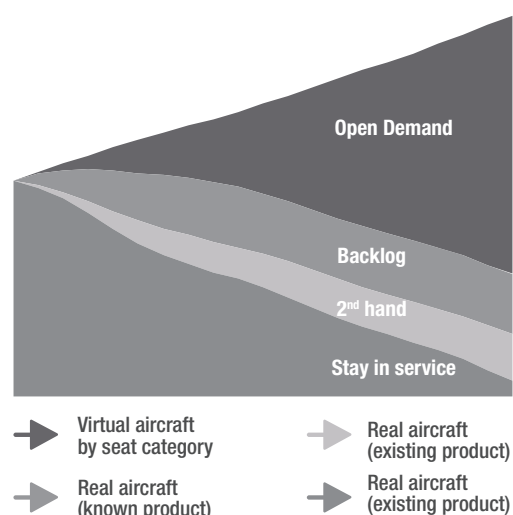
The demand forecast aims to estimate the number of aircraft which will be required over the next 20-years to satisfy the world's traffic growth. The new demand identified by the Airbus GMF (on top of current fleet and known orders) is expressed in neutral seat categories. The use of such virtual aircraft allows a view of future demand unconstrained by the product supply. This "theoretical" demand represents a solution which would best match the airlines needs in terms of aircraft size, if no considerations of supply (specific product performance, production availability, etc.) are made. Based on this undistorted view, the results can be used to consider such things as new product introduction, size requirements and timing. By examining the market at a route by route and airline by airline level then also allows a large number of other uses, from discussions with airlines to our supplier partners, for example.

Forecasting network

Airline networks evolve over time and airlines keep on adding and removing routes from their networks, changing the supply of travel from the passenger standpoint. The evolution of the network with new opened and closed routes shifts the demand from one routing to another, with an impact sometimes even visible at a level as high as the traffic flow level. Furthermore, new routes tend to fragment the market as they partially absorb traffic from the existing network and therefore impact the route-per-route traffic evolution. The network forecast aims at quantifying these impacts.

The first step of this phase consists of breaking down the forecast from a global traffic flow level down to estimates of Origin-and-Destination traffic on city- or airport-pair level. A set of new route candidates is then devised for each airline, based on the airline's current network and the potential size of new markets. This set of routes is fed into a 'Quality of Service Index'- based model, which determines for each new route the traffic potential and the point in time when it could be opened.

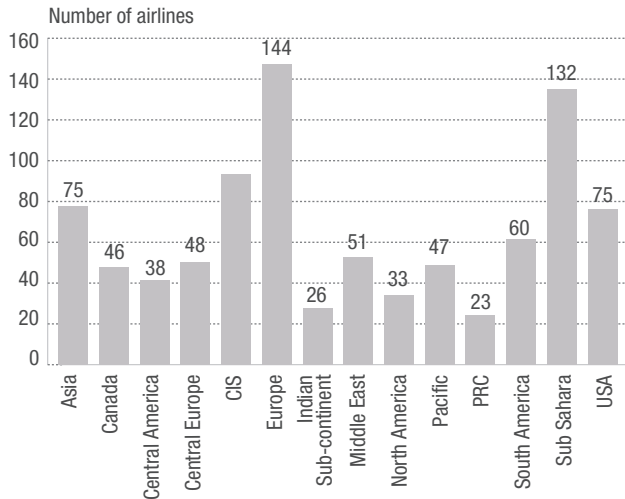
The Airbus GMF is a demand forecast



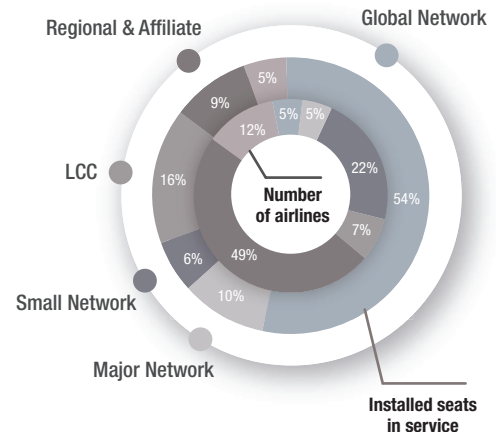
The airline calibration process

The Airbus GMF 2012 covers 889 passenger airlines and their subsidiaries worldwide.

Airlines distribution per region



Airlines distribution per type



As a first step and for each of these airlines, a dedicated calibration process is carried out. It aims to take the best of several sources of information concerning the airlines in order to understand how an airline is operating each of its aircraft. Precise fleet data allows us to calibrate

the detailed operations of a given airline (either scheduled or unscheduled) and therefore deduce which type of aircraft has been flying on which sector for a particular month of the year. This detailed adjustment allows us effectively apply the way an airline utilizes its aircraft on its network.

The airlines operation forecast

Once the calibration of an airline has been carried out, real aircraft are converted into virtual aircraft in a fashion that keeps the overall number of seats in the fleet constant. The whole forecast is then based on neutral category values, our seat categories, e.g. 100, 125, 150, 210 for single aisle types and requirements.

Traffic growth rates are applied to each airline's network, also taking into consideration future developments, as anticipated in the network forecast process. There are few ways an airline can accommodate traffic growth: load factor improvement, improvement of its aircraft utilization, frequency or capacity increase.

The split between frequency increase and / or capacity increase is one of the most important factors influencing the shape of the future demand. A dedicated model (the Airbus Capacity/Frequency Model) has been developed to address this issue. The general principle is that airlines grow on a route by adding frequencies up until a minimum level of service is reached.

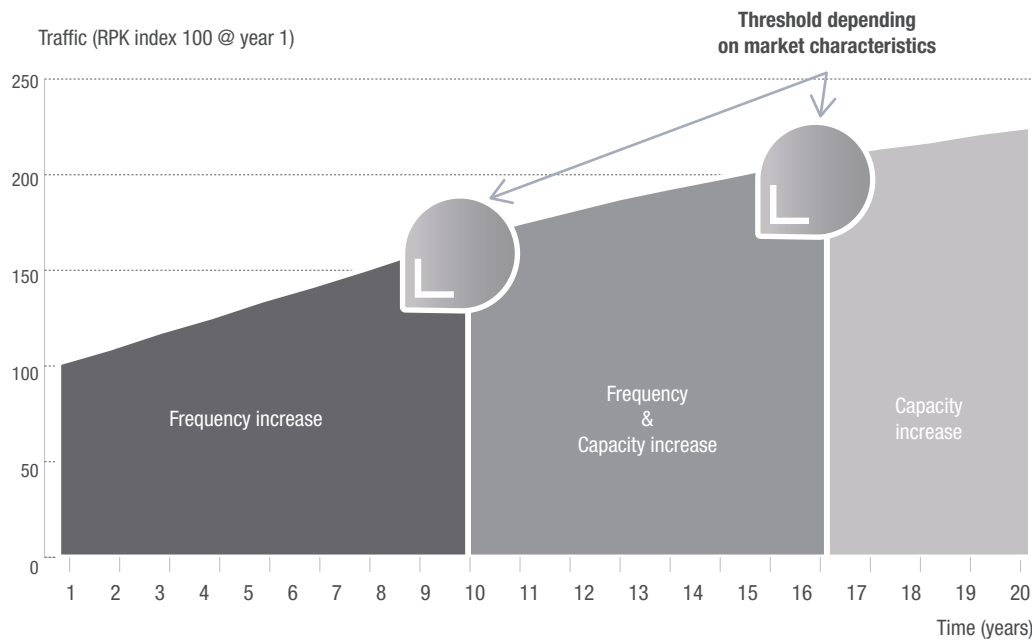
Beyond this minimum level, airlines grow with a mix of both frequency and capacity increases, until the maximum level of service is reached, above which time differentiation through additional frequencies does not bring any further value to the passenger.

Above this maximum service level, the most efficient way to accommodate further growth is to increase the average aircraft size to achieve lower costs per aircraft seat. Each market in the world has its own specificities. Passengers in North America for instance, are used to a very high level of service (i.e. very frequent flights between two airports) which is not true for other regions in the world.

A market in this case can be defined as a set of routes on a given traffic flow for a certain type of airline's business model. For each of these markets, one or more airlines may compete and each route might have a different length. Taking all this into account allows us to specify how frequencies and capacity will develop over time for a given traffic growth.

A dedicated model handles the Frequency and/or Capacity split

Typical evolution on a route enjoying growth



The calibration of this model has to be reviewed each year based on the market definitions and in light of any market evolution (e.g. infrastructure development plans).

As a result, the airline operation forecast outputs year by year, the demand in terms of aircraft numbers (yearly utilization, flight frequencies and capacity) expressed in neutral categories for the complete network of each airline.

Airlines fleet build-up

Once the overall neutral demand is forecast, each airline fleet build-up can be carried out. This demand is re-allocated to the existing fleet and the known orders.

Generic assumptions are made for each region regarding the retirement age of the fleets, but these schemes are adapted to each airline. Elements such as replacement plans (new aircraft replacing older types), end of contract lease, airline business models or economic and financial environment have to be taken into account in determining replacements.

The remaining demand which cannot be satisfied by the current fleet or the known orders corresponds to the open market.

As well as identifying demand, the GMF also allows us to extract all forecast operational detail e.g. traffic flow, route, frequencies, utilization, load factors, etc.

2nd hand aircraft

The final step of the GMF process consists in estimating second hand or re-cycled deliveries as they account for a significant share of total deliveries (~13% including regional aircraft).

Survival curves applied to the GMF base fleet, per aircraft type, allow identification of the gap between the statistical world fleet attrition and the shape of those that will "stay in service". The delta corresponds to the maximum potential for second hand aircraft. In parallel to this, candidate aircraft are identified amongst the existing fleet and reallocated as deliveries to another airline if the corresponding demand exists.

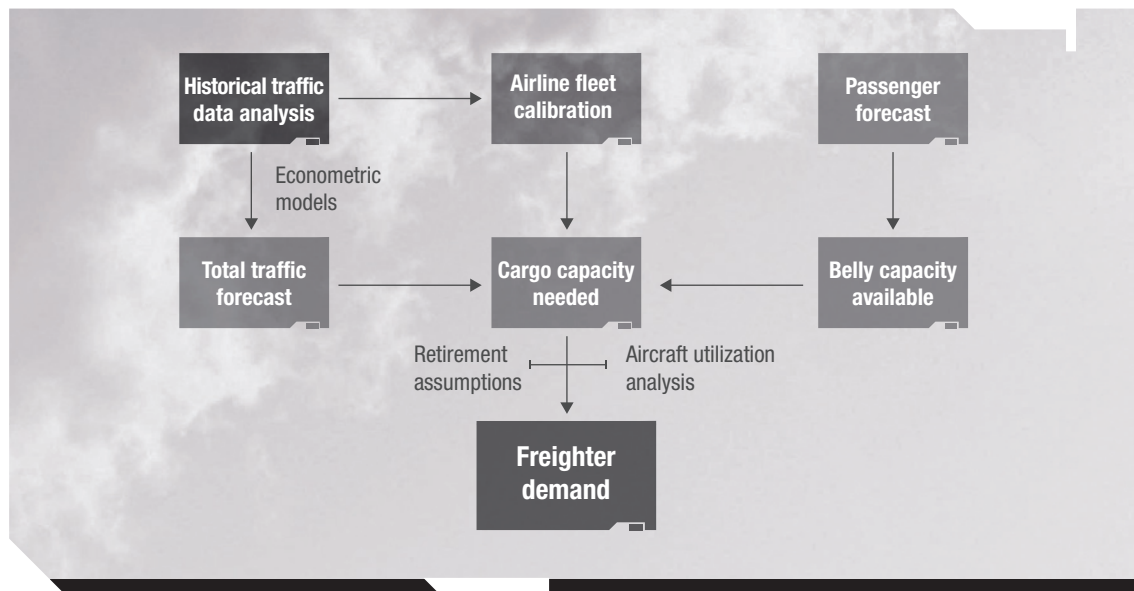
This study is carried out on a worldwide basis as a first step and then refined by region and by airline. At the end of the process, these "second hand" deliveries are subtracted from total deliveries, leaving only the "new deliveries" which are the figures displayed in this publication.

FREIGHT METHODOLOGY



The freighter GMF has been part of the Airbus forecasting process for more than 10 years and is being constantly enhanced to account for all the key aspects of the cargo market, as well as their evolution. It is closely linked to the GMF passenger forecast, drawing on results from this forecast to derive future belly hold capacity.

The freighters forecast exercise can be divided into three main steps: the traffic forecast resulting from econometric projections for each directional flow, the integration of the belly traffic coordinated with the passenger aircraft forecast and the demand forecast evaluating how many freighters will be needed in the next 20 years.

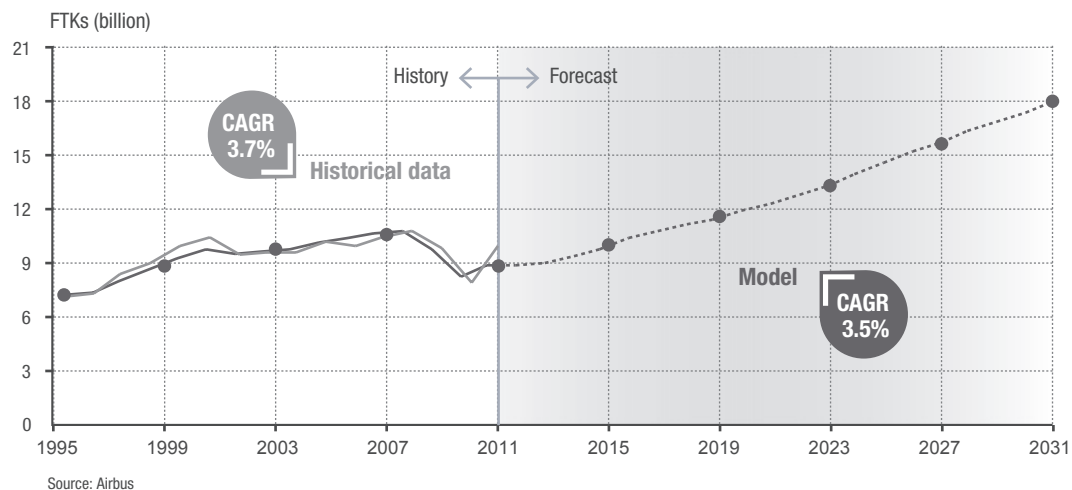


Traffic Forecast

The first step in the traffic forecast is assessing the relationship between macroeconomic trends and the cargo traffic. GDP, Real Income, Investments, Exports / Imports, industrial production, and many other parameters are used in our econometric models to assess

the closest relationship to growth in traffic. Alongside these macro economics factors, the analysis of historical data allows us to identify and understand the multiple trends involved in the evolution of the market, such as modal shifts for certain commodities.

Flow : Europe to North America



VARIABLES CHOSEN

CPI
Europe

CPI
North America

Real GDP
Europe

Belly Capacity and base year calibration

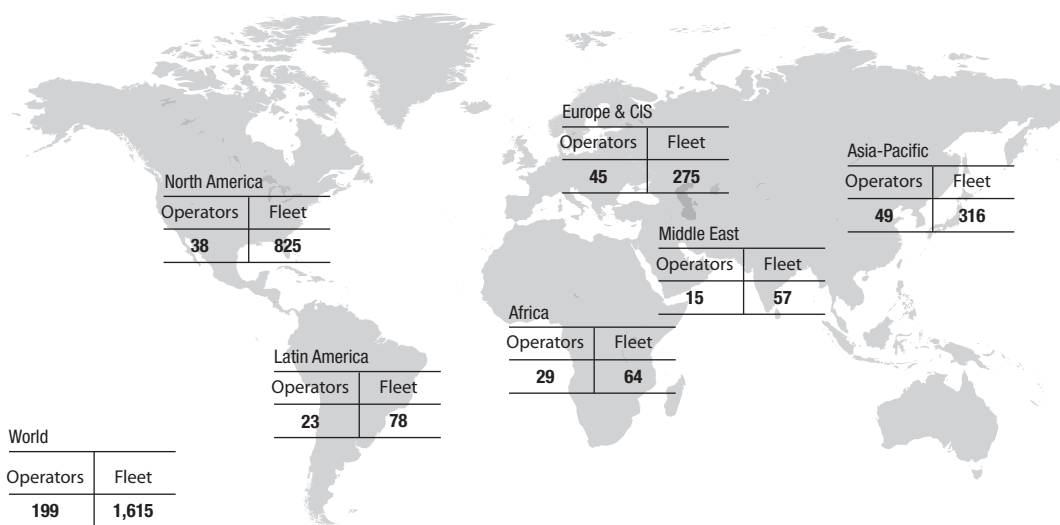
Once the traffic flow forecasts have been established, a very important step consists of splitting the future demand between belly capacity and the dedicated freighters. Thanks to the passenger aircraft GMF, it is possible to estimate the belly capacity each airline will offer on its network. In addition, Airbus monitors how airlines use their belly holds to carry cargo to establish trends in belly capacity load factors.

As a result, the combination of the airlines' passenger network development and the cargo hold load factor evolution gives an estimation of

the share of freight transported in the passenger aircraft belly on each flow.

In parallel, a calibration is conducted on today's freighter fleet. An assessment of multiple data sources is performed to arrive at the best estimate of airlines' network, aircraft utilization and load factors for the base year. Projections are based on historical data collected for more than a decade, with current market perspectives gathered from stakeholders across the industry to ensure the latest data and trends are incorporated.

2012 Freight Operator and Fleets



Source: ASCEND

Freighter forecast

The freighter forecast for the next 20 years estimates the number of aircraft required to accommodate the cargo traffic growth. The demand is divided into four neutral size categories starting at 10 tonnes, including new build and converted aircraft. Thanks to these virtual

categories, it is possible to assess which aircraft size, on which flow, best suits the market.

Our freighter forecast is the result of the analysis of the behaviour of more than 200 different airlines.

Domestic Express analysis

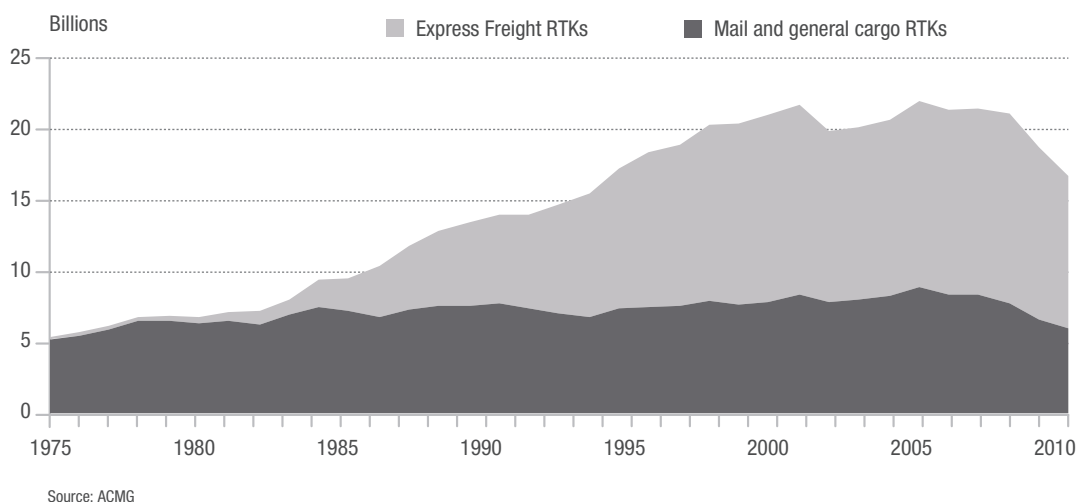
To address the specific question of the domestic express market, a dedicated forecast model has been developed and deals with four countries: the US, which today is the largest player in express traffic, as well as Brazil, India and China all which are expected to become large consumers of express services over the next 20 years.

This model analyses a distinctive set of parameters to understand the customer's need for express services resulting from well-known or new behaviours, such as online purchasing, next-day delivery for business purposes, service reliability and traceability.

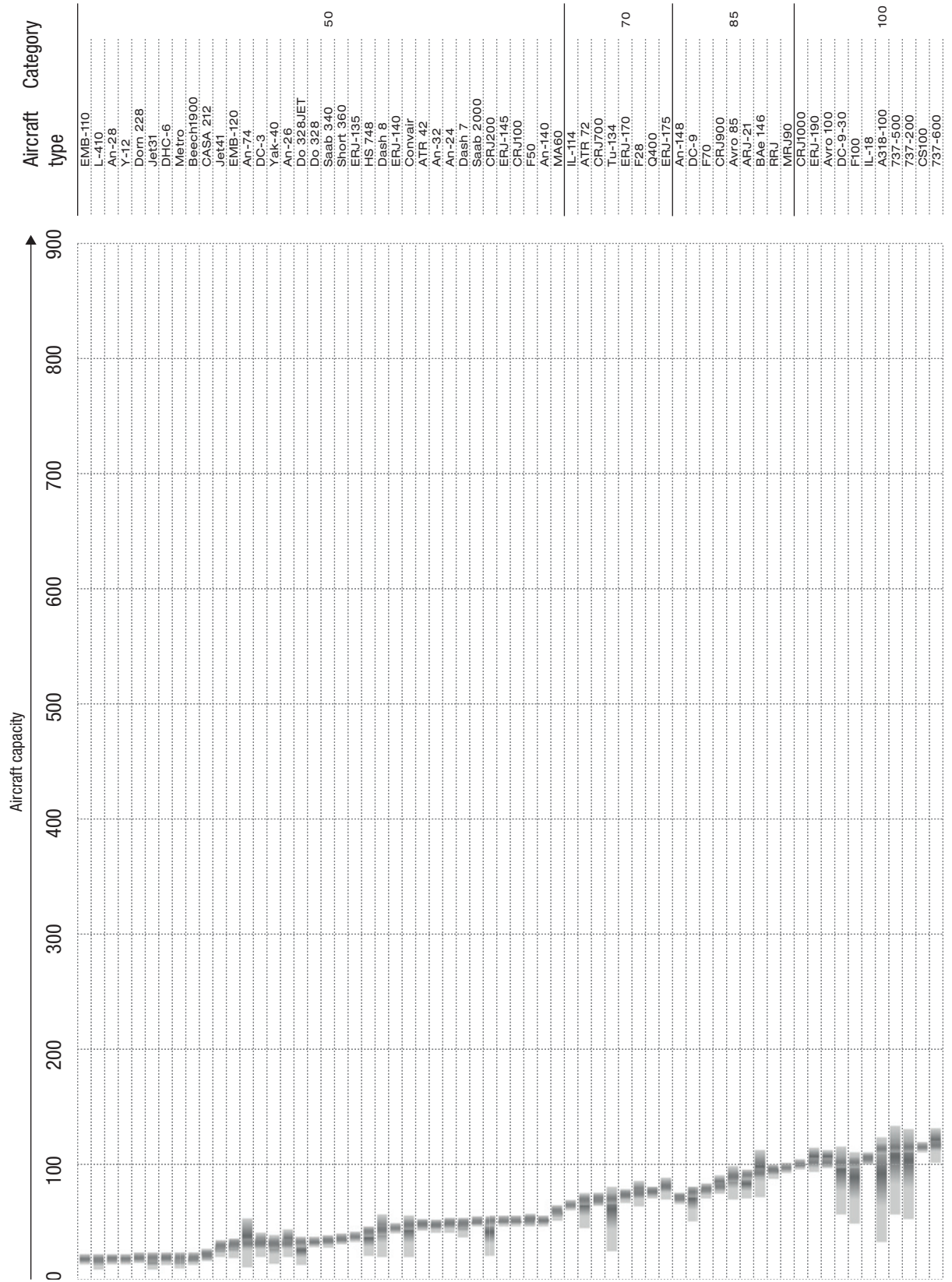


The model for domestic express consists in two parts: the first estimates the US express traffic and fleets based on 40 year historical data to identify the main drivers of growth. The second, used for the emerging markets, takes into account US express development as a benchmark, whilst at the same time taking into account the unique characteristics of each country including infrastructure development, labour cost, internet penetration, etc.

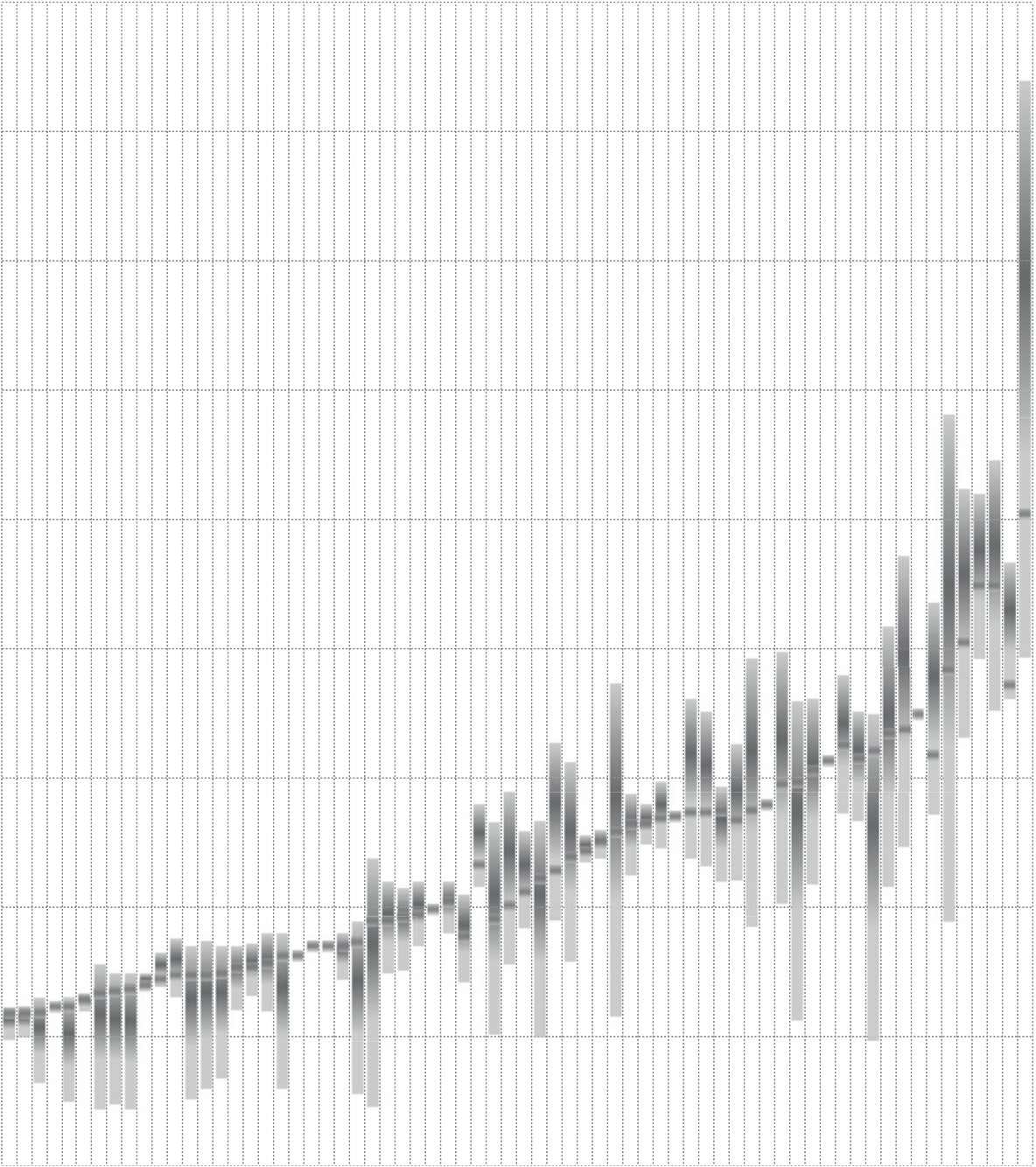
US Air Freight Domestic Market



Capacities



ERJ-195	
717	
Yak-42	
MD-80-87	
DC-9-50	
A319neo	
A319-100	125
737-700	
737-300	
CS300	
MD-80-88	
MD-80	
MD-80-83	
727	
737-400	
MD-90	
IL-62	
Tu-154	150
A320-200	
NS21-200	
C919	
737-8 max	
A320neo	
737-800	
757-200	
A321-200	
737-900	
A321-100	175
NS21-300	
A321neo	
Tu-204	
757-300	210
767-200ER	
767-200	
A310-300	
A340-500	
767-300ER	
787-8	
767-400ER	
A340-200	250
A330-200	
767-300	
A300-600	
A300	
A350-800	
777-200LR	
A300-600R	
IL-96	
A340-300	
777-200ER	
787-9	
A330-300	300
MD-11ER	
L1011	
A350-900	
DC-10	
A340-600	
IL-86	
777-200	350
777-300ER	
A350-1000	
747-400C	
747-400	
777-300	400
747-300	
747-200	
747-8	450
A380-800	500







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(Richard Semik), ssguy, chungking, Alexander Chaikin,
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September 2012. Printed in France by Art & Caractère.

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and are expressed in good faith. Where the supporting
grounds for these statements are not shown, AIRBUS
S.A.S. will be pleased to explain the basis thereof.

The printing inks use organic pigments or minerals.
There is no use of basic dyes or dangerous metals
from the cadmium, lead, mercury or hexavalent
chromium group.

The printer, Art & Caractère (France 81500),
is engaged in a waste management and recycling
programme for all resulting by-products.



10-31-1270



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