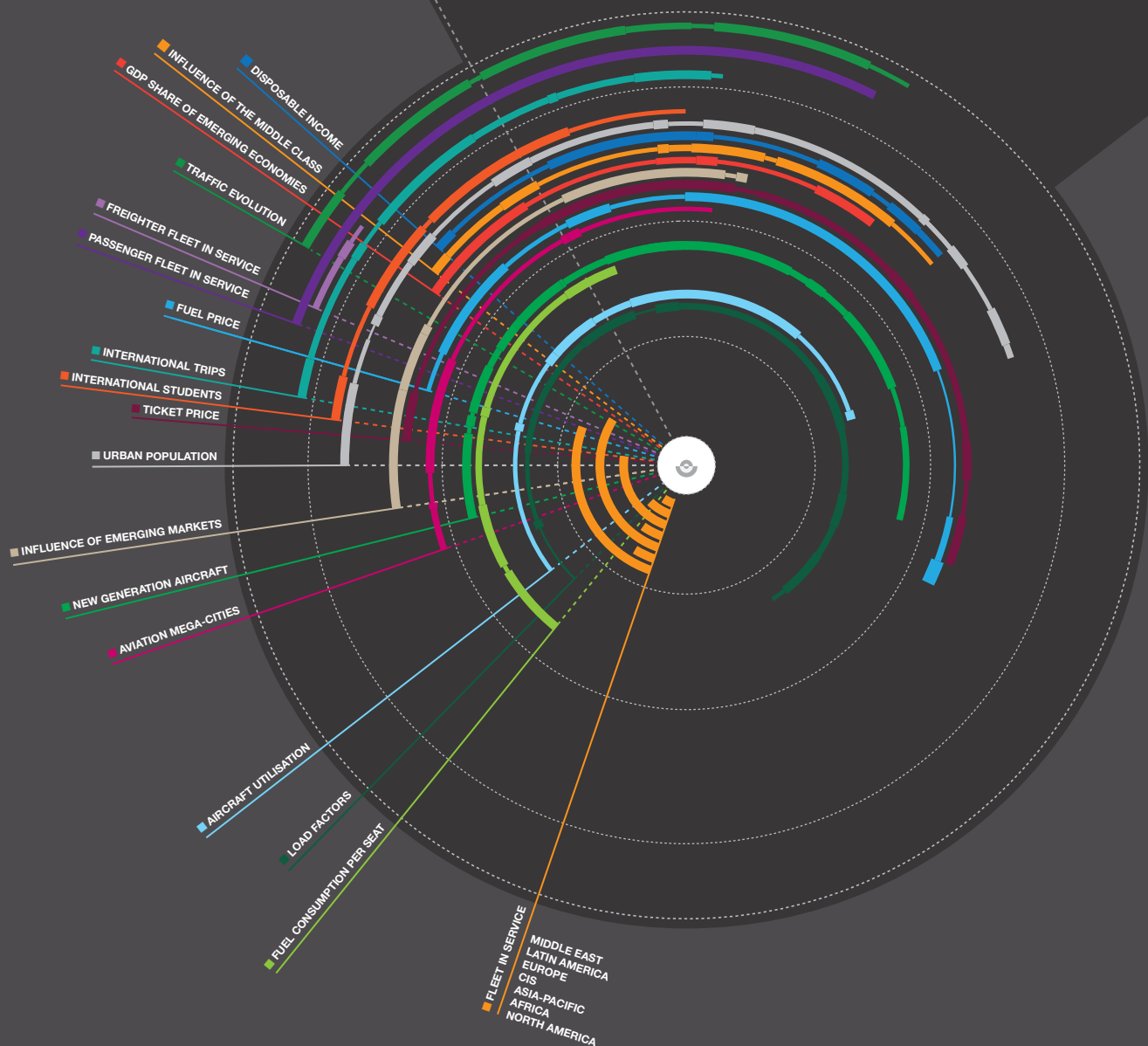


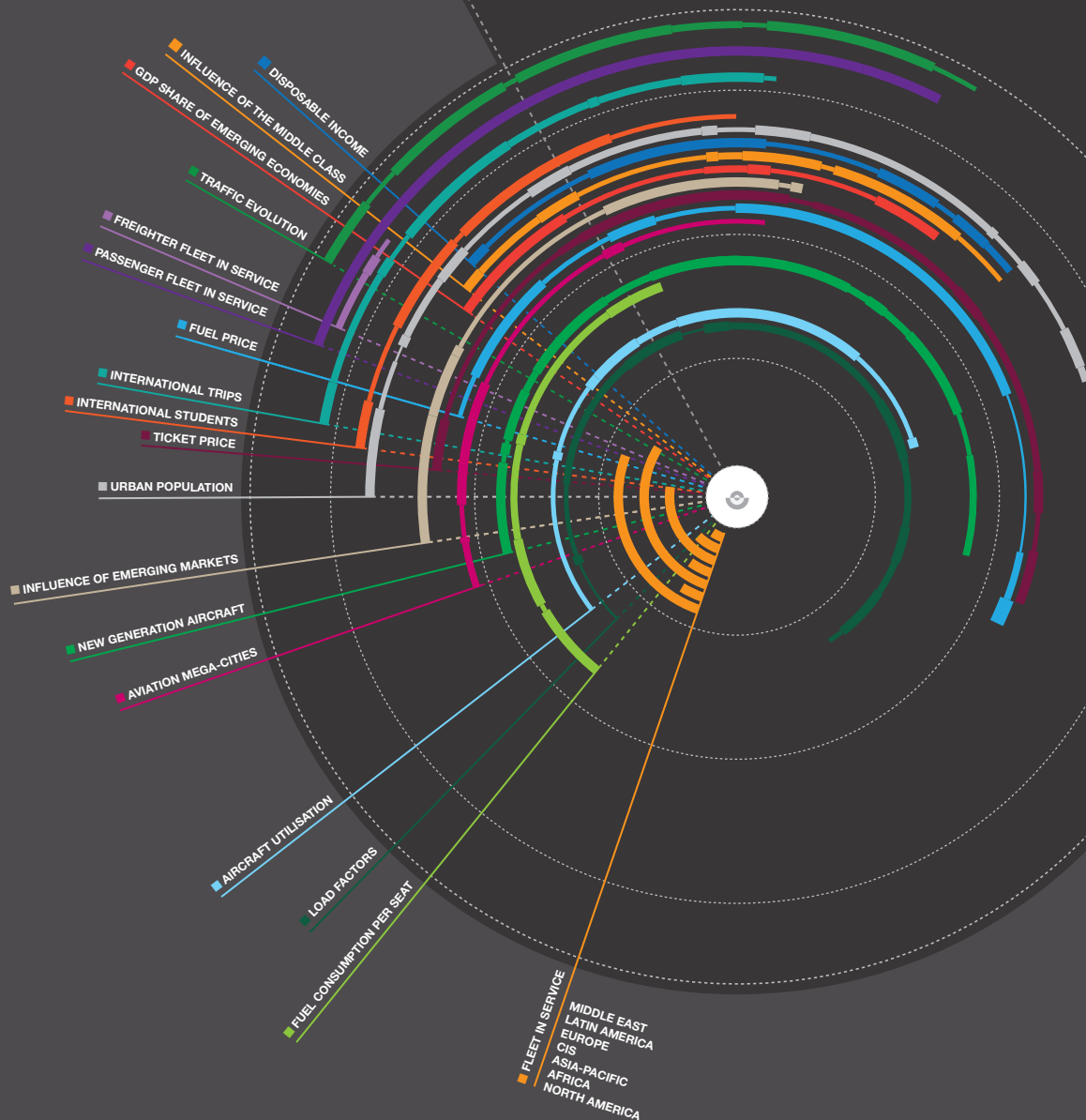
Future Journeys

2013 2032



Future Journeys

2013 2032



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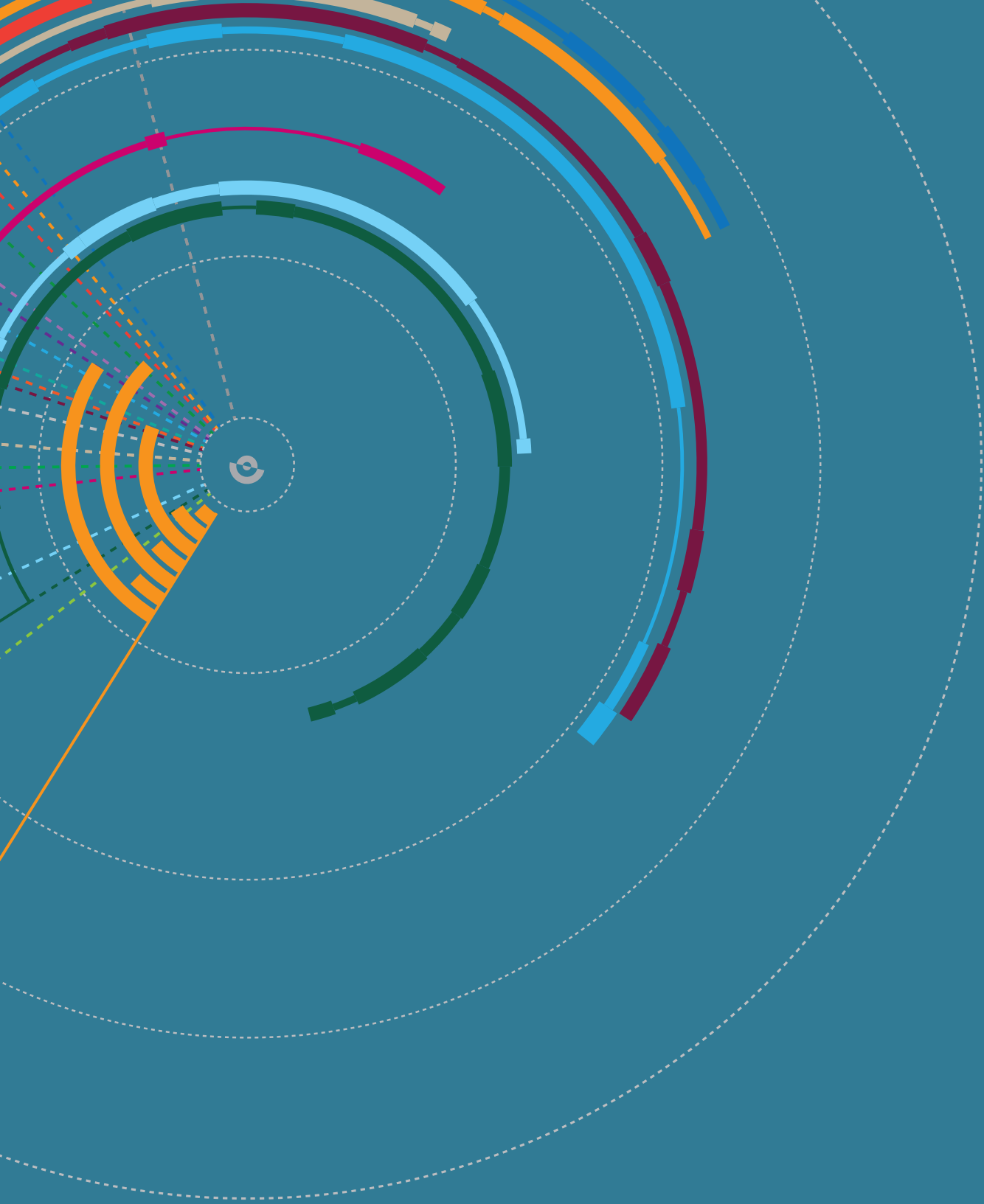
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Introduction

Aviation at the centre of “Future Journeys”

With each successive Airbus Global Market Forecast (GMF) we seek to deliver a 20-year view of the demand for civil passenger and freighter aircraft that will serve as a reference for airlines, airports, investors, government and non-government agencies, air transport and economic planners world-wide.

We chose the title for this year’s GMF “Future Journeys” to remind us that, behind the data, the analysis and the predictions contained in our forecast, the community that constitutes the air transport industry essentially provides journeys. These journeys involve real people, each with their own particular reason to embark upon each journey.

Very soon after the first flights of the early 1900s, flying became less about the challenge of flight itself and more about peoples’ journeys. As early as 1914 passenger flights were a regular occurrence and 1919 saw the creation of the first airline that is still operating today. People were quick to grasp the benefits aviation could bring to their journeys, beginning with the transport of high-value freight in the form of air mail.

Aviation continued to innovate to facilitate this need with a succession of significant airline firsts: across the Atlantic and Pacific in the nineteen thirties and the introduction of jet airliners in the fifties. Technological and operational firsts have continued to this day and behind each of them are the demand of peoples’ lives and their journeys.

In this forecast we set out our view of the key economic and operational drivers of air transport markets in the next 20 years and their implications on the demand for passenger and freighter aircraft. But as in the past it is journeys, how they are performed, where they start and finish, when they happen and who will take them that will define the future. This future will steer us all towards the areas of innovation that will define the shape and structure of our industry at the end of this forecast’s coverage in 2032 and beyond.

Our regular readers will notice some areas of greater focus in the 2013 GMF. It is our intent to provide you with analysis based on the most comprehensive sets of data and calling on the very best forecasting techniques to provide a useful source material for your own analyses. We realise, however, that there is always room for further improvement and we look forward to your feedback and your questions in order to make our future forecasts even more robust.



The demand for air transport will grow

Air traffic has doubled every 15 years in the past, and is expected to double again in the next 15. It rebounded each time demand was slowed by shocks, such as the 2008 global financial crisis. This is evidence of the value people place on the ability to fly to do business, visit friends and family or simply to relax on holiday. How much, how quickly and where air transportation will grow is driven by a number of factors. Some are economic and others linked to demographics and socio-economic development. It is the job of the forecaster to determine which of these will help explain air transportation's future and which will shape its direction. People, where they choose to live, the work they do and their aspirations are

all a big part of the story, and will drive factors such as urbanisation, wealth, disposable income and consumer spending, key factors in the growth of air transportation. In this year's GMF, we will delve a little more deeply into these factors to show how they in turn drive our forecast and results. However, it's not just about the benefits aviation can bring to people, but the benefits aviation can bring to countries for example look at contribution to GDP. Report after report has shown the scale of benefits aviation brings in terms of jobs and economic development. Good reasons to ensure that aviation is able to reach its potential in the future.

Aircraft size is growing

This growth has not been without a focus on the environment; new technologies have constantly driven down aircraft noise and emissions levels. In the last 40 years, noise has been reduced by 75% and CO₂ by 70%. This focus will continue into the future, with the latest new products and derivatives either just coming onto the market or arriving in the next year or two like the A350XWB and A320neo delivering between 15-25% lower fuel burn and associated CO₂ than the aircraft they are replacing. It is not just new technologies; over recent years a trend has developed to select larger aircraft. This is a simple way to reduce the fuel burn and cost per seat

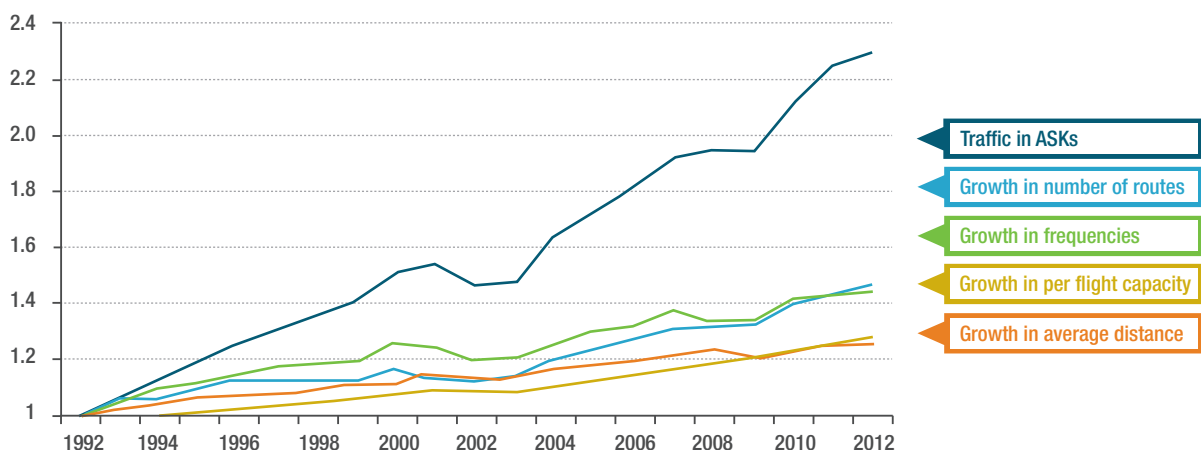
for the airline and also to meet the growing demand on the routes that they serve. If the number of seats offered by the world's airlines' are divided by frequency, it can be clearly seen that average aircraft seating is increasing. So it is no surprise that when it is possible, airlines choose larger aircraft within each market segment to meet their needs. Airlines are also up-gauging aircraft in their existing backlogs and densifying, (adding more seats) existing cabin configurations. Manufacturers in turn are looking at ways to add seats to existing products and some considering or launching larger variants of existing aircraft families in order to meet demand.

70% CO₂ reduction in the last 40 years

AVERAGE AIRCRAFT CAPACITY HAS GROWN BY MORE THAN 25% OVER THE LAST 20 YEARS

Source: OAG, Airbus

Evolution of the aviation industry over the last 20 years
Base year 1992=1



Ticket price has not grown

It is possible to believe that the ability to transport a person to anywhere in the world, with less than a day's travel time would come at a very significant cost to the traveller. In fact, this was the case. In 1941, it could have cost the average American more than a year's salary to fly from Los Angeles to Hong Kong. Today, they would have to work less than a week to do the same trip. According to data from Airlines for America, domestic US airfares (including fees) have reduced by 40% since the 1980s. This decline has not just been in the US, there is little

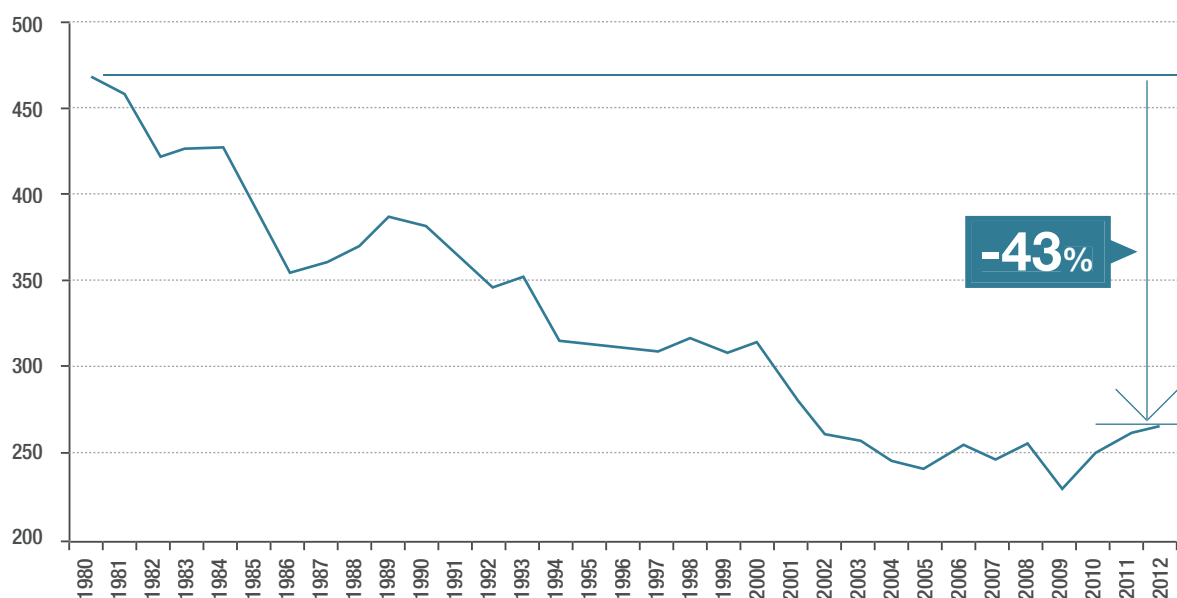
doubt that it is possible for travellers from all corners of the world to identify flights they have made in the past that are now less expensive. Importantly, with cheaper flights has come a greater ability for people to fly, aiding a very real democratisation of flight world-wide.

There are few products in the world that have become cheaper in this way, in fact it is a struggle to think of more than a handful.

➤ REDUCING AIR FARES HELPING TO DEMOCRATISE AIR TRAVEL - THE US EXAMPLE

Source: Airlines for America, Airbus

Average fare (Real US\$) paid per domestic round-trip journey



01

Executive summary _





Background

In the last year, despite continuing social problems and sluggish economic growth in parts of the world, aviation has continued to grow through developments in world economic activity, demographics, positive socio-economic progress and simply the ability of aviation to deliver real benefits to real people. This is something we are reminded of every year when putting together the Airbus GMF as the data shows the further evolution of air transport. Positively the trends driving aviation are not short term in nature, propelling aviation through the last 30 years to a point where air traffic has doubled, twice, over

that time. These trends will also form the basis on which aviation will continue to grow in the coming 20 years, with aviation becoming increasingly accessible to people in all parts of the world. Each year, Airbus forecasters take the best macro-economic and operational data and combine it with a forecasting methodology developed over 20 years, performing more than 208 traffic flow forecasts, over 100,000 Origin and Destination (O&D) city-pairs and modelling demand for nearly 750 individual airlines in order to deliver the forecast.

Highlights

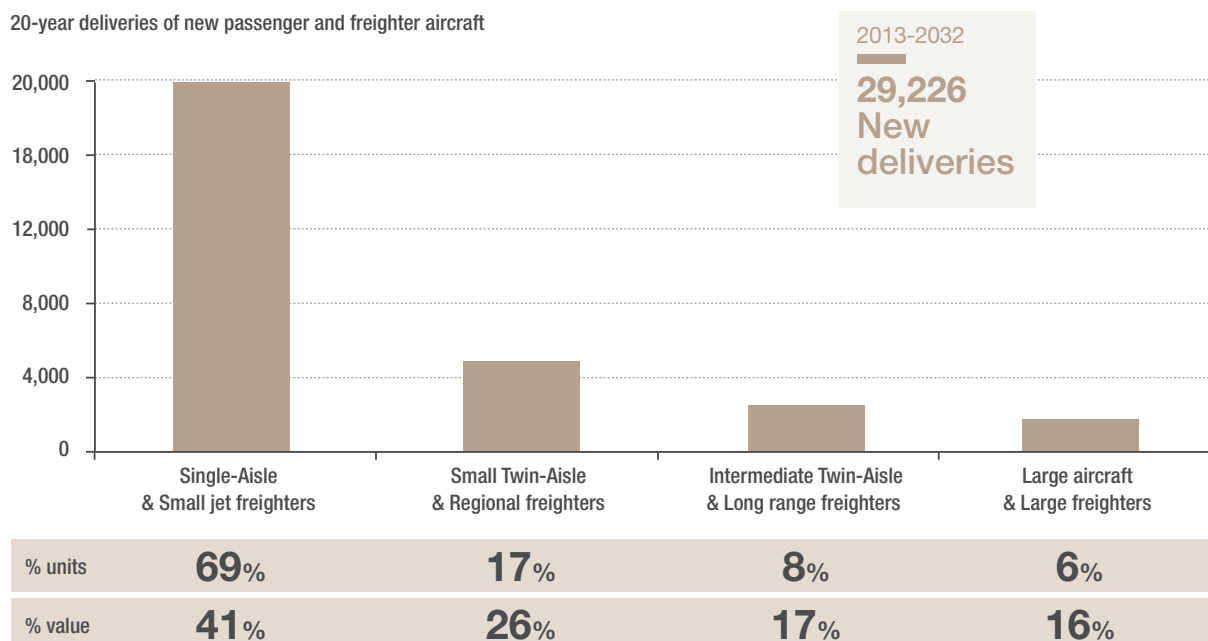
While GDP continues to be a strong explanatory variable for aviation growth, Airbus' traffic forecasts also test and use other variables. For example, the Chinese market is also driven by real consumption and trade, which are used to forecast future demand. Last year, Chinese domestic traffic was identified as the largest flow by the end of the forecast period, a view that is re-asserted in this year's forecast. The emerging markets as a whole, with their economic growth, large populations and growing middle-classes continue to be strong drivers on the forecast, with Asia-Pacific becoming more significant over time in terms of new

aircraft deliveries, for both passenger and freighter types. The Single-Aisle market continues to be the most significant in terms of volumes. However, within this segment the evolution in terms of aircraft size continues. The largest segments, the 175 and 210 seat categories, with demand met by aircraft such as the A321 today, are forecast to take 44% of all Single-Aisle demand, with the largest demand expected to remain in the 150 seat segment. The forecast for larger Twin-Aisle categories, including the Very Large Aircraft, remain robust, driven by growth of significant existing city pairs, hubs and development across all regions, but in particular Asia.

➤ SINGLE-AISLE: 69% OF UNITS; WIDE-BODIES: 59% OF VALUE

Passenger aircraft (≥ 100 seats) and jet freight aircraft (>10 tonnes)

20-year deliveries of new passenger and freighter aircraft



36%

Share of passenger and freighter aircraft delivered to Asia

Traffic

Airbus analysis shows that traffic growth between advanced and emerging air transport markets will grow at an average annual rate of 4.9%, and will represent 30% of global traffic (RPKs) by 2032. Traffic between emerging markets will grow at an impressive 6.8% and will represent just over 40% of passenger traffic. On a world-wide 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 under-estimated.

In fact by 2032, about 60% of all traffic will still involve the advanced aviation markets, primarily North America and Europe. As in GMF 2012, traffic carried by airlines from the Middle East airlines is expected to grow at the highest rate of 7.1% per annum, accounting for 12% of all traffic carried in 2032. But the three largest regions in terms of airline domicile will continue to be Asia-Pacific, Europe and North America, accounting for 34%, 22% and 18% of global traffic respectively in 2032. World-wide freight traffic is expected to grow slightly higher than passenger traffic at 4.8% per year.

Fleet and Deliveries

By 2032, the fleet of passenger aircraft (with 100 seats or more) and freighter aircraft (10 tonnes or greater), will be 36,556 aircraft more than doubling the 17,739 aircraft fleet in service today. Single-Aisle passenger aircraft represent the largest segment of the new deliveries with 20,242 over the next 20 years. The demand for Twin-Aisle aircraft will require 6,779 new passenger aircraft and 494 freight aircraft. Due to the growth in traffic demand in Asia-Pacific, it is no surprise that 47% of the demand

for very large passenger aircraft (VLA) will be within this region. It is equally important to note that over 40% 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 2032, the world's airlines will take delivery of more than 29,220 new passenger and freighter aircraft worth US\$ 4.4 trillion at current list prices.

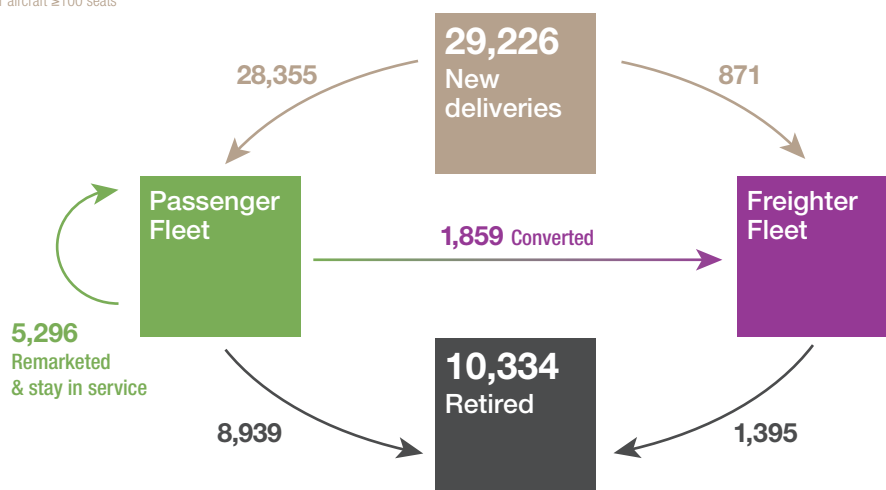
NEW PASSENGER AIRCRAFT DELIVERED BY REGION

Passenger aircraft ≥100 seats

	2013-2022	2023-2032	2013-2032	% of 20 years total new deliveries
Africa	443	527	970	3%
Asia-Pacific	4,894	5,770	10,664	36%
CIS	587	508	1,095	4%
Europe	3,035	2,792	5,827	20%
Latin America	1,040	1,239	2,279	8%
Middle East	1,010	989	1,999	7%
North America	2,968	2,553	5,521	19%
Freighters	416	455	871	3%
World	14,393	14,833	29,226	100%

MORE THAN 29,200 NEW AIRCRAFT DELIVERIES

Passenger aircraft ≥100 seats



02

Demand for air travel

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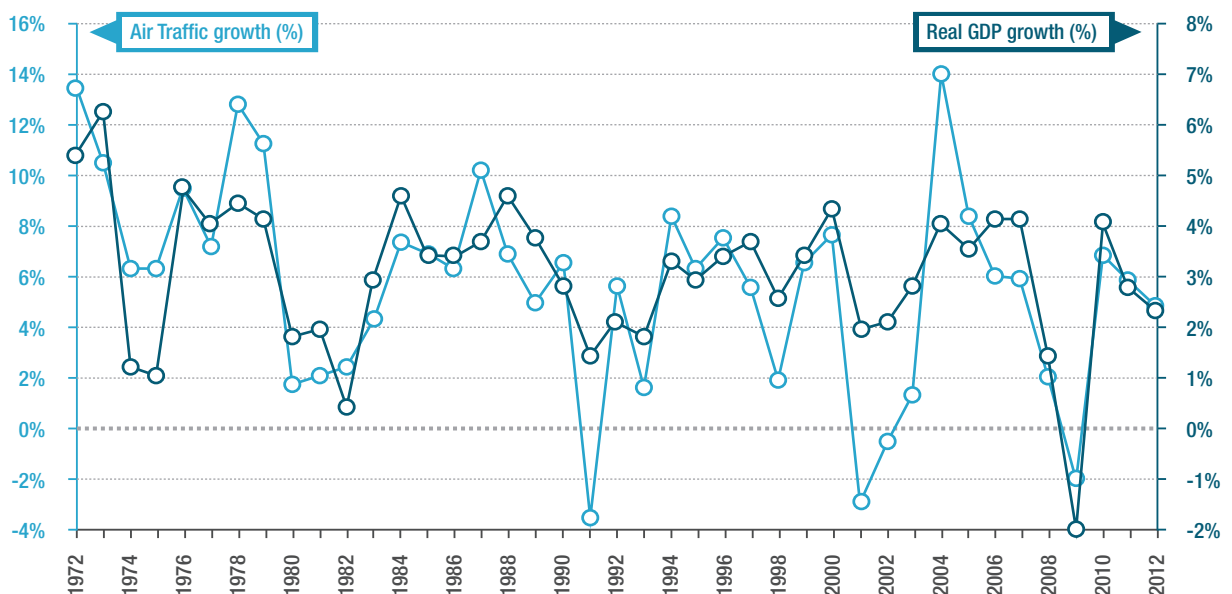
Economy



Commercial air transport development is driven by two main factors: economic growth and air ticket price stimulation. Economic developments can be measured by several elements including private consumption, disposable income, exports, imports or tourism growth (national and international). However, the variable that best combines these different dimensions is the more global Gross Domestic Product (GDP), as shown in the chart below.

WORLD TRANSPORT GROWTH IS CLOSELY CORRELATED TO ECONOMIC GROWTH

Source: IHS Global Insight, ICAO, Airbus



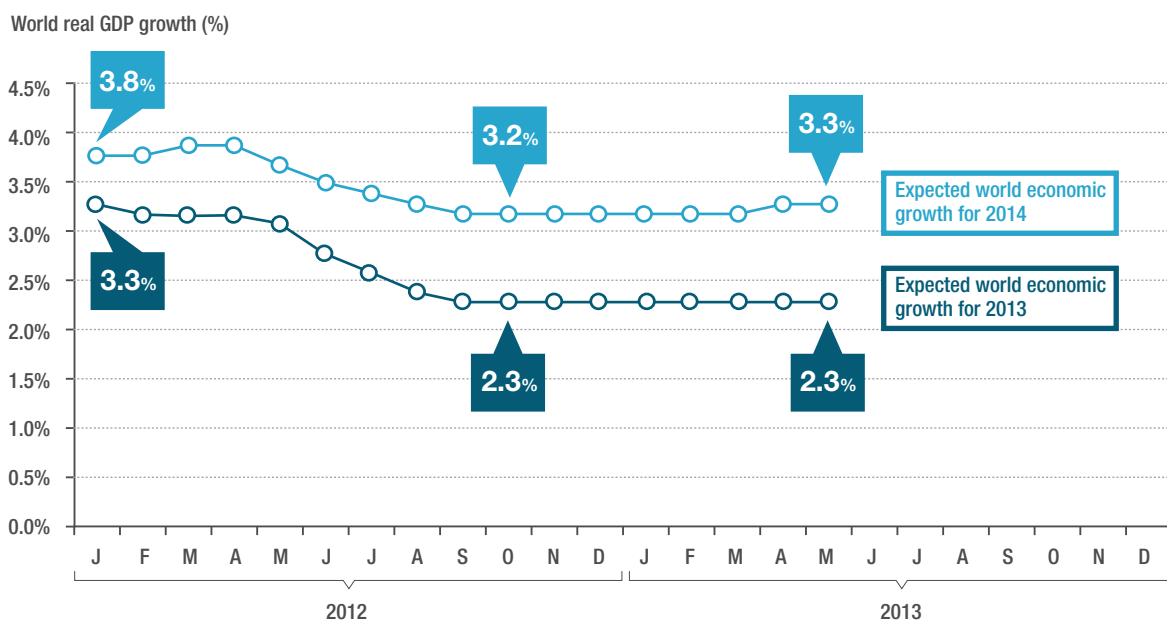
Over the first half of 2013, negative news concerning the global economy has gradually slowed, with previously identified threats beginning to look less likely to materialize. Although Europe's recent performance has been an issue for the global economy, structural reforms made at the European Union (European Central Bank) and at a national level have helped a more optimistic outlook. The US economy faces some challenges in the form of the federal spending sequestration. Nevertheless, the underlying fundamentals of the US economy remain solid, which should translate into strengthening economic growth in the second half of 2013, especially given the resilience of the private sector. The risk of a hard landing for China is also seen by economists as less likely than previously thought. With 2012 economic growth at 7.8%, it is still a very impressive growth rate, even when compared to other emerging countries.

Finally, the on-going geopolitical tensions in the Persian Gulf and the rest of the MENA (Middle East and North Africa) region have helped to keep oil prices at elevated levels. Any adverse effects are however not expected to derail world economic growth.

All in all, previously identified risks are expected to translate into loosening tensions, suggesting the idea that a more negative scenario will be avoided for now and that the global economies on-going expansion has staying power. This is illustrated by the fact that downward revisions of short term economic growth outlooks have stopped. This is the case for 2013 (expected world economic growth of 2.3% at the time of writing) and even more true for 2014 economic growth which has been slightly revised upwards recently (from 3.2% up to 3.3%).

> FORECAST WORLD ECONOMIC GROWTH RATES ARE NO LONGER BEING REVISED DOWNWARD

Source: IHS Global Insight, Airbus



Over the medium term, the global economy's performance is expected to improve gradually, thanks mainly to more aggressive business investment, which in itself is fuelled by accumulated pent-up demand in developed and emerging economies. As a result, the pace of growth may even strengthen and surpass the long-term trend level during 2015-2019, before gradually edging down to a rate close to its long-term trend (3.1% yearly growth) after 2020.

The post-crisis journey shows further disparities between emerging and developed countries and even between developed countries: those that are agile/competitive and those more indebted/less competitive. Having been faster to implement structural reforms and debt de-leveraging

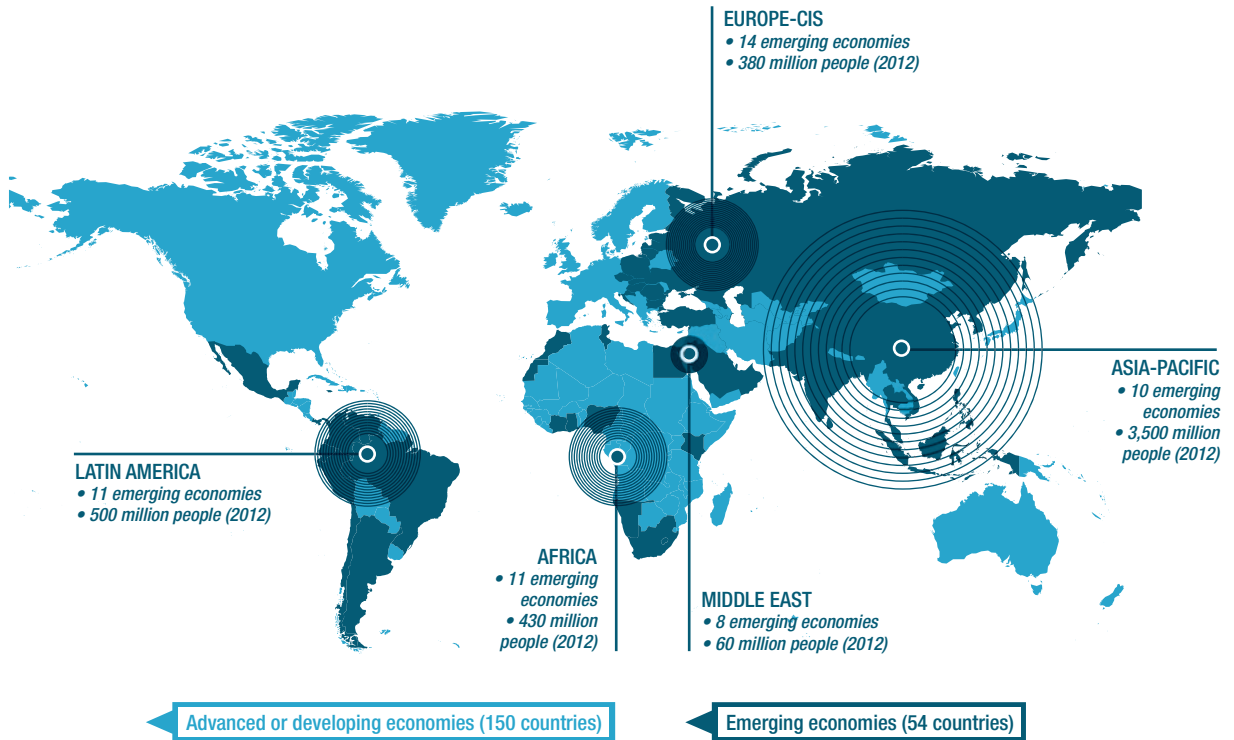
measures, emerging countries have rebounded faster and stronger to pursue their development growth, increasingly adopting some western consumption patterns including the use of air travel.

The 54 emerging economies we use in our segmentation have an impressive cumulated population of almost 5 billion people. Contrary to perception, these 54 emerging economies are very diverse and not only located in the Asia-Pacific region but globally (11 in Latin America, 11 in Africa, 8 in Middle East, 14 in Europe-CIS and 10 in Asia-Pacific).

Population of emerging economies  5 billion

DIVERSE EMERGING ECONOMIES, NOT JUST LOCATED IN ASIA-PACIFIC

Source: IHS Global Insight, Airbus



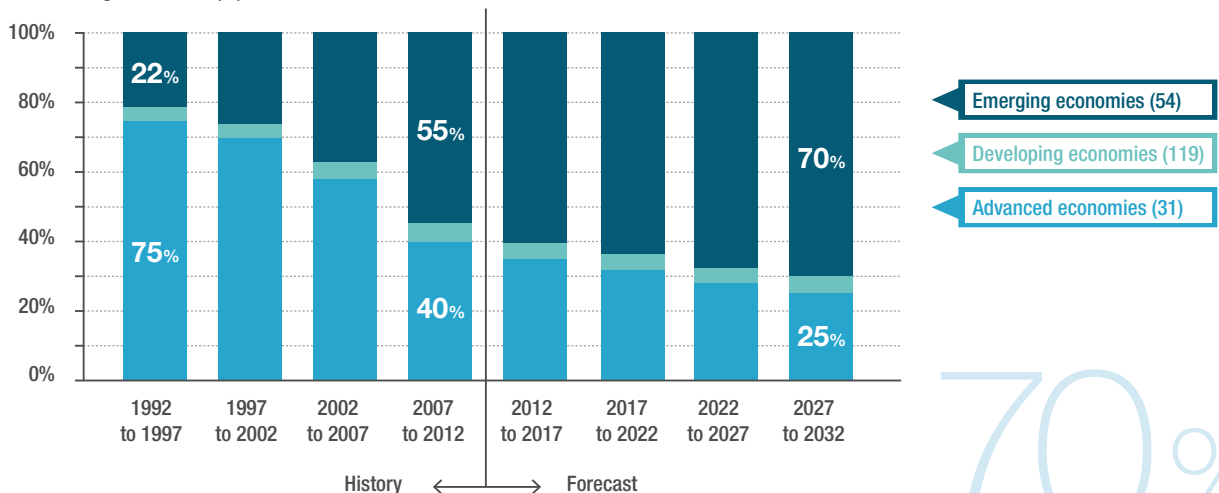
On their way to converge and eventually catch up with more mature/advanced economies, emerging economies have been and will continue to be the single most important engine of the world economic growth. Between 1992 and 1997, the 54 emerging economies identified contributed to a 22% share of the world economic growth, compared with a 75% share for the 31

more advanced economies. Over time these emerging economies have gradually increased their share of world economic growth, up to 55% during the 2007-2012 period (compared with 40% for the advanced economies). By the next decade, this trend is expected to continue to reach an impressive 70% of world economic growth from emerging economies.

EMERGING ECONOMIES INCREASINGLY DRIVING WORLD ECONOMIC GROWTH

Source: IHS Global Insight, Airbus

World GDP growth share (%)



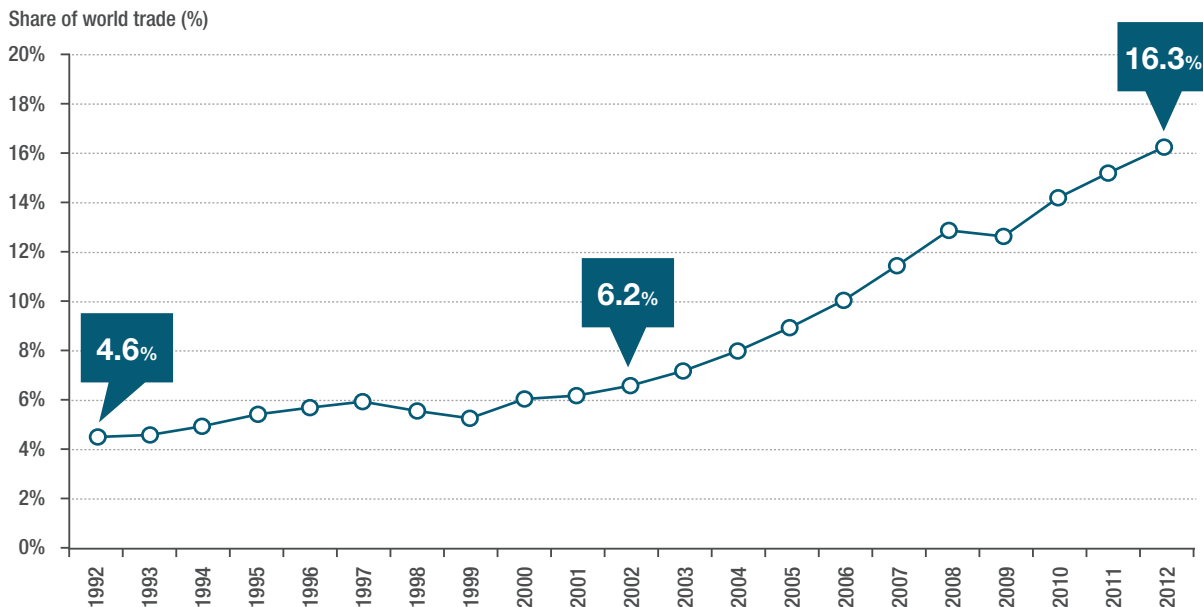
70% of the world economic growth from emerging economies (2027-2032)

As a result of their growing economic power, emerging economies have begun to build stronger political and commercial links between themselves, furthering world globalisation. To illustrate this, trade between emerging

economies in 2002 represented 6% of the world's total trade. Currently, this share has grown to an impressive 16% and will continue to grow for the foreseeable future.

> STRONG TRADE GROWTH BETWEEN EMERGING ECONOMIES* OVER THE LAST 10 YEARS

Source: IMF, Airbus



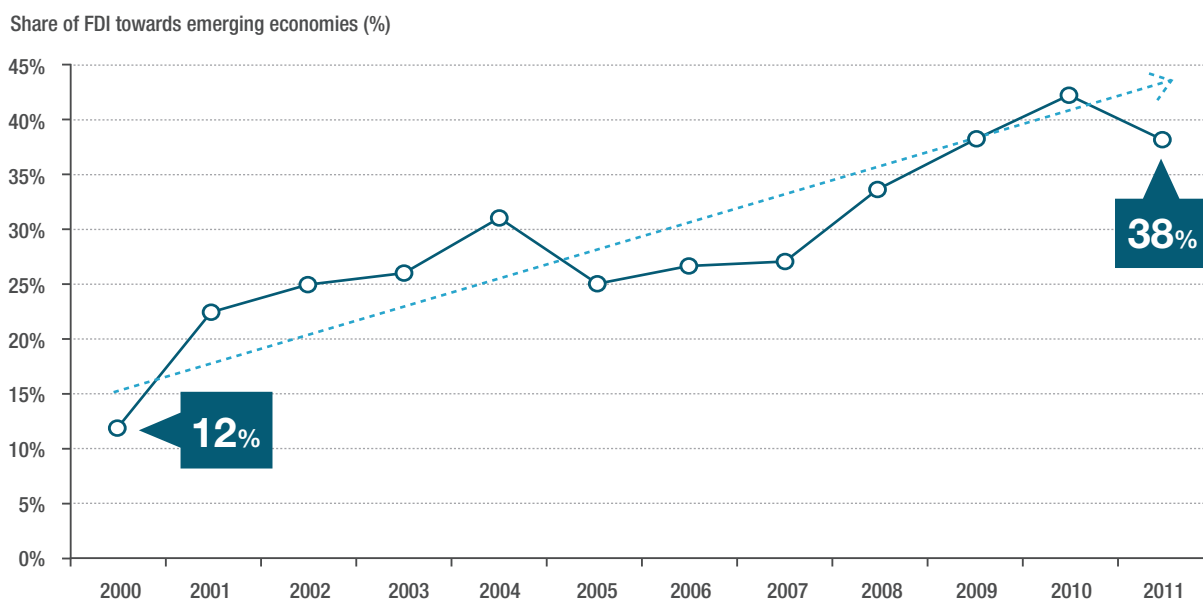
* 54 emerging economies

Another illustration of this world globalisation lies with capital flows, which are increasingly spread amongst a growing number of countries. Emerging countries, which

represented 12% of the world Foreign Direct Investment (FDI) in the early 2000s, currently represent more than one third (38%) of world-wide FDI flows.

> A GLOBAL WORLD: FOREIGN DIRECT INVESTMENT INCREASINGLY DIRECTED TOWARDS EMERGING ECONOMIES*

Source: World Bank, Airbus



* 54 emerging economies

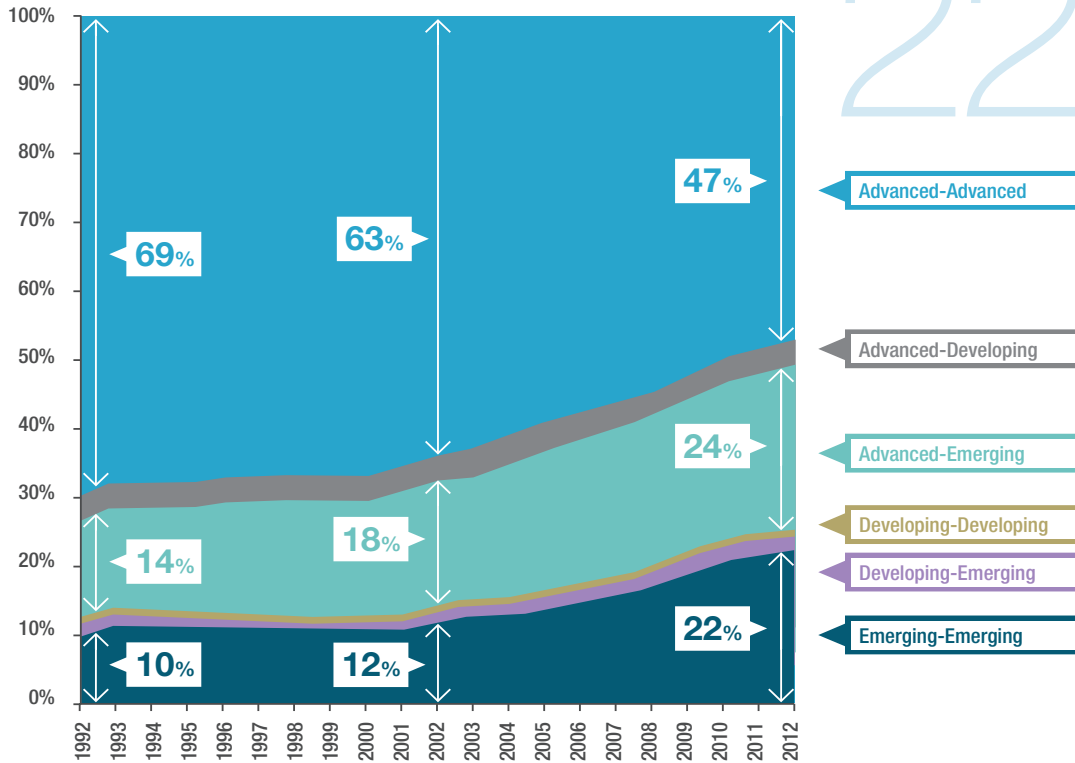
It is not surprising to see how increasing globalisation has democratised air transportation around the world, especially over the last 10 years. Passenger capacity offered between emerging economies grew from 12% in 2002 to 22% in 2012. Over the same period, offered capacity share between advanced economies has declined from 63% to 47%.

in 2002 to 22% in 2012. Over the same period, offered capacity share between advanced economies has declined from 63% to 47%.

A GLOBAL WORLD: AIR TRANSPORTS INCREASING DISTRIBUTION

Source: OAG, Airbus

Share of world offered capacity (%)



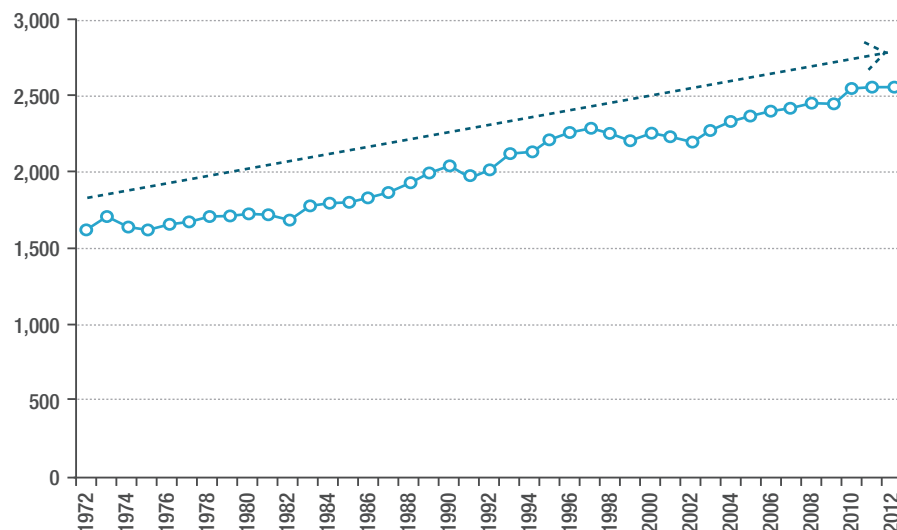
The reverse approach is also true: globalisation has been helped thanks to the development of air transportation. Although there were 1,500 country pairs served with

scheduled air transport 40 years ago, this has increased over time and is expected to reach 3,000 country pairs in the near future.

NEARLY 3,000 COUNTRY PAIRS NOW SERVED WITH SCHEDULED AIR TRANSPORT

Source: OAG, Airbus

Number of country pairs linked by air (scheduled service)



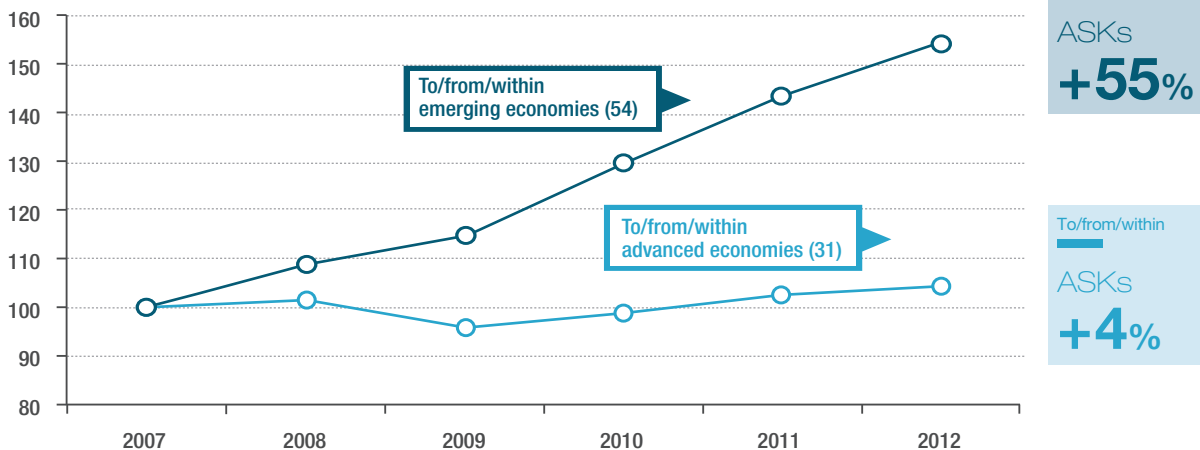
Overall, air transport growth during the last few years has been highly dependent on the emerging markets, which have regularly grown at a double digit year-over-year rate. Since 2007, passenger capacity offered to/from/

within emerging economies (measured in ASKs) has grown 55%, compared to a 4% growth in the capacity offered to/from/within the advanced economies.

> SINCE 2007, AIR TRAVEL HAS GROWN 55% IN EMERGING ECONOMIES

Source: OAG, Airbus

Offered capacity (ASKs)
(Base 100 in 2007)



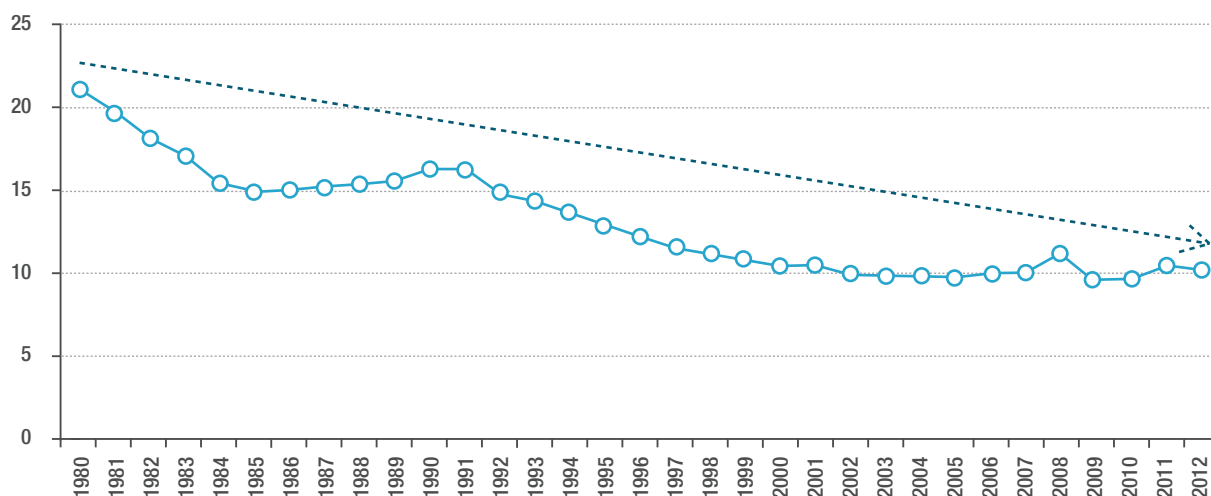
The second pillar of the commercial air transport development over time has been the air ticket price stimulation with an average yearly decrease of 3% per unit of passenger traffic over the last 30 years (in real terms, inflation removed). This impressive achievement was helped by outstanding

air transport productivity improvements from both airline operations (aircraft utilisation, fleet maintenance, improved passenger load factors, etc) and more efficient and capable aircraft. Air transport liberalisation and emergence of low cost carriers have also played a decisive role in this productivity improvement and price stimulation.

> STRONG DECREASE OF COST PER UNIT OF TRAFFIC HELPING TO LOWER AIR FARES

Source: ICAO, Airbus

Unit cost (cents/RPK in 2012 US\$)



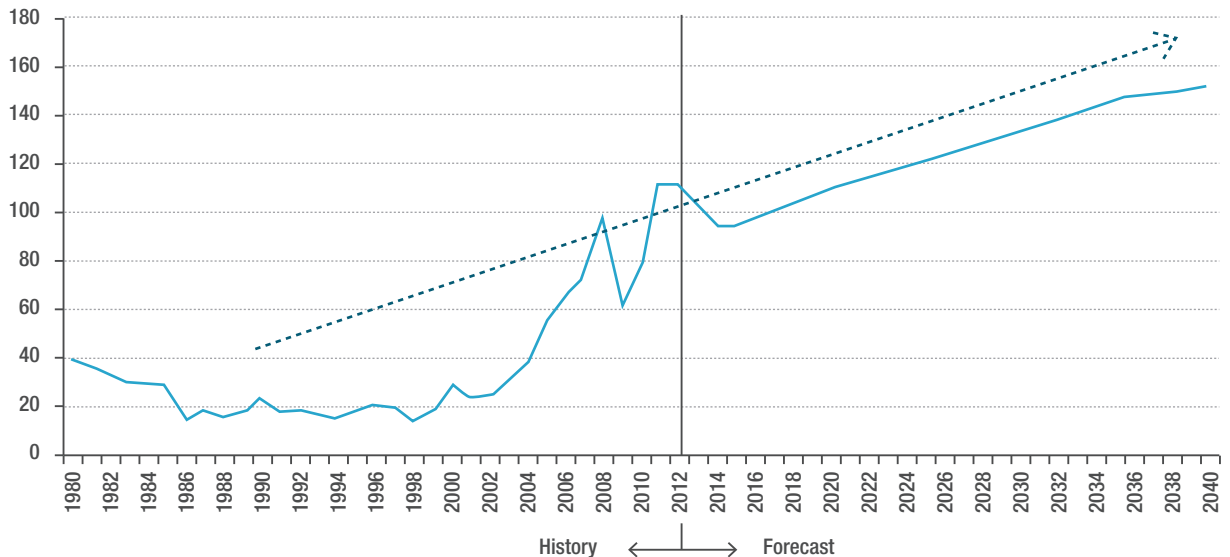
The trend towards increasing oil prices, which has been observed during the last decade, is expected to continue in the long-term, the main explanation being basic supply/demand fundamentals. As experienced over the last five years, price volatility is not expected to diminish in the short term. At the time of writing, global oil prices

have been under pressure due to weaker global demand growth and additions to supplies from North America, the Middle East and Central Asia. As a result, the price of Brent crude was hovering close to US\$100 per barrel. Were it not for a US\$10-20 per barrel geopolitical risk premium, Brent's price could be well below US\$100.

> HIGH OIL PRICES HERE FOR THE LONG-TERM

Source: EIA, IHS CERA (May 2013), Airbus

Brent oil price (current US\$ per bbl)



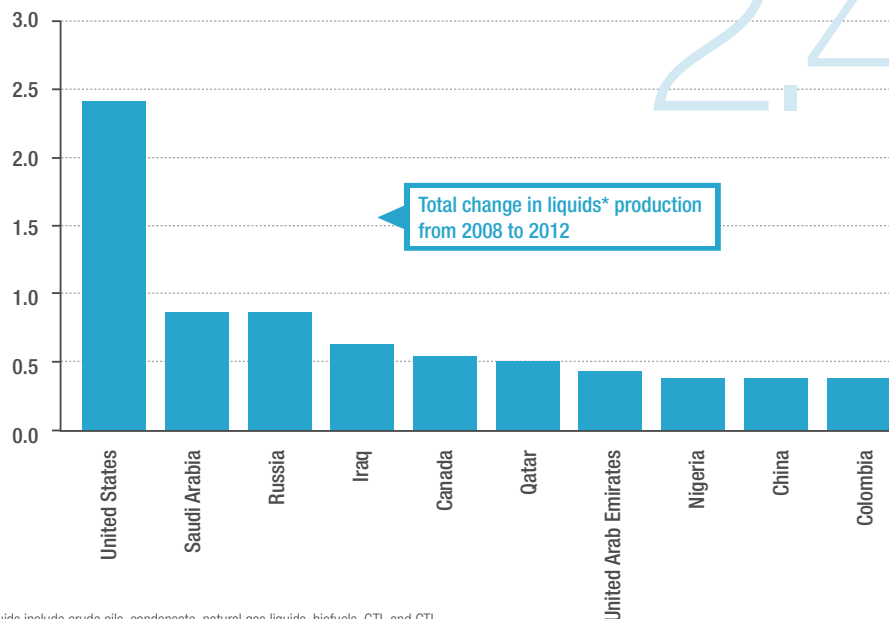
Another element worth mentioning is the rise in production of non-conventional oil and alternative energy, especially in North America (oil sands, tight oil and gas). As a consequence, it is interesting to note that the

US has become the biggest source of growth in liquid production in recent years (2.4 million barrels per day growth in production in the US from 2008 to 2012) and could become a net exporter by 2020.

> THE GREAT REVIVAL: THE US HAS BECOME THE BIGGEST SOURCE OF GROWTH IN LIQUIDS PRODUCTION IN RECENT YEARS

Source: EIA, IHS CERA, Airbus

Growth in production in million barrels per day



2.4 million
barrels per day growth
in US production
from 2008 to 2012

* Liquids include crude oils, condensate, natural gas liquids, biofuels, GTL and CTL

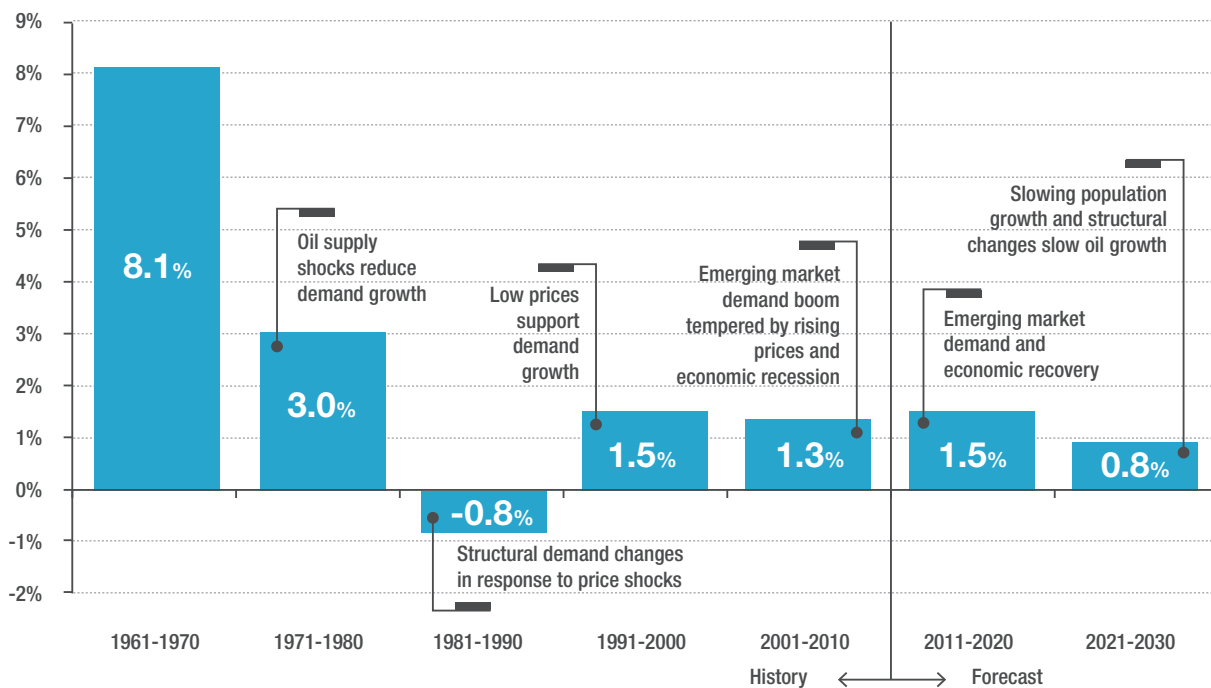
However, oil supply growth (mainly triggered by high prices) is not expected to cope with long-term oil demand trends. In the baseline scenario, it is expected that oil demand will grow at an average yearly rate of 1.5%

from 2011 to 2020 and 0.8% from 2021 to 2030. Long term increasing oil prices are then expected to be the adjustment variable of supply and demand imbalance.

> LONG TERM WORLD OIL DEMAND TREND

Source: IHS CERA, Airbus

Annual average percent change in world oil demand



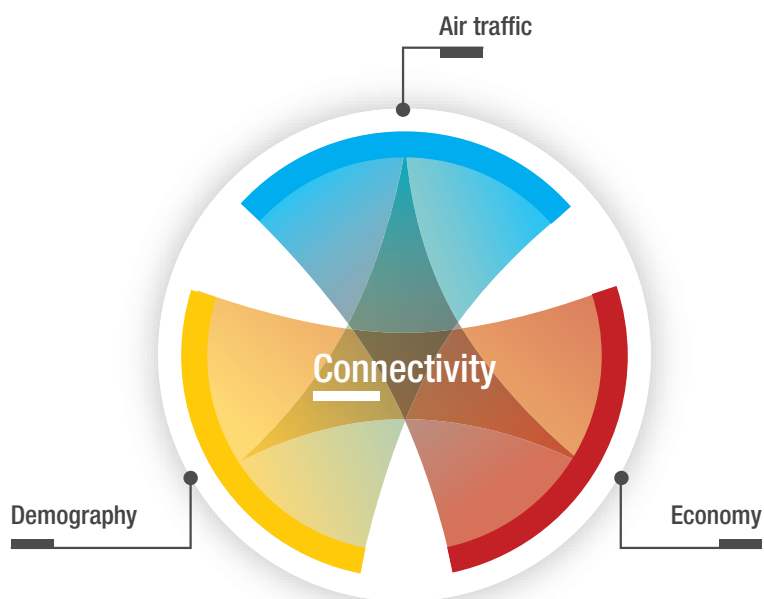
This trend in oil prices and its translation into an increasing share of airline operating costs, together with the volatile nature of fuel prices, has meant that the focus of airlines and manufacturers has been to minimise fuel burn and costs. Manufacturers like Airbus invest the majority of their R&T spending on reducing fuel burn. In recent years airlines have focused on reducing seat mile costs by purchasing larger aircraft and even converting existing orders to larger types or variants or densifying existing aircraft cabins.

All of these economic and industry drivers, and many more not mentioned here, are used in our traffic forecast in an attempt to correlate them with historical and future air traffic developments. By doing so, we hope to derive a more comprehensive and detailed understanding of the factors driving our industry.

Market drivers



It is well known that economic growth is a key factor when explaining air traffic growth. However, forecasters will often look to demographic trends as another explanatory variable, as these also play a major role in air traffic evolution: population growth, urbanisation and new middle-class emergence in developing countries are all factors that explain why and how frequently people travel. Another lever of air traffic is the increasing connectivity between people, between regions. At first, it can be viewed as a consequence of economic growth but it is also a facilitator: directly with the multiplication of new routes and the increasing capacity in airports which extend the supply for future journeys; and indirectly by stimulating the economy through infrastructure investments and the business they attract.



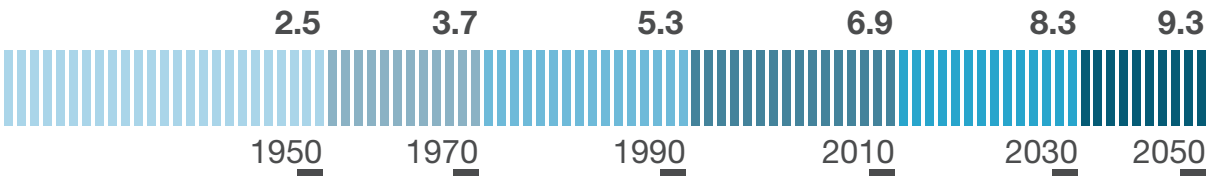
Urbanisation and emergence of a new global middle-class

According to the United Nations, Department of Economic and Social Affairs (DESA), the world's population will grow to 8.4 billion people in 2032.

Associated with this, two other phenomena will occur: strong and rapid urbanisation, and middle-class growth in emerging countries, especially in Asia.

WORLD POPULATION (BILLIONS) – 1950-2050

Source: United Nations DESA, Airbus



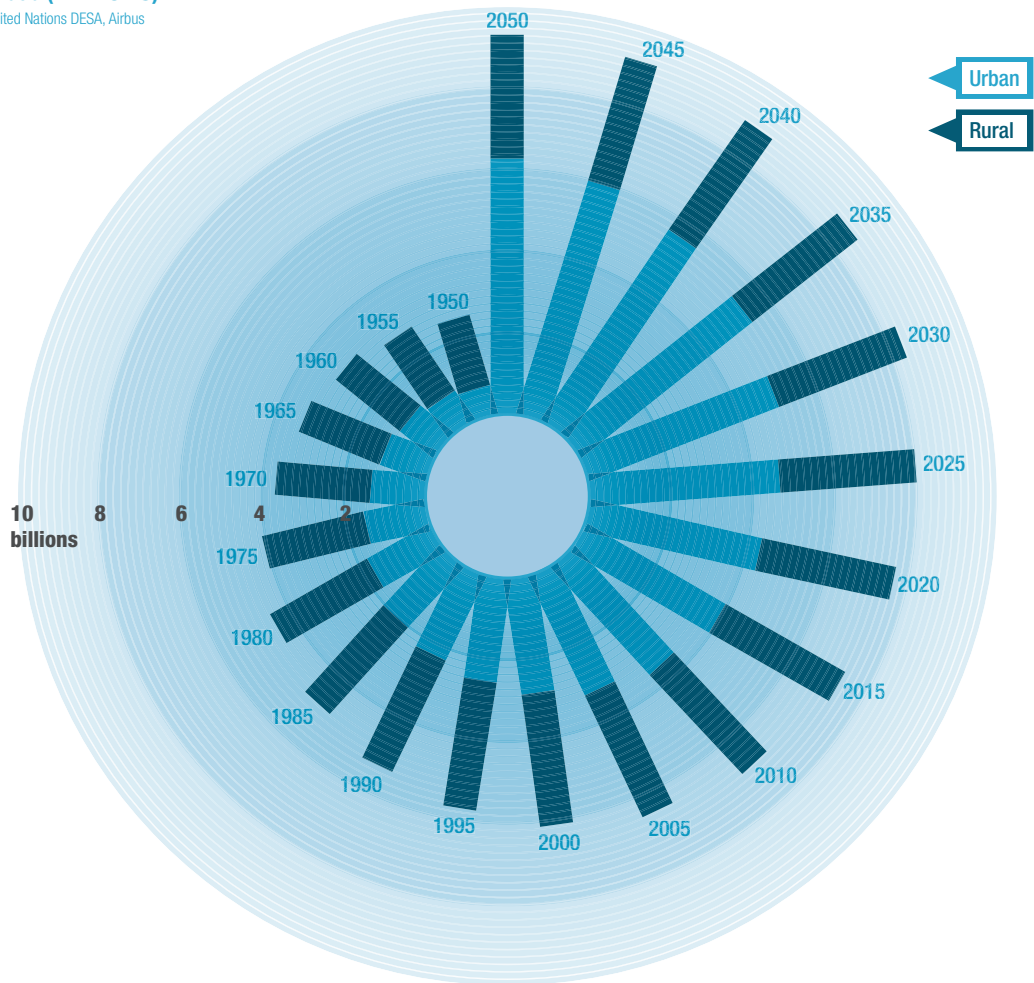
Up to 2050, the world's urban population will increase at twice the pace of the global population. In 2032, 61% of the world population will live in a city compared to 52% in 2012. This will represent an increase of 1.5 billion urban dwellers.

61%

Urban share of world population in 2032

URBAN AND RURAL POPULATIONS 1950-2050 (BILLIONS)

Source: United Nations DESA, Airbus

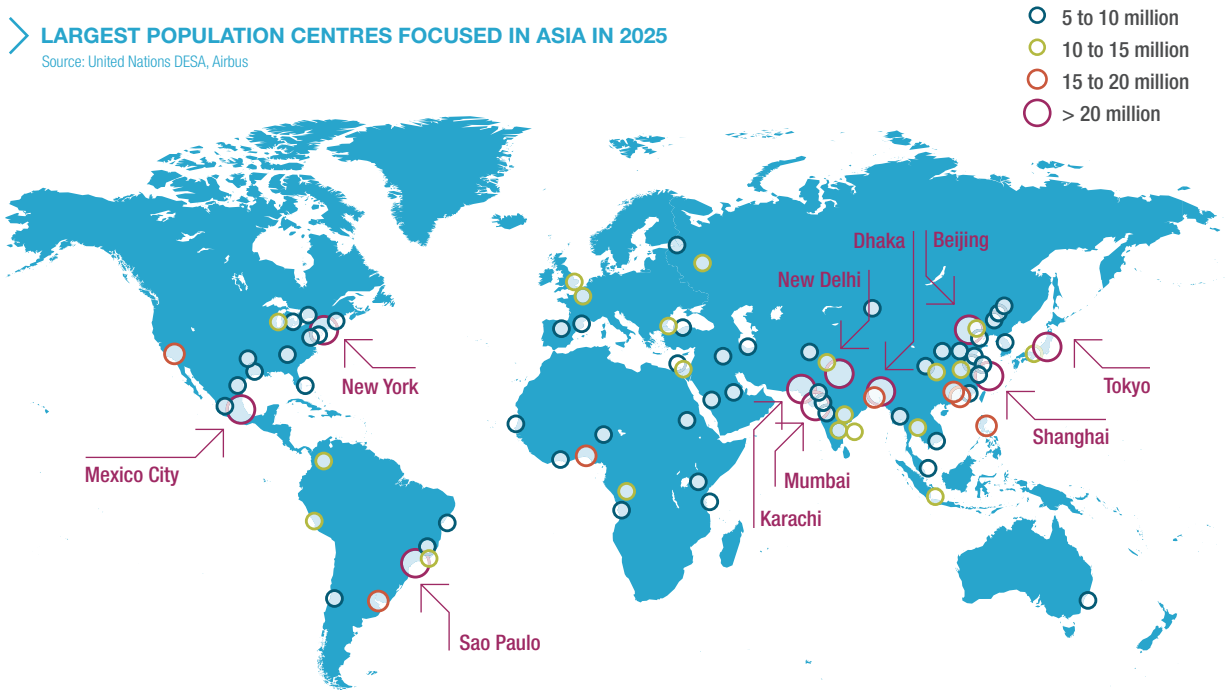


An increasing proportion of the urban population will live in large urban agglomerations of over 5 million people. United Nations DESA anticipates that 23% of urban population, representing 1 billion people, will live in these cities by 2025 compared to 18% in 2012.

The number of these cities will dramatically increase between 2012 and 2025 by more than 50%, jumping to 96 cities of over 5 million. In other words, more large urban centres, with more people.

LARGEST POPULATION CENTRES FOCUSED IN ASIA IN 2025

Source: United Nations DESA, Airbus

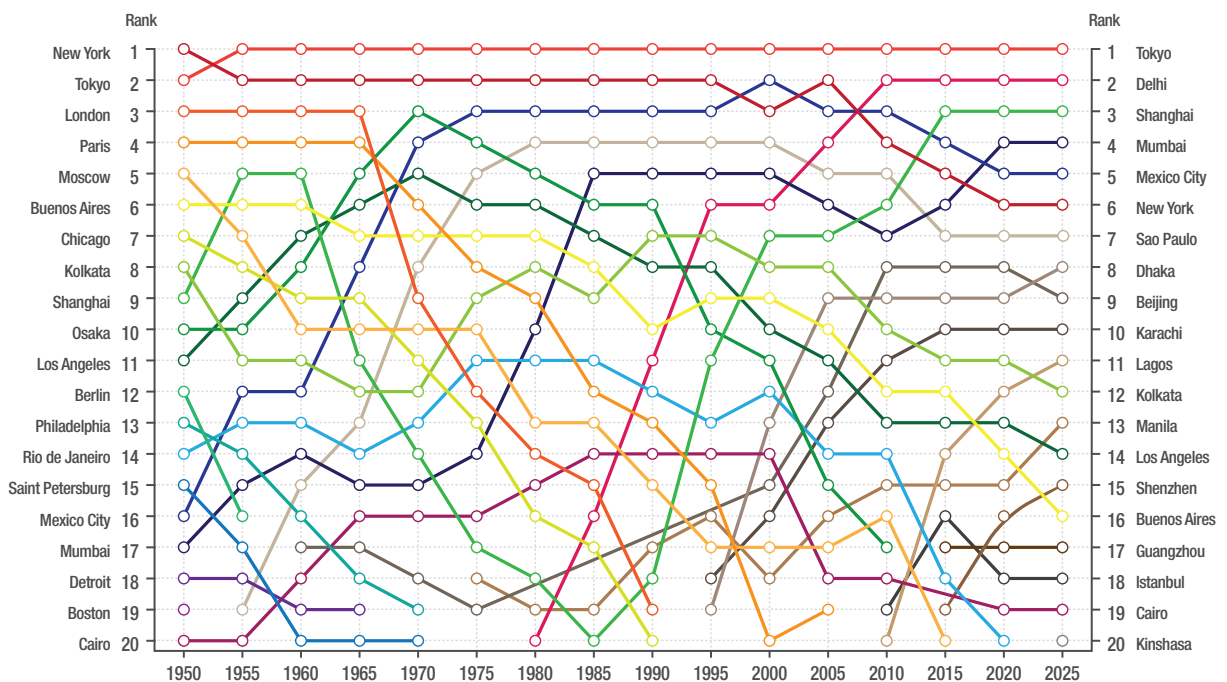


Tokyo will remain the largest city with more than 38 million inhabitants in 2025, followed by Delhi (33 million), Shanghai (28 million) and Mumbai (27 million), making these four Asian cities the most populated in the world by 2025. Seven out of the top 10 cities with more

than 20 million of inhabitants in 2025 will be located in Asia, two in Latin America and one in Northern America. These are places where increasing numbers of people will live, work and want to travel between and, therefore, focal points for a large amount of future aviation growth.

TOP 20 CITIES IN THE WORLD – 1950-2025

Source: United Nations DESA, Airbus

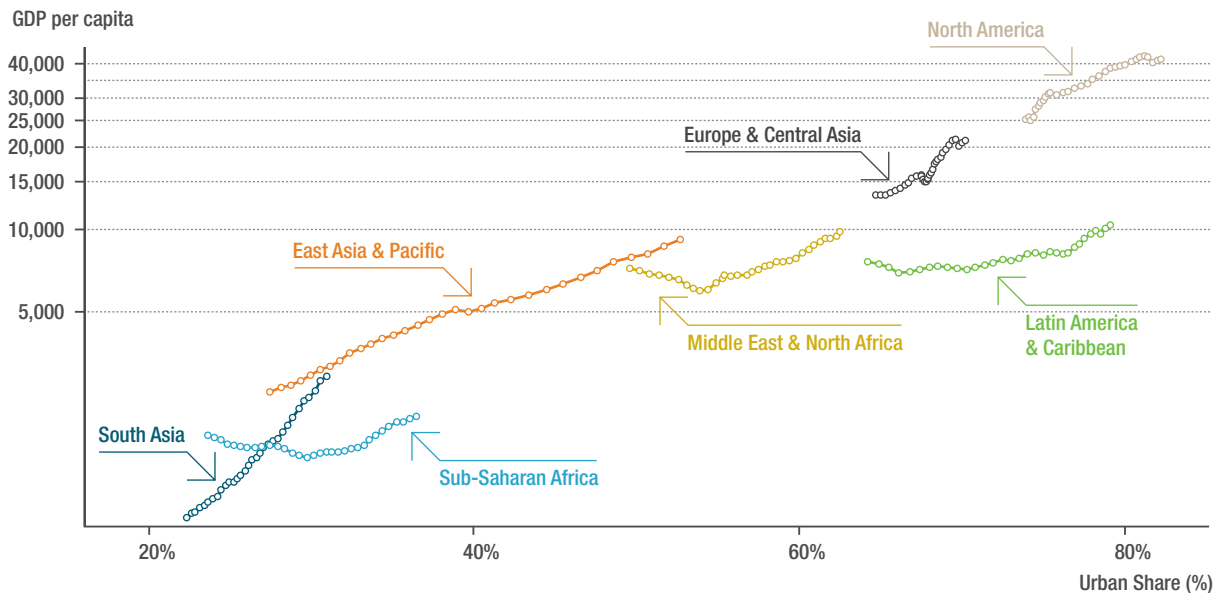


Historically, urbanisation goes hand in hand with the emergence of a middle-class. This is illustrated with World Bank data highlighting the strong relationship between urban population share and GDP per capita

over time. One noticeable element is the fast evolution in the last three decades of this relationship for Asian countries, region which tends to overtake more advanced economies.

EVOLUTION OF THE RELATIONSHIP BETWEEN SHARE OF URBAN POPULATION AND GDP PER CAPITA BY REGION – 1980-2011

Source: OECD, Airbus

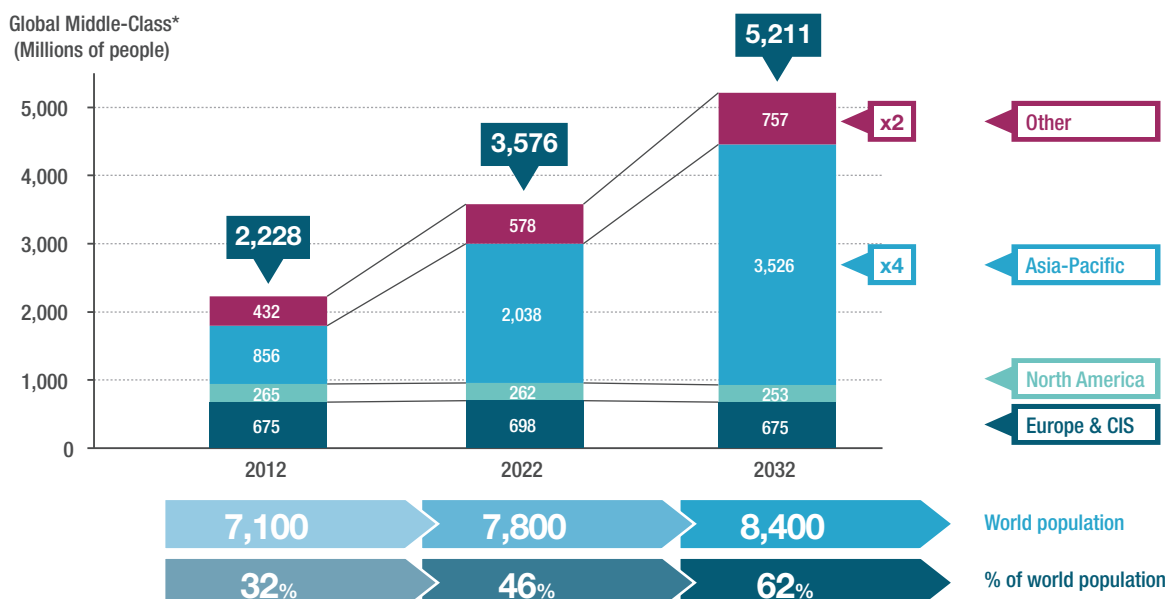


Based on a study published by OECD (*The Emerging Middle Class in Developing Countries - Working Paper No. 285*), the global middle-class (defined as households with daily expenditures between \$10 and \$100 per person at purchasing power parity), will grow by 60% between 2012 and 2022 and by 134% in 2032. Most of growth will come from Asia, which will represent 2/3

of the middle-class population in 2032, with 3.5 billion people. In parallel, middle-class consumption will grow at the same pace. This will constitute a tremendous lever for global consumption in the next two decades and a marker of the consumption shift to Asia, after the shift of production. The world's producers becoming the world's consumers.

GLOBAL MIDDLE-CLASS* EXPECTED TO RISE TO MORE THAN 5 BILLION PEOPLE BY 2032

Source: Kharas and Gertz, Airbus



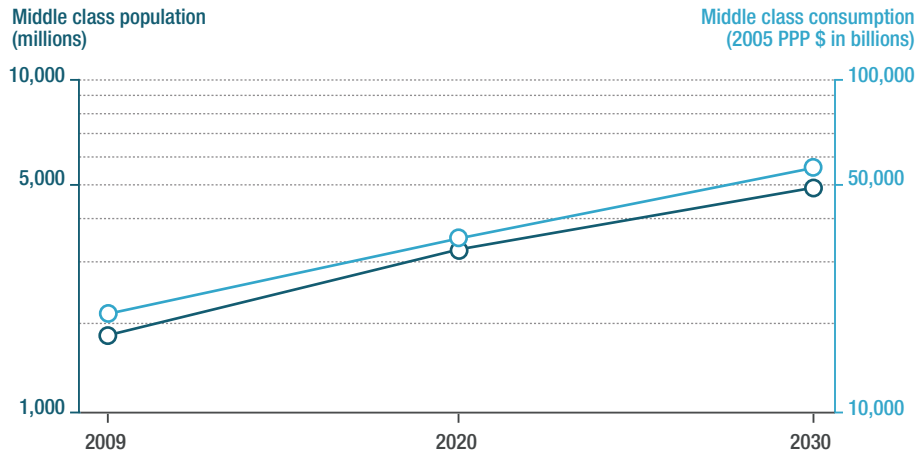
* Households with daily expenditures between \$10 and \$100 per person (at PPP)

The aviation industry directly benefits from the growth in the number of new middle-class consumers and the progression margin is huge. The propensity to travel

of Asian countries is not at the same level of maturity compared to more developed economies, but they are catching up fast.

MIDDLE-CLASS POPULATION AND CONSUMPTION

Source: OECD, Airbus

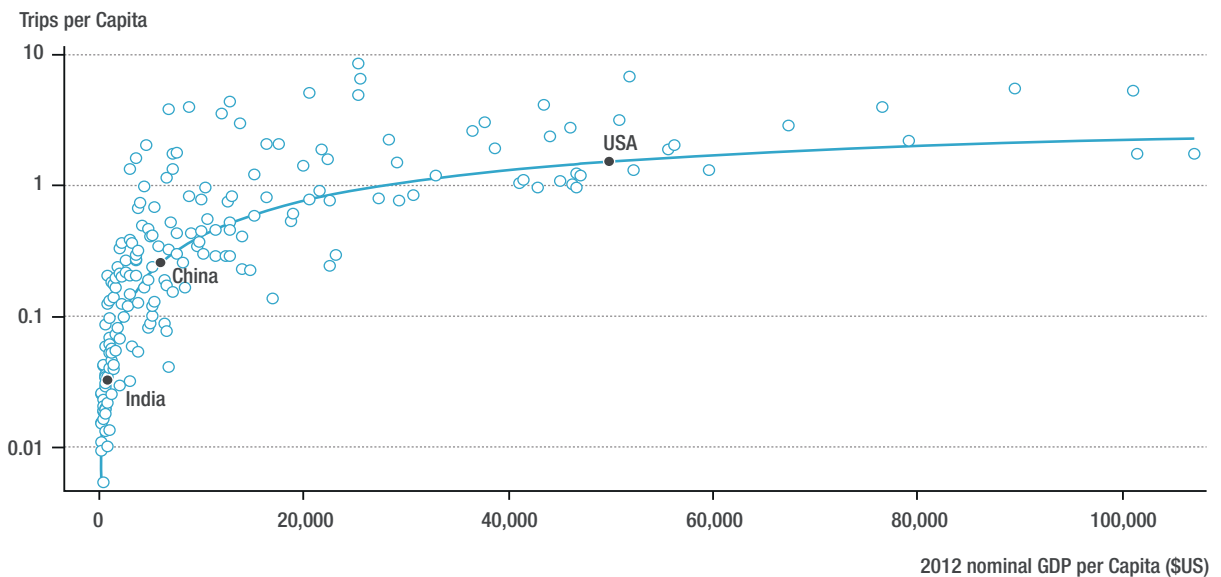


As seen in the following chart, a small increase in GDP per capita results in a large increase in trips per capita in

less developed economies but only a small increase in mature economies.

PROPENSITY TO TRAVEL IN 2012 - INDIA AND CHINA ON THE UPWARD CURVE

Source: Sabre, IHS Global Insight, Airbus

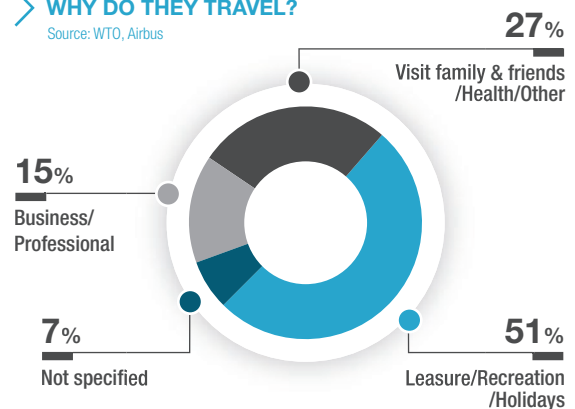


Reasons to travel

According to the World Tourism Organisation, a billion people travelled outside their own country in 2012, mainly by air (52%) and for leisure or visiting friends and relatives (78%), this number will nearly double to 1.9 billion by 2032, according to estimates.

WHY DO THEY TRAVEL?

Source: WTO, Airbus

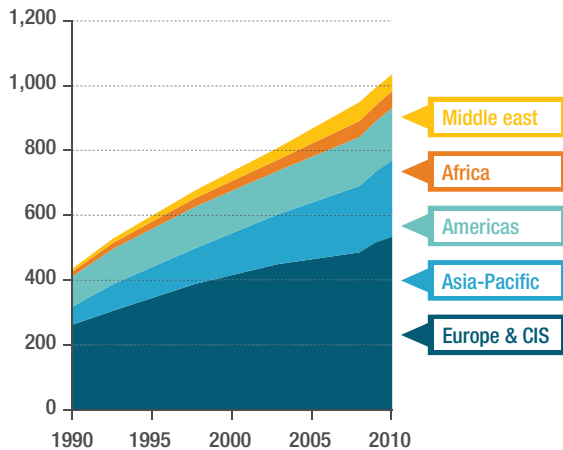


International tourism is an important source of revenues for all regions. For example, Europe was the most popular destination receiving more than half of all

international tourists in 2012, representing \$458 billion (43% of tourism receipts), followed by Asia-Pacific (23% of tourists, 30% of receipts).

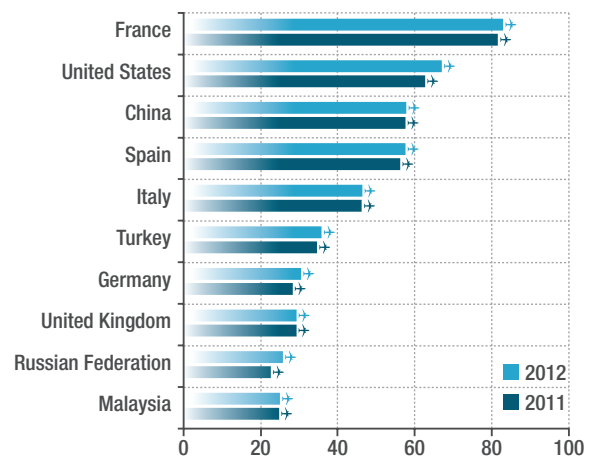
> INTERNATIONAL TOURIST ARRIVALS (MILLIONS)

Source: WTO, Airbus



> TOP 10 TOURISM DESTINATIONS (MILLIONS)

Source: WTO, Airbus

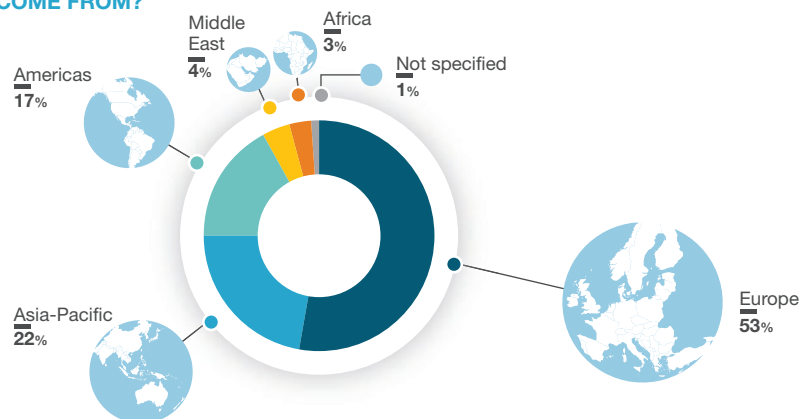


Historically driven by Europe, international tourists are increasingly coming from the Asia-Pacific. For the first

time, in 2012, China was the number one country in terms of tourism spending with a total of \$102 billion.

> WHERE DO THEY COME FROM?

Source: WTO, Airbus



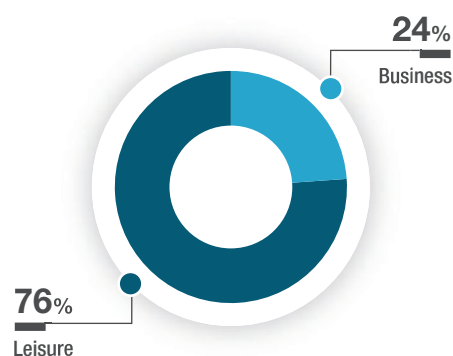
According to the World Travel & Tourism Council (WTTC), most of the spending on inbound and domestic travel generated in 2012 came from leisure travel (76%). This is expected to grow at 4.6% per year. The share of leisure travel spending will continue to increase due to the growth of the new middle-class in emerging countries. As a result, in ten years China is expected to become the number one contributor to travel and tourism GDP, overtaking the USA.

Business travel represented 24% of travel and tourism spending in 2012 and is expected to grow at 4.1% per year.

To better understand the crucial role of business travel in the economy, the WTTC launched a study with Oxford Economics to evaluate the impact on global GDP and employment of a 25% budget reduction in business travel during two consecutive years. It was found that, after five years, Global GDP would be 5% lower compared to the baseline forecast (no budget cut) and 30 million jobs would be lost.

> BUSINESS AND LEISURE TRAVEL

Source: WEF 2013 report on Travel & Tourism competitiveness, Airbus

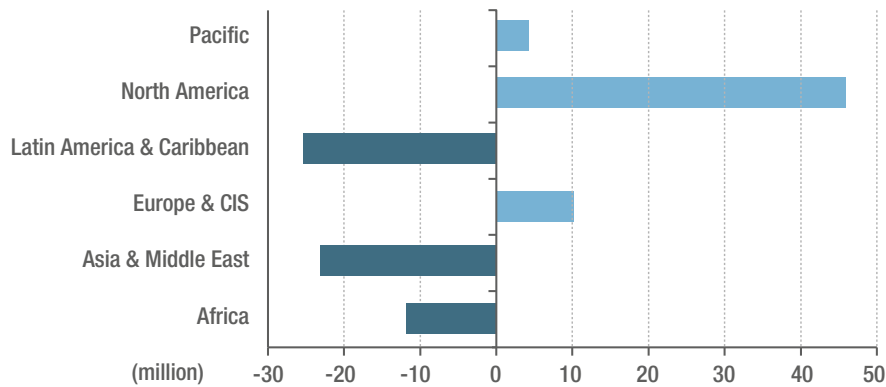


Migration is also an air traffic vector. According to the United Nations DESA, Latin America, Asia and Africa were net emigration regions whereas Northern America, Europe and Oceania were net immigration regions in

2010. North America is the number one immigration region whereas Latin America is the number one emigration region.

NET MIGRATION (TOTAL IMMIGRATION STOCK – TOTAL EMIGRATION STOCK) IN 2010

Source: United Nations DESA, Airbus

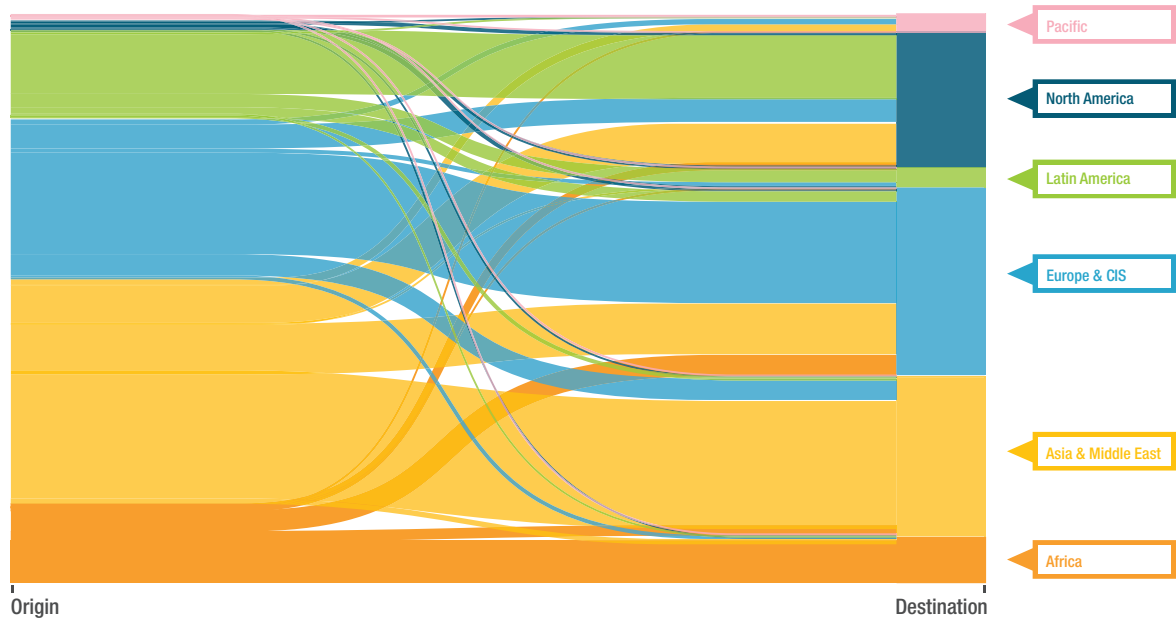


The chart below gives a snapshot of migrants world-wide, their region of citizenship and where they now reside. When looking at the migration flows in detail, most

migration is within the region. The main exception is the migration of 23.5 million people from Latin America to Northern America.

MIGRATION BY ORIGIN AND DESTINATION REGION

Source: United Nations DESA, Airbus

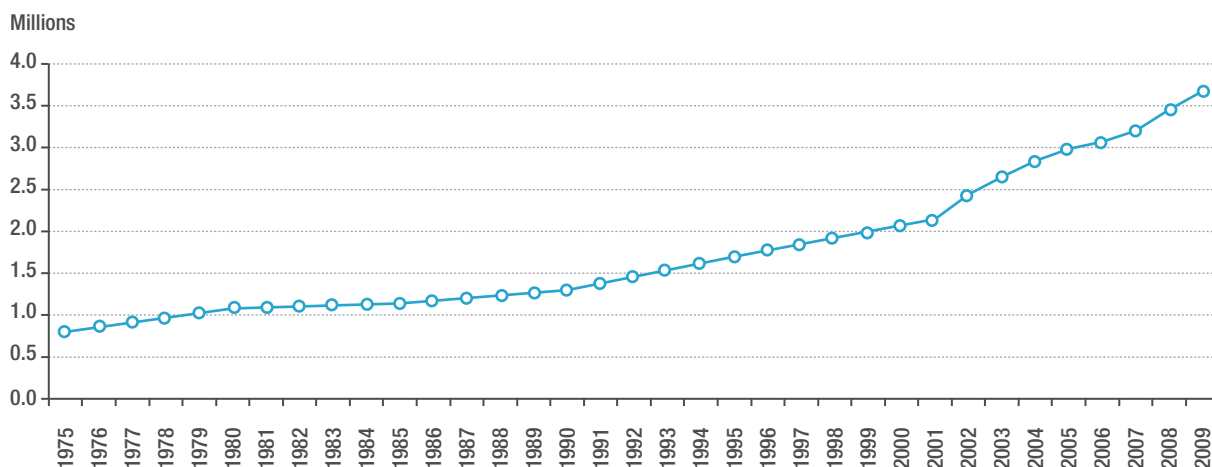


With the globalisation of the economy, more and more students feel that studying abroad is positive for their future careers. Governments also encourage their students to study abroad with programs, such as Erasmus exchange program in Europe, with many universities also seeing foreign students as an important source of revenue.

As a result, the number of students enrolled outside their country of citizenship has increased to reach 3.7 million students in 2009 (OECD). In a 2009 UNESCO report, the international student population in 2020 is expected to be around seven million.

EVOLUTION OF THE NUMBER OF STUDENTS STUDYING ABROAD

Source: OECD, Airbus



In terms of the flow of students, one million international students come from East Asia & Pacific. Approximately half of them are studying within the same region, whereas the other half is studying in North America

and Western Europe, which is the number one hosting region with two million international students (Global Education Digest 2012 - UNESCO).

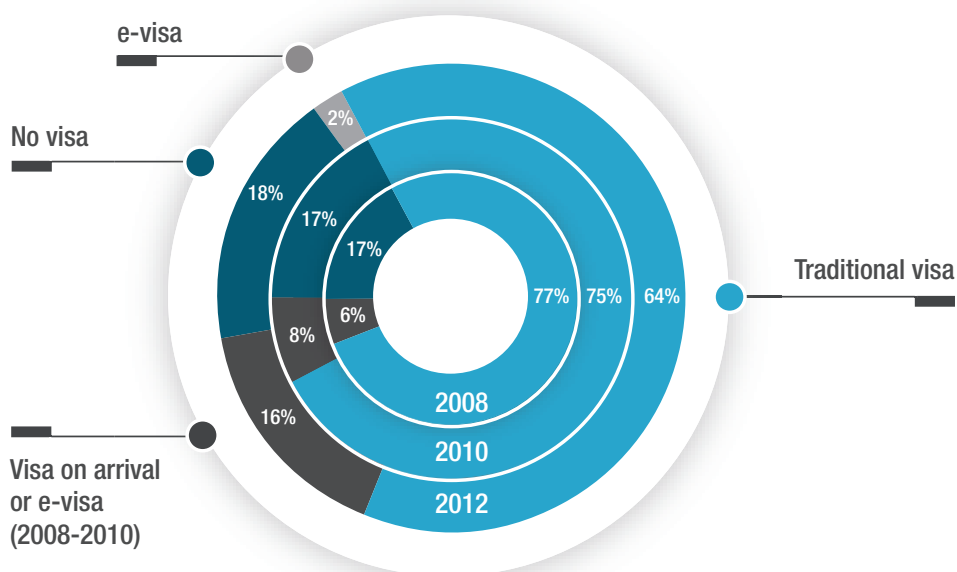
Finally, simplification of visa policies, with more and more visa on arrival programmes replacing the traditional visa, a form of deregulation, is also having a positive impact on air traffic growth.

7 million

International students by 2020

VISA POLICIES FACILITATED

Source: WTTC, Airbus



Connectivity

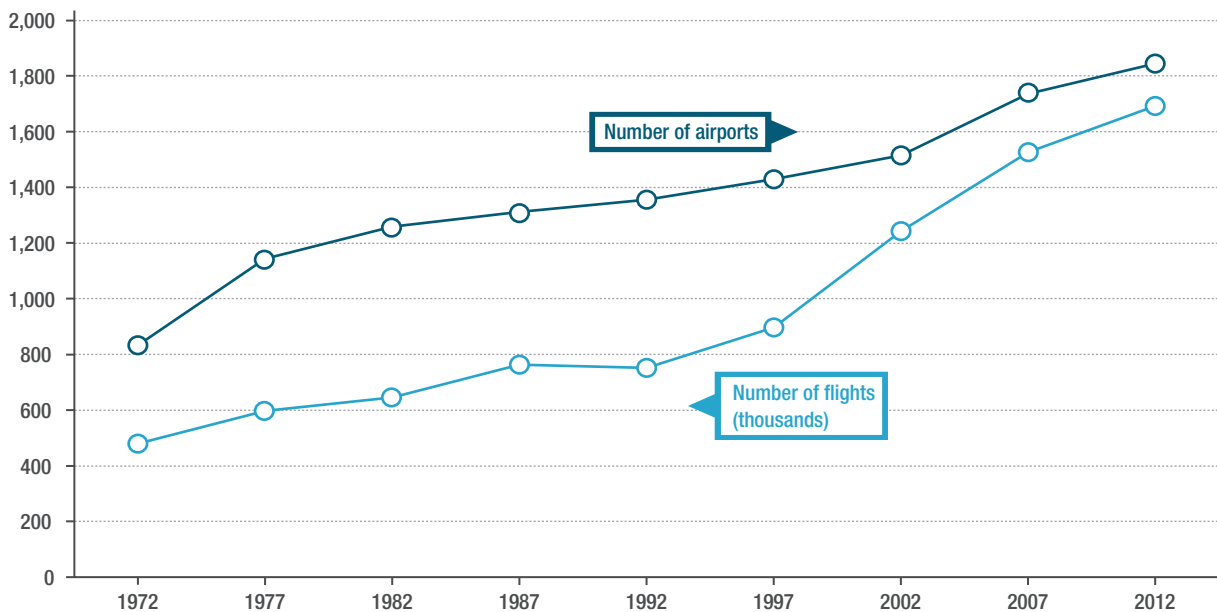
Both the number of airports with at least one flight with a 100-seater aircraft or larger and the total number of flights have increased over time. This is a consequence of economic globalisation and the increasing number of tourists which are likely to continue.

For example, Istanbul and Beijing plan to build additional airports before 2020, and according to press reports, China plans to build 82 new airports between 2011 and 2015 to meet demand.

EVOLUTION OF THE NUMBER OF AIRPORTS AND NUMBER OF FLIGHTS

Source: OAG, Airbus

Number of airports served by 100-seater aircraft and above and number of flights



Note: month of September of each year

The growth of aviation networks provides new opportunities for both tourism and business, making the aviation sector an important contributor to global economic growth. According to an Oxford Economics study included in the IATA Annual Review 2013, the

increase in connectivity in the past 20 years has provided an additional \$200 billion in global GDP, and because GDP growth is a key driver for aviation sector, the latter indirectly benefits from greater connectivity. A kind of virtuous circle.

THE IMPACT ONE AIRPORT CAN HAVE...

Source: The economic value of Sydney airport - Deloitte Access Economics, Airbus

Sydney Airport's total economic contribution

The total economic contribution of the Sydney Airport precinct – that is, the economic contribution encompassing both the direct and indirect impacts – in 2012 can be summarised as follows:

- The activities of businesses operating on the Sydney Airport precinct contributed an estimated \$9.3 billion in value-added, with associated employment of 49,930 full time equivalent (FTE).
- The contribution of tourism and freight facilitated by the airport represented a further \$18.3 billion in value-added and generated an estimated 234,000 FTE jobs.

Network development



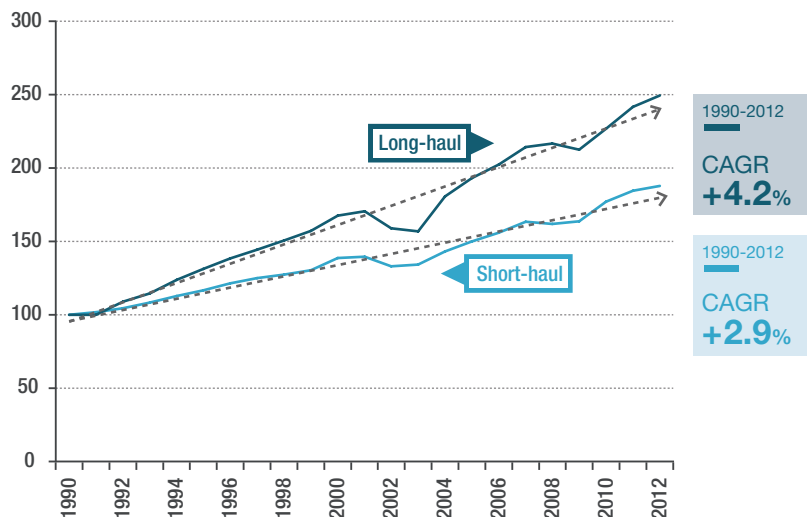
Air traffic has grown at a steady pace over the last 20 years. Since 1992, air traffic, as measured by revenue passenger kilometres (RPK), has grown 4.7% annually.

Examining air traffic growth in seats offered by flight length between 1990 and 2012, and despite the two major external shocks (2001-2002 and 2008-2010), both short-haul traffic (flights of less than 2,000 nm) and long-haul traffic have grown at a robust pace. Long-haul traffic grew faster than short-haul traffic, growing at an annual 4.2% rate during 1990-2002, compared to 2.9% for short-haul traffic. Interestingly, while growing faster, long-haul traffic was more negatively impacted by adverse economic shocks, compared to short-haul. This suggests that long-haul passengers are more price sensitive, as the cost of travel of one of these trips represents a higher proportion of an individual income.

LONG-HAUL TRAFFIC GROWS FASTER THAN SHORT-HAUL TRAFFIC, BUT IS MORE SENSITIVE TO EXTERNAL SHOCKS

Source: OAG, Airbus

Evolution of long-haul and short-haul traffic (seats offered), 1990-2012, Index 100 = 1990*



* Long-haul traffic: flight distance >2,000 nm

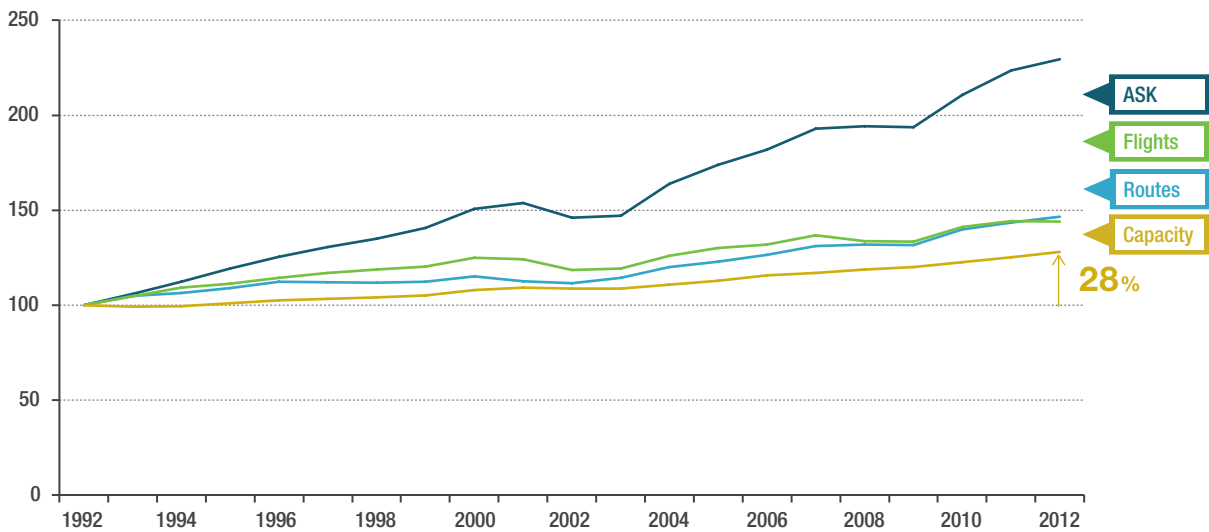
Airlines extend their networks by opening new routes, as well as expanding the capacity of their existing networks by offering more frequencies and/or using higher capacity aircraft. As air passengers value both low prices and frequent, convenient flights; understanding when a new route can be opened and the application of capacity vs frequency is the key for assessing how today's network will develop in the future.

Over the last 20 years, air traffic growth has been possible through more frequent departures, which have increased 44% since 1992; through an increase in the number of non-stop city pairs, which have grown 47% since 1992, and through larger aircraft, whose average capacity grew 28% over the same period.

AIR TRAFFIC GROWS THROUGH NETWORK AND CAPACITY EXPANSIONS

Source: OAG, Airbus

Evolution of long and short-haul traffic, 1992-2012, Index 100=1992



Airlines are accommodating more traffic

What is the impact of increased air traffic on the competitive landscape? Except for the crisis period following 9/11, long-haul air traffic has still increased at a faster rate than the number of long-haul operating airlines. As a result, average capacity (ASKs) per operator has multiplied by 2.5 in around 30 years (1972 and 2002). Nevertheless, successive deregulation of air transport and the development of emerging markets have given opportunity to new entrants in long-haul markets. While 70 airlines were operating long-haul routes in 1972, there were more than 200 in 2005; however, long-haul traffic

has increased even faster. Airlines have extended their networks and have organised it around major hubs, and since 2007 the long-haul traffic concentration process has become more significant. For the first time in 40 years, the number of airlines operating on long-haul routes is decreasing, primarily due to several significant mergers around the world. Code-share agreements and joint ventures are becoming more common between airlines and an increasing number of airlines belong to global alliances, all driving the concentration of long-haul traffic.

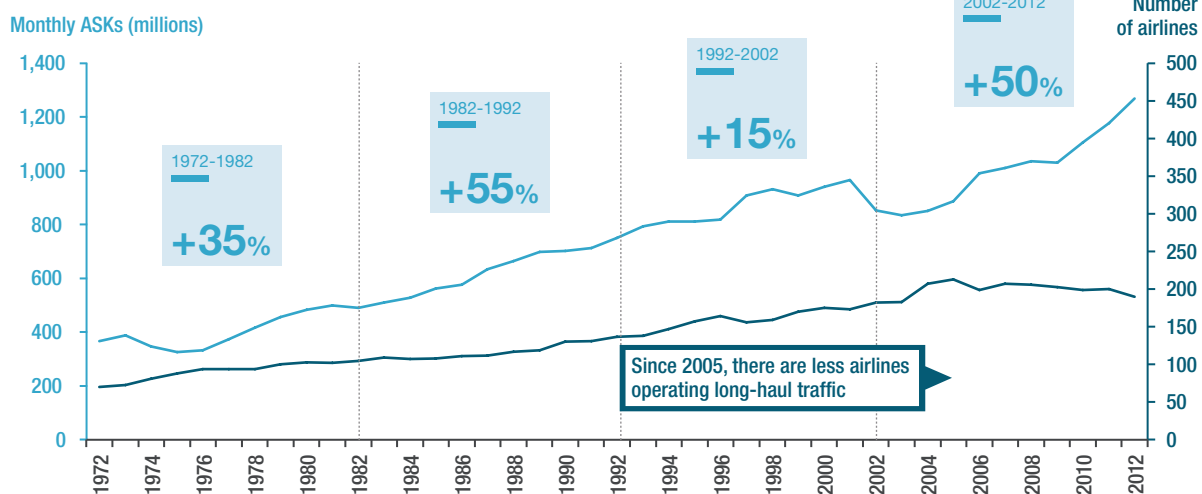
28%

The growth in average aircraft capacities since 1992

AIR TRAFFIC IS GETTING MORE CONCENTRATED

Source: OAG, Airbus

Average ASKs per airline operating on long-haul routes



Note: Long-haul route >2000 nm - excluding domestic routes

➤ Average long-haul ASK per airline has increased by 50% over the last 10 years.

Long-haul and short-haul networks have experienced different network development models

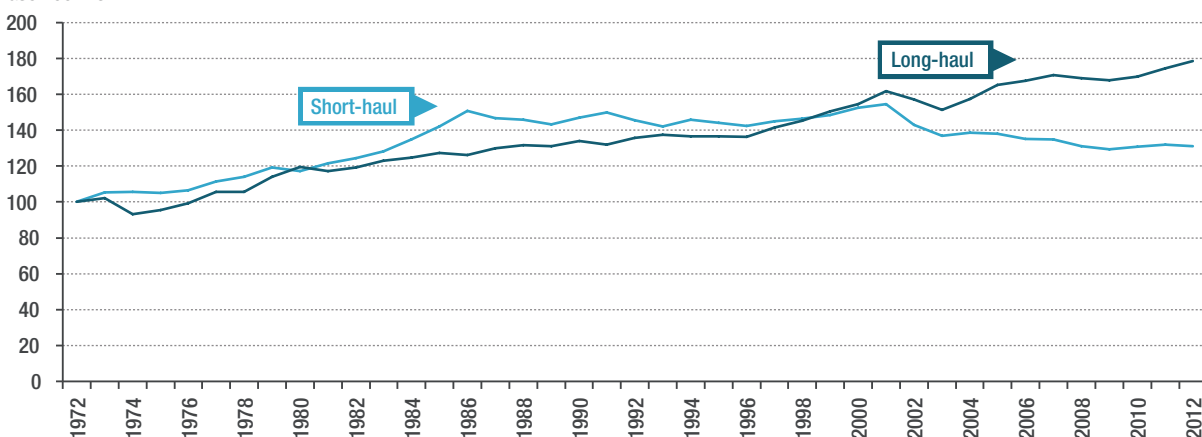
The average number of seats offered on short-haul routes has been stable between 1985 and 2000 and has been decreasing since 2000. This does not mean, of course that short-haul traffic is decreasing. However, the short-haul market has experienced many new routes openings, as opportunities arise, thus offering more direct services.

This process has been driven in part by the spread of the low-cost model more globally. On the other hand, long-haul traffic increases have been absorbed to a greater extent by the existing long-haul network. This is achieved by either the addition of frequency, new routes or increased aircraft capacity.

SHORT-HAUL AND LONG-HAUL NETWORKS HAVE DEVELOPED DIFFERENTLY SINCE 2000

Source: OAG, Airbus

Average number of seats offered by city-pair
Base 100=1972



Note: Long-haul route >2000 nm - excluding domestic routes

➤ Long-haul network development is more concentrated than short-haul.

City-pair traffic forecast

By introducing more detailed data at a country and city pair level, we are able to increase the granularity of our forecast. Starting from 208 traffic flows, we enlarge our scope to consider more than 15,000 country pairs and more than 250,000 city pairs.

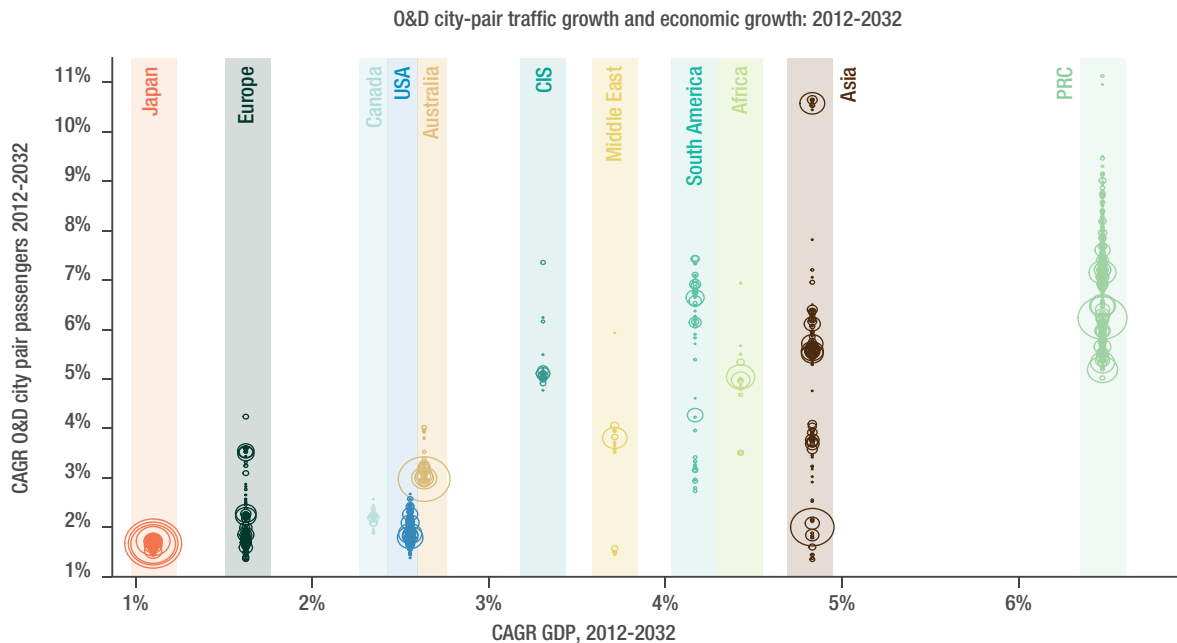
When predicting passenger traffic between cities, it is important to consider the factors that make a city attractive for passengers; amongst them are the size of the city's population and its socio-economic development

(as measured, for example, by income per capita). This is significant because different city pairs, even in the same country, may have different behaviours in terms of traffic and these need to be accounted for when studying how the network will evolve.

Interestingly, when examining expected passenger traffic growth between city pairs belonging to the same country or region, city pairs in more mature economies are more likely to behave in a similar manner, than city pairs in emerging economies.

MORE HETEROGENEOUS TRAFFIC GROWTH BETWEEN CITIES IN EMERGING ECONOMIES

Source: IHS Global Insight, Airbus



Note: Domestic O&D city pairs with more than 40 daily passengers in 2012. Size of the bubble represents 2012 daily passengers

More new routes

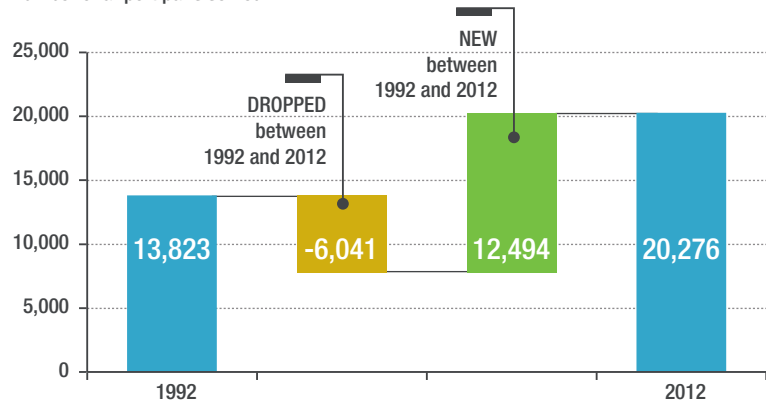
Estimating airline network future development is a challenging, yet necessary task which drives the overall shape and scope of the future aviation network.

The overall number of routes operated has increased over time, although the net addition of airport pairs only accounts for 50% of the total new airport pairs opened between 1992 and 2012. The remaining 50% are routes that have previously been tried, dropped then re-opened when development of demand or other positive factors allow.

ONLY 40% OF TODAY'S NETWORK WAS THERE 20 YEARS AGO

Source: OAG, Airbus

Number of airport pairs served



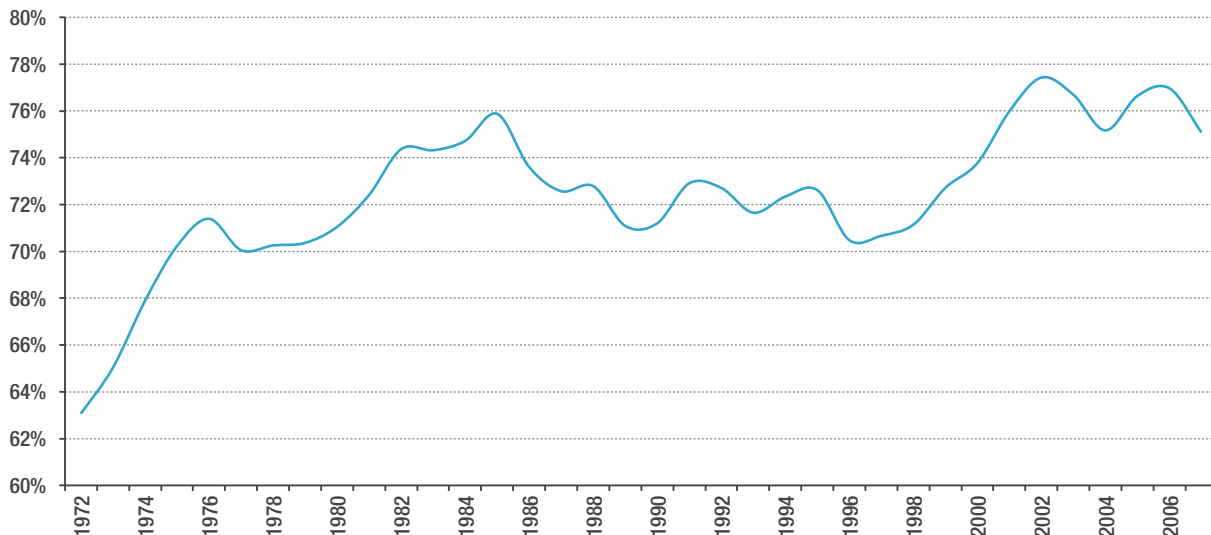
Even though the network development process of various airlines around the world involves techniques ranging from trial and error to very sophisticated schedule optimisation engines, it appears that the

overall quality of new route forecasting has improved over time. The survival rate of new routes after five years of operation has increased from 65% in the 70's to more than 75% today.

> AIRLINES TARGETING MORE RESILIENT NEW ROUTES

Source: OAG, Airbus

New routes survival rate after 5 years



Shifting toward emerging countries

Very much like the total traffic evolution shift towards emerging countries, a larger number of new route openings have come from the emerging economies. This expansion is mainly driven by the liberalisation of aviation and the emergence of low-cost airlines, which help to make air travel more convenient and affordable, therefore

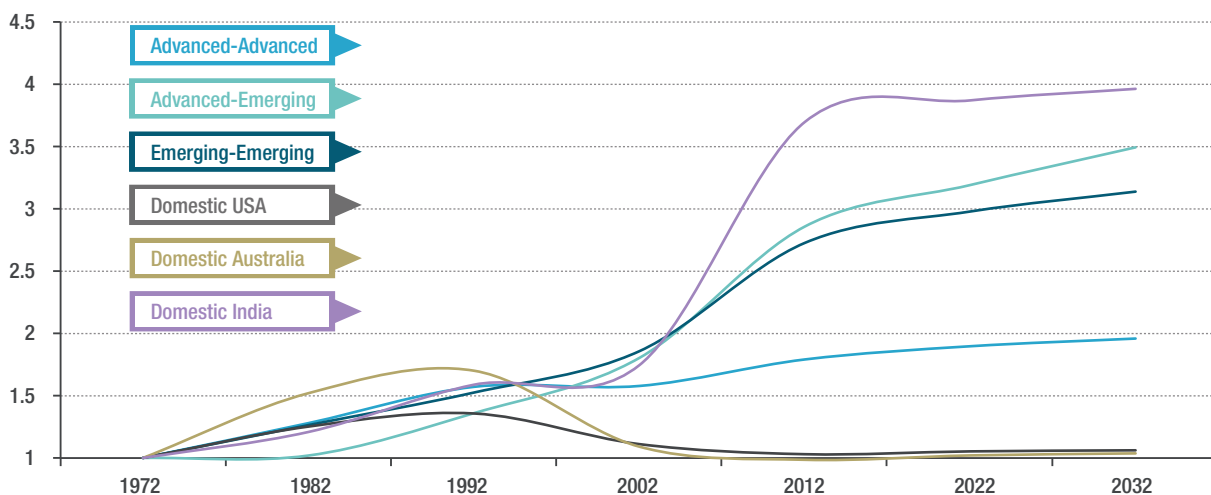
increasing passenger demand. We forecast this trend will continue in the future, maintaining significant potential for new routes between advanced countries. However, the bulk of the network development will involve at least one emerging country per new route.

> NEW ROUTE DEVELOPMENT TYPICALLY SLOWS AS MARKETS MATURE: MORE NEW ROUTES INVOLVING EMERGING ECONOMIES

Source: OAG, Airbus

Number of services evolution (routes by airline)

Base 1=1972

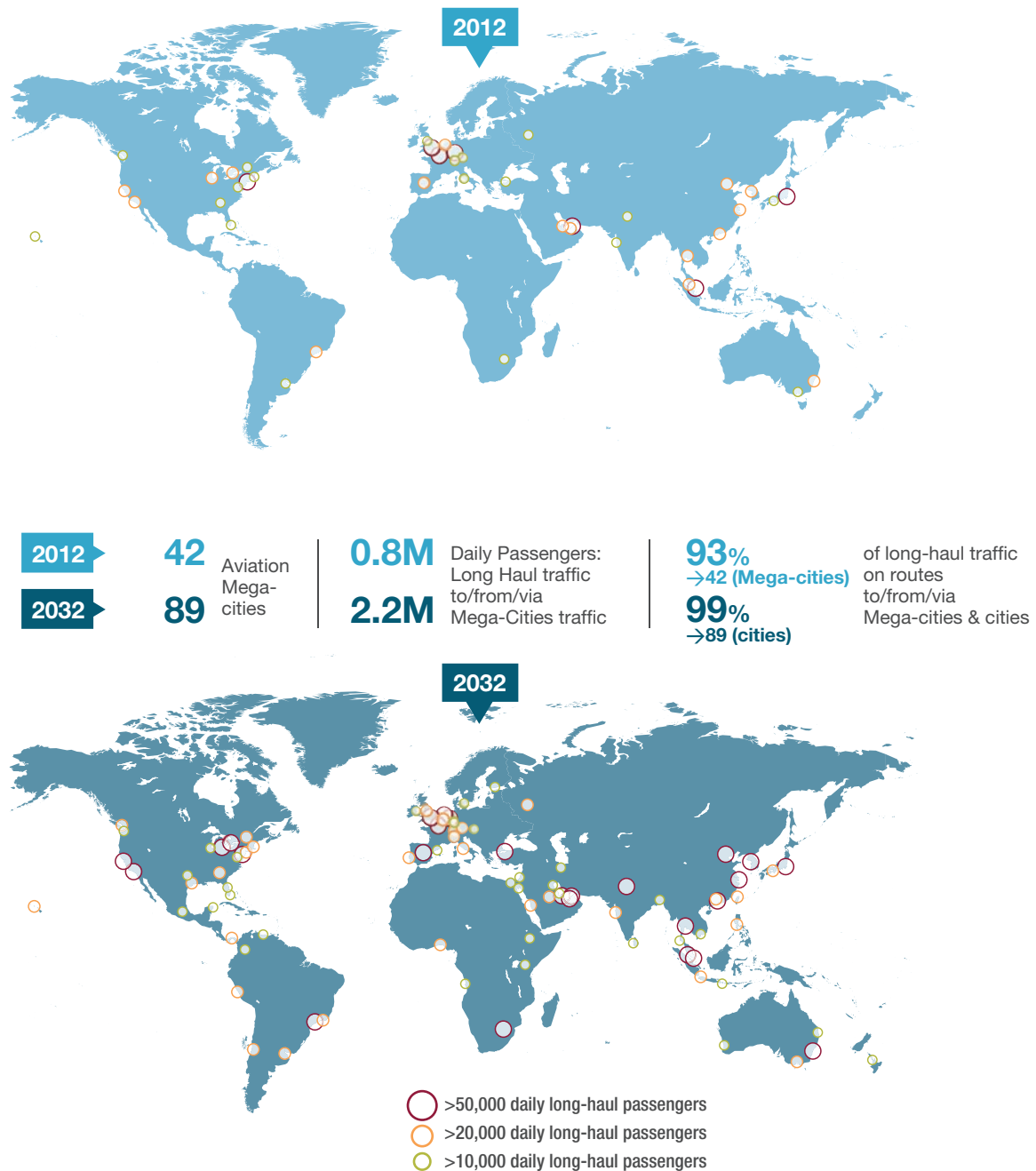


Long-haul traffic growing and more concentrated on Mega-Cities

Aviation Mega-Cities, by our definition, are cities that handle more than 10,000 long-haul passengers per day. In 2012, out of some 850 cities handling long-haul passengers in their airport(s), only 42 met this criteria, most of them being located in the northern hemisphere. The long-haul network connecting Mega-Cities with each

other represents 51% of the total world-wide long-haul traffic, and if we consider the traffic from or to Mega-Cities (including both the traffic between them and connecting Mega-Cities to secondary cities), 93% of world-wide long-haul traffic passes through one of these aviation Mega-Cities.

> CITIES WITH MORE THAN 10,000 DAILY LONG-HAUL PASSENGERS IN 2012 AND 2032



Long-haul traffic will be more concentrated on main aviation centres.

Traffic as of month of September.

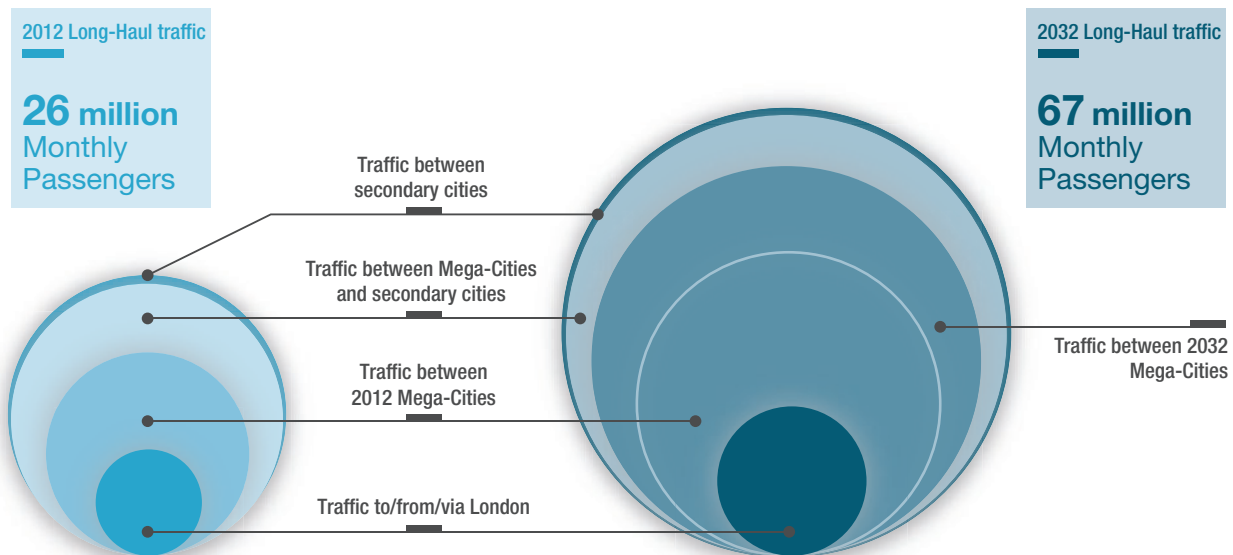
Long-haul traffic: flight distance >2,000nm, excl. domestic traffic.



The aviation Mega-City network will grow to 89 in 2032. This growth will be particularly noticeable in the southern hemisphere. For example there will be 10 Mega-Cities in Latin America in 2032, growing from two today. Similarly, the number of Mega-Cities will increase from one to eight

in Africa over the next 20 years. Extending the aviation Mega-City network will concentrate an increasing share of the total long-haul traffic. More than 75% of long-haul traffic will be operated between these main aviation centres in 2032.

> TRAFFIC BETWEEN MEGA-CITIES IN 2032 WILL BE HIGHER THAN TOTAL LONG-HAUL TRAFFIC TODAY



Note: Surface is proportional to traffic on this chart - Long-haul traffic: flight distance >2,000nm, excl. domestic traffic.

However, due to the importance of Mega-Cities on the long-haul market, they will enjoy the majority of the future global growth these flows. While there were only seven cities in the world handling more than 50,000 long-haul passengers a day in 2012, there will be 26 such

cities in 2032. As an illustration of the growth that will be experienced by Mega-Cities in the future, the traffic between these 42 cities in 2032 will be greater than today's entire world-wide long-haul traffic.

03

Traffic forecast

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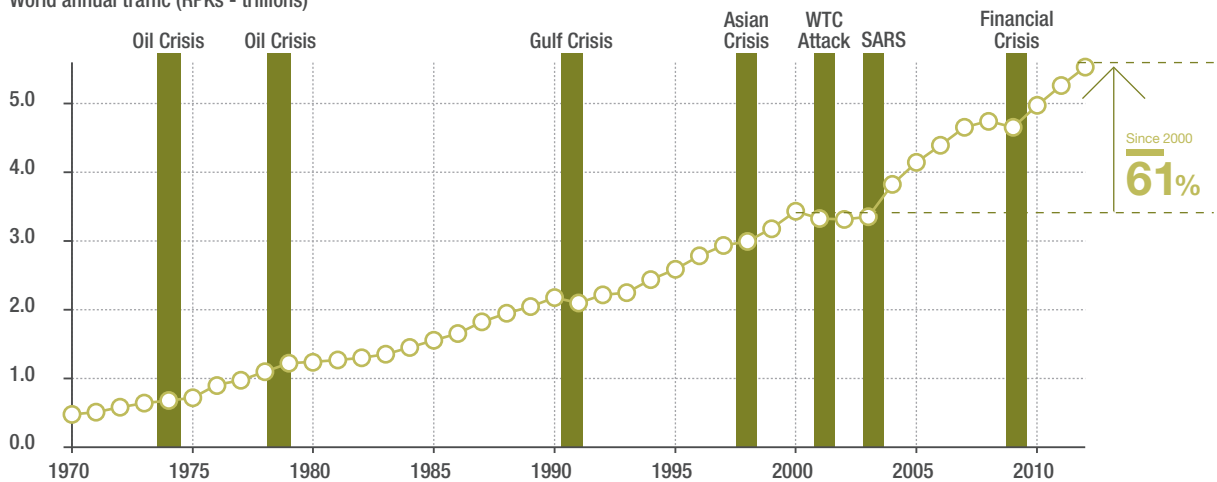


Air transport continues to be a growth industry, resilient to external shocks, as it has been since the start of the jet age. The industry's resilience is illustrated in the rapid recovery of world passenger traffic after the 2008-2009 economic downturn. Over the period 2009-2012, world passenger traffic, as measured by Revenue Passenger Kilometres (RPK), has grown at an average 5.9% annually, above the 4.1% observed during 2000-2008.

AIR TRAVEL HAS PROVED TO BE RESILIENT TO EXTERNAL SHOCKS

Source: ICAO, Airbus

World annual traffic (RPKs - trillions)



The speed at which air transport returned to its long-term trajectory after a shock has even outperformed the world economic recovery. While economic activity is expected to recover its 3.2% long-term potential by 2014, world traffic recovered to its long-term trend one year after its 2009 drop.

Many factors have permitted the impressive and steady growth of air transport. Some key factors have been:

- **Growing population**, in particular, the expanding urban population.
- **Macro-economic growth**, which has spilled over to

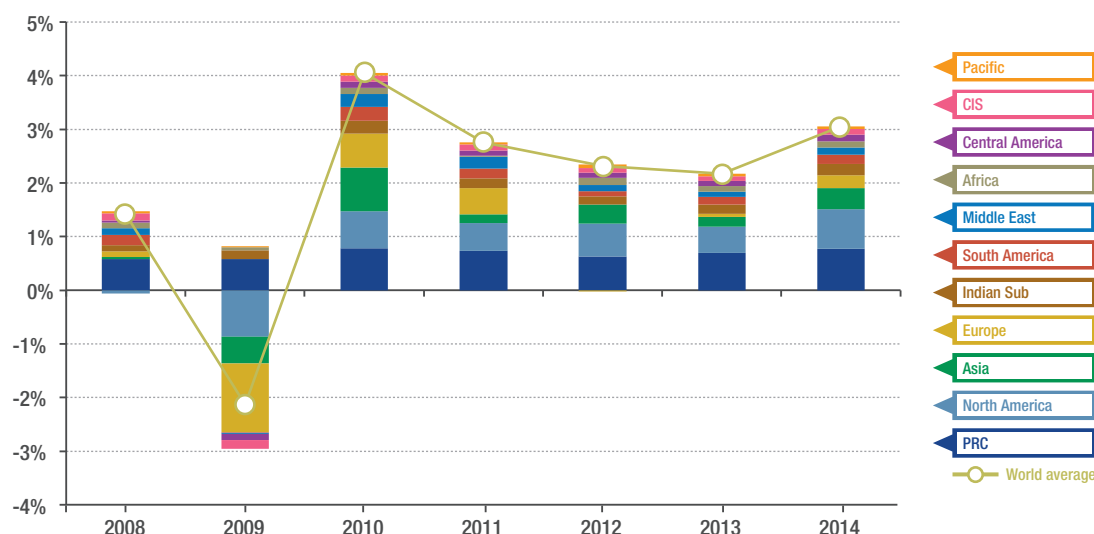
wealth creation, allowing people to travel more, or quite simply for the first time.

- **Greater globalisation**, leading to the need for more air traffic rights and a greater spread of economic activity and air travel.
- **Liberalisation of air transport**, which has allowed new services or airline business models, like Low Cost Carriers, which have become one of the key drivers over the last decade.
- **Entry into service** of more capable long-range aircraft.

THE WORLD ECONOMY WILL PROGRESSIVELY GET BACK TO ITS LONG-TERM POTENTIAL IN 2014

Source: IHS Global Insight (January 2013), Airbus

Contribution to the world GDP growth, by region



2012 was another good year for air transport

Despite the widespread economic concerns throughout 2012, especially in Europe, it was a good year for air transport. Air passenger demand grew 5.0%, slightly below the 5.8% observed in 2011.

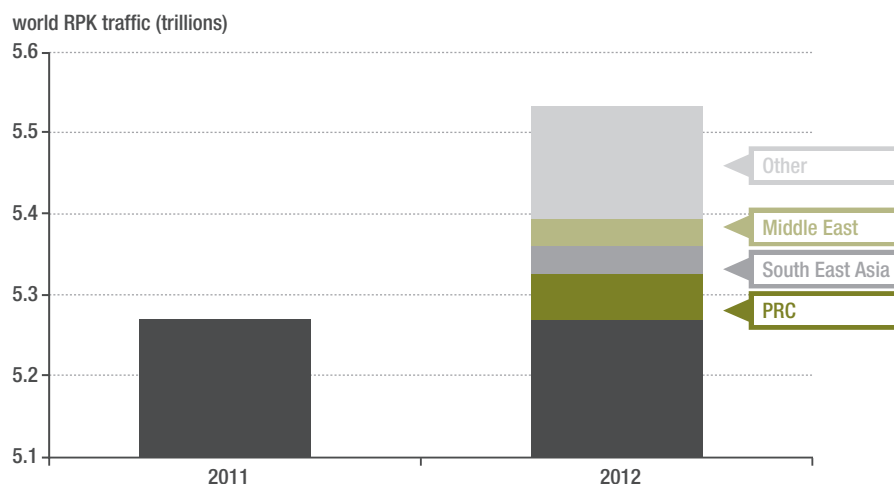
Air traffic growth in 2012 was mainly driven through the strong performance of the fastest growing regions, including the PRC, South East Asia and the Middle

East. Very high load factors, reaching 79%, was another takeaway from 2012, illustrating the attention that airlines give to managing aircraft capacity. This means that on average more than three quarters of all aircraft and flights are full. This underlines how increasingly eco-efficient a form of mass transportation aviation is.

ALMOST 50% OF THE TOTAL RPK TRAFFIC GROWTH IN 2012 CAME FROM THE PRC, SOUTH EAST ASIA AND MIDDLE EAST

Source: Airbus

Contribution of each region* to the world traffic growth in 2012



*Traffic from/to within the region Intercontinental traffic: 50% allocated to each region

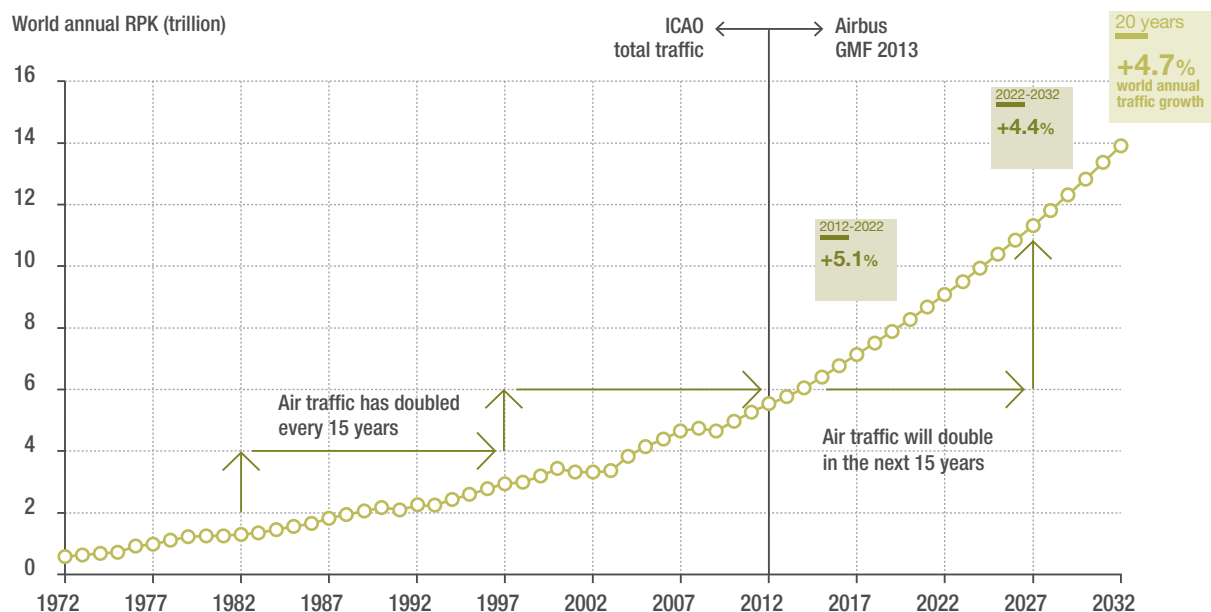
The long-term perspective

We expect world traffic to double over the next 15 years, reaching the 11 trillion RPK threshold by 2027. On a 2012-2032 forecast horizon, we maintain our expectation that

world traffic will grow at an average 4.7% annually, with a 5.1% average annual increase in the first decade and a 4.4% expansion per year over the second.

TRAFFIC WILL DOUBLE IN THE NEXT 15 YEARS

Source: ICAO, Airbus



When looking more in detail at what is behind the expected traffic growth over the next 20 years, there are several features to highlight.

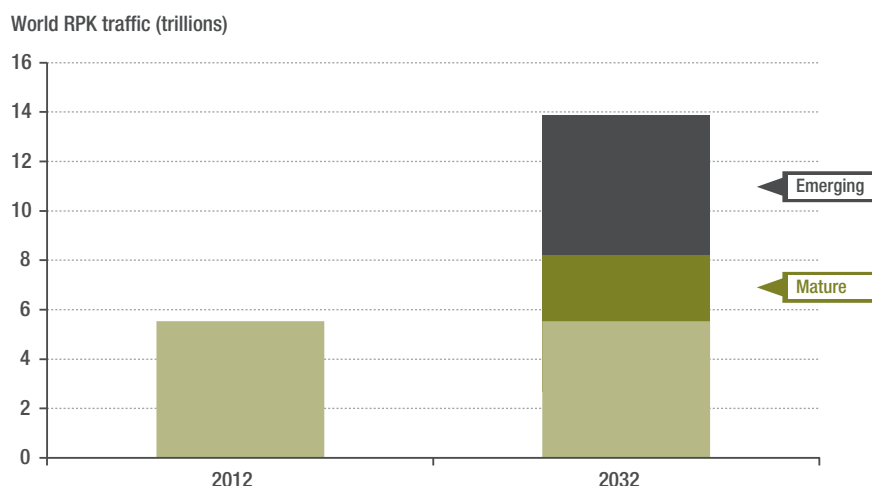
The first is the two speed air transport growth model, which is likely to dominate in the future. On the one hand,

the fastest growing are the emerging regions, which will drive future demand. On the other hand, the advanced economies, with more moderate growth rates, are still expected to be amongst the largest traffic regions in 2032.

EMERGING REGIONS WILL DRIVE THE WORLD TRAFFIC GROWTH, BUT ADVANCED ECONOMIES WILL REMAIN FOREMOST

Source: Airbus

Contribution of each region* to the World RPK traffic growth (2012-2032)



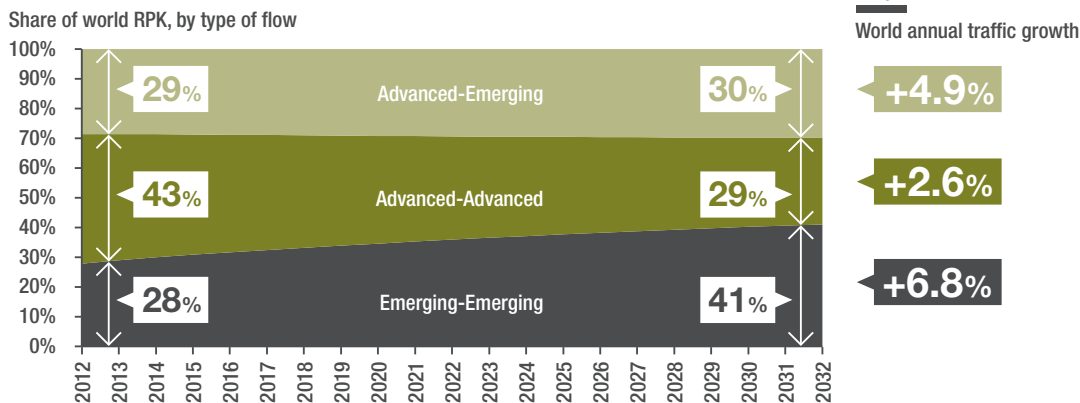
*Traffic from/to/within the region Intercontinental traffic: 50% allocated to each region

Air traffic and macro-economic theory

Air transport is an example of relative convergence theory at work. Meaning that air travel should grow faster in regions where today's population has a smaller propensity to fly, than in advanced economies, who already fly in large numbers. Good macro-economic performance of these emerging economies, in turn creates new potential for air travel demand.

Exemplifying this idea, starting from a lower share in 2012, air traffic between emerging regions will grow at a strong 6.8% annual pace over the next 20 years, to reach a 41% share of world RPKs by 2032. This growth is well above the 2.6% expected annual growth between advanced economies over the same period.

EMERGING MARKETS WILL DRIVE TRAFFIC GROWTH



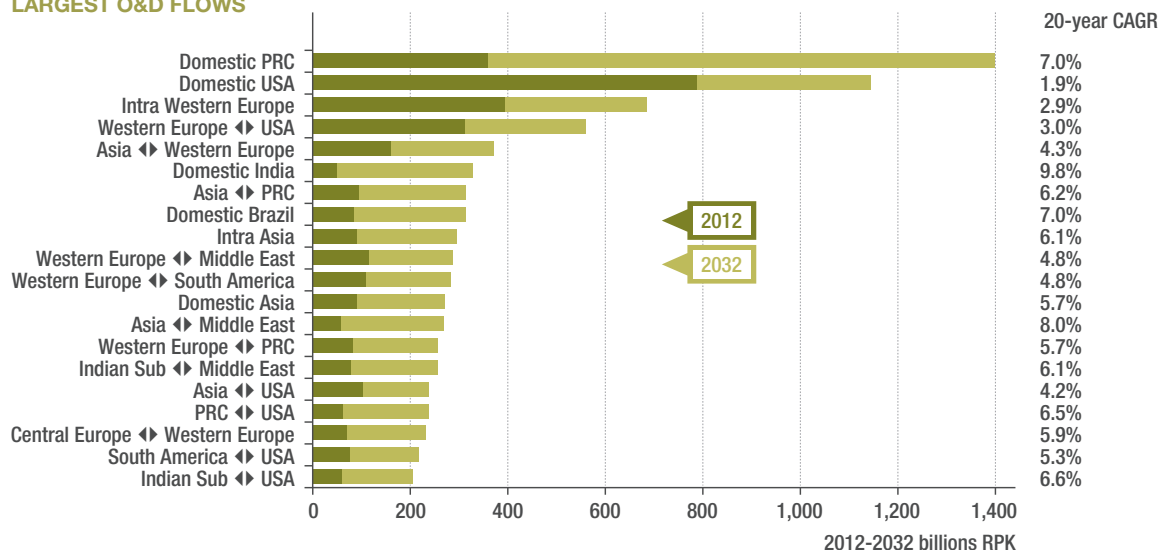
The second feature to highlight is the reduction of emphasis on mature markets. With emerging regions growing faster than advanced economies, although their growth is still high, forecast traffic growth will be less concentrated. Supporting this idea, the index of concentration (as measured by the Herfindahl-Hirschman Index) of the largest 50 traffic flows is expected to decrease 27% from 2012 to 2032. Note that a lower index means that the demand of air transport is less concentrated on mature markets.

If we now focus on the differences between origin and destination (O&D) traffic flows, there are two complementary ways to look at it. On the one hand, to

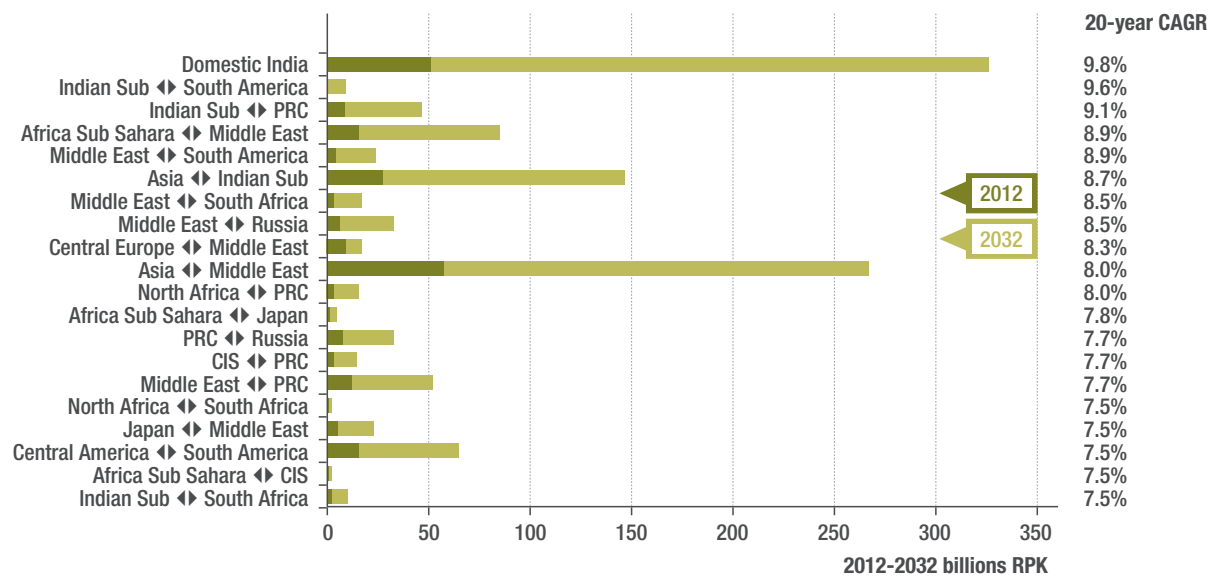
look at the largest O&D traffic flows, and on the other, to consider the fastest growing.

When looking at the first dimension, Domestic PRC will be the largest region in 2032, thanks to an impressive 7.0% annual growth, representing 10.4% of total world RPKs. With an expected growth of 1.9% per annum, domestic USA ranks second, reaching 8.5% of total 2032 world traffic, followed by Intra Western Europe and Western Europe-USA. The latter two will account for 5.1% and 4.2% of world air travel demand in 2032, respectively. These figures also demonstrate that advanced economies will continue to play a major role in future air transport growth.

LARGEST O&D FLOWS



FASTEST GROWING O&D FLOWS



The fastest growing O&D passenger traffic flows forecast between 2012 and 2032 will be in emerging economies. Domestic India ranks first, with an annual average increase of 9.8%; followed closely by O&D passenger traffic between Indian Sub-Continent and South America, with 9.6% forecast annually; and lastly

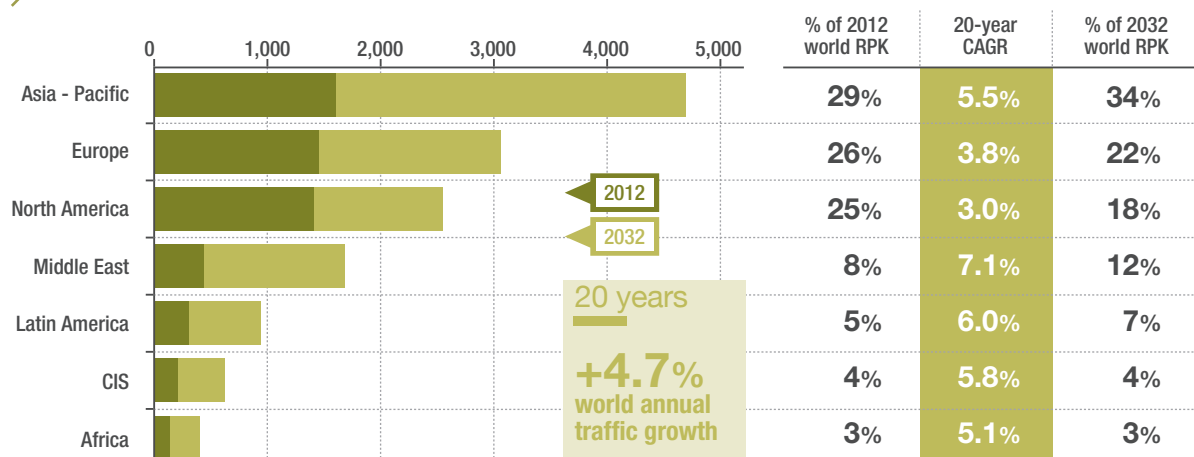
passenger traffic between the Indian Sub-Continent and PRC, with a 9.1% annual growth forecast over the period. This is not surprising when we consider that over recent years, air traffic from/to/within these emerging economies have been steadily growing at a two-digit a year rate.

Airlines in Asia-Pacific and Middle East driving traffic growth

On a regional basis, the airlines located in the Middle East, Latin America and Asia-Pacific will enjoy higher than average traffic development, growing at 7.1%, 6.0% and 5.5% respectively. This is fuelled by the aspirations of airlines to benefit from privileged access to fast growing markets which will generate a higher ability and desire to travel as time passes.

Airlines based in Africa and in the CIS are also expected to register growth higher than the world's 4.7% average annual growth to 2032. Finally, North America and Europe, which have more mature growth rates are expected to grow at a slower pace, +3.0% and +3.8%, respectively, but will still contribute 40% of the world's air traffic by 2032.

ASIA-PACIFIC TO LEAD IN WORLD TRAFFIC BY 2032





LCCs will fly an increasing amount of air traffic

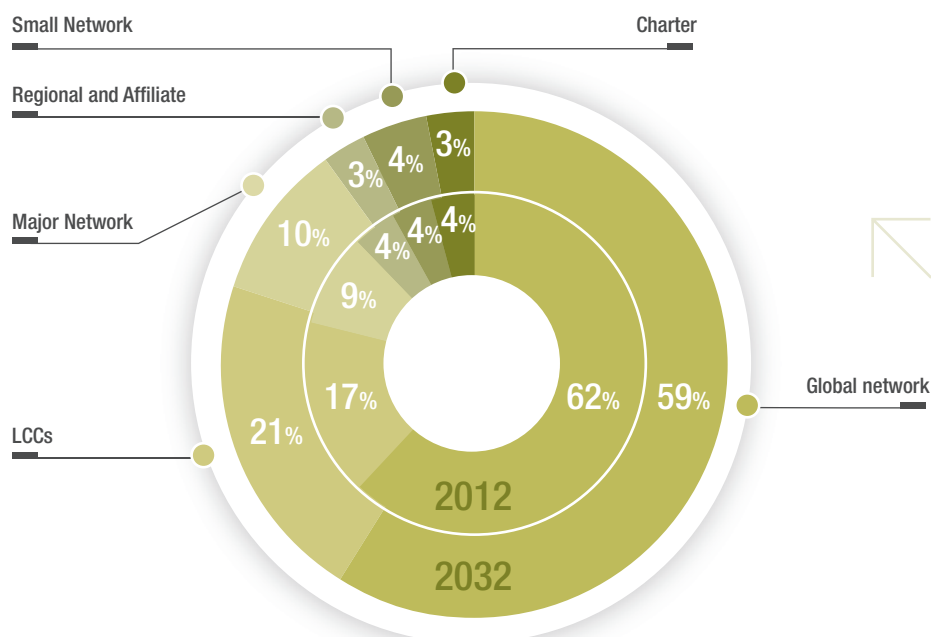
Low-Cost Carriers (LCCs) are now a global phenomenon, especially in Europe and increasingly in Asia, the Middle East and Africa. As the propensity to travel is highly correlated with economic growth and air ticket price stimulation, LCCs have been able to open new markets and allow more people to fly more often.

Distinguished by their fleet simplicity, their predominance on short-haul routes, fast turnaround times and rapid growth, we expect LCCs to continue to increase their global traffic market share to reach 21% by 2032, above

the 17% they represent today. Regionally, some short-haul markets such as the Intra-Europe or Domestic ASEAN for instance, are expected to have greater low cost market presence, potentially taking a 60% share of the short-haul market on these flows by 2032.

However, it is clear that whether considered low cost or full service, airlines are taking the best from each other's models. This makes a clear differentiation more difficult in some cases, particularly as we project 20 years into the future.

GLOBAL NETWORK CARRIERS ARE THE LARGEST IN 2012, BUT LOW-COST CARRIERS ARE THE FASTEST GROWING BETWEEN 2012 AND 2032



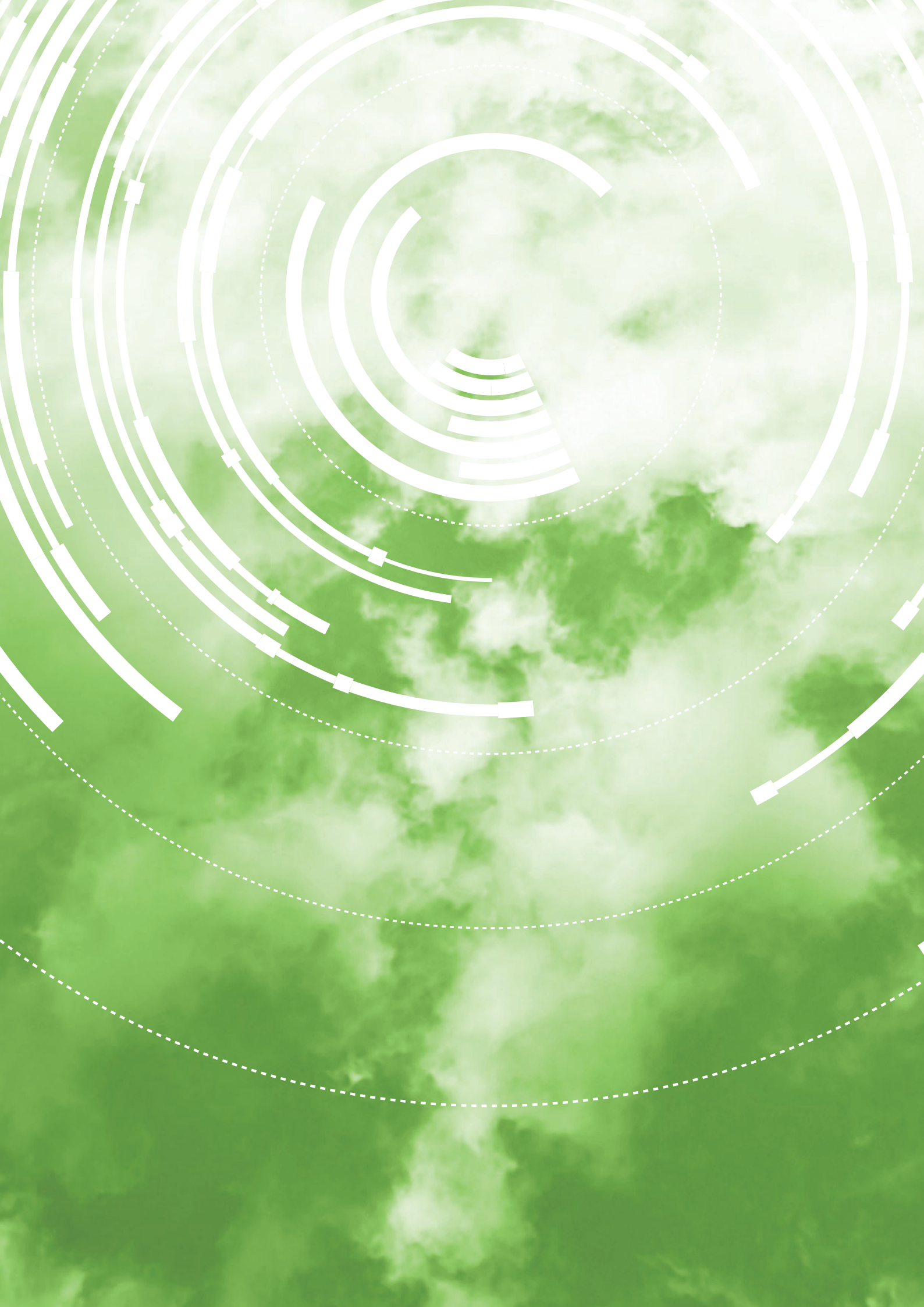
21%

Share of LCC traffic in 2032.

04

Demand for passenger aircraft





Single-Aisle

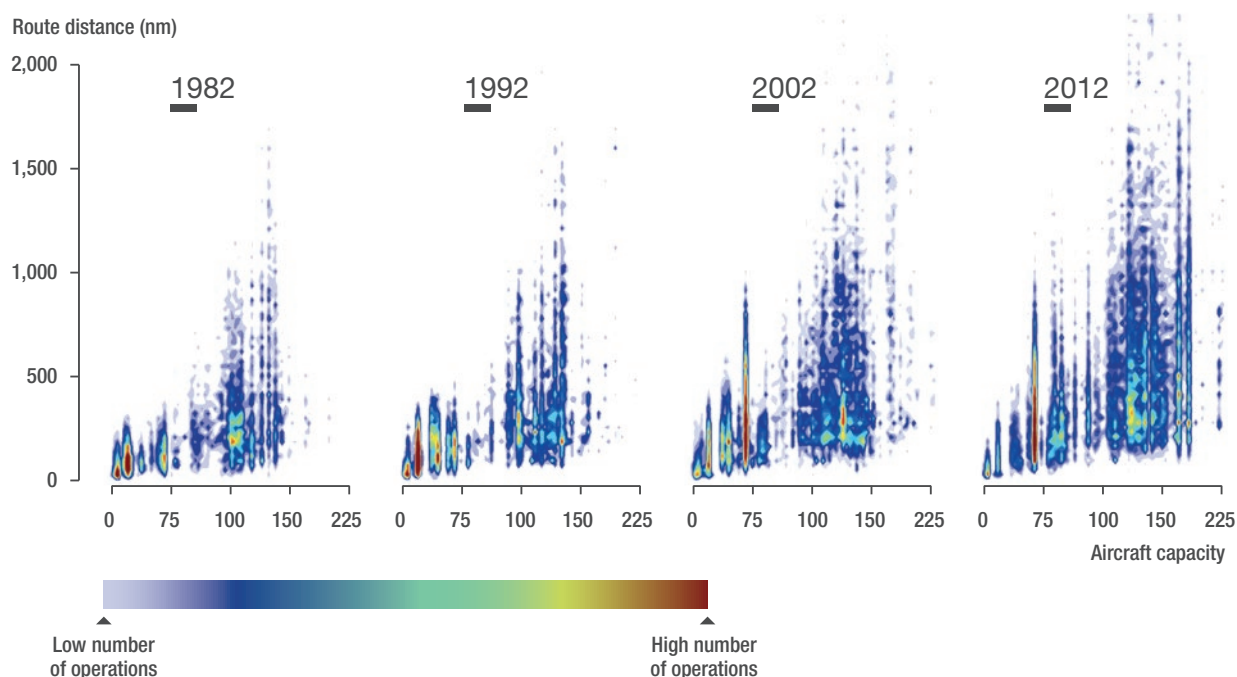
MORE RANGE, MORE SEATS

Today, there are nearly 12,600 Single-Aisle aircraft serving as a key element of the world's aviation network, enabling journeys to take place quickly and efficiently around countries and regions, as well as feeding the hubs who themselves enable journeys between continents. They represent 78% of the total commercial airline fleet of aircraft over 100 seats.

By 2032, the number of aircraft will more than double to more than 24,600 aircraft. Some 20,242 of these will come from new deliveries between now and 2032 with around 40% replacing older aircraft and around 60% targeting new growth in the industry. A large number of these deliveries will come from new more fuel efficient aircraft like the new 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 46% of the overall demand for new Single-Aisle aircraft. Asia, with its growing inter-regional and domestic networks and demand will also take a significant share of the market with 34% of Single-Aisle demand.

> IN 30 YEARS, THE AVERAGE SHORT-HAUL AIRCRAFT CAPACITY INCREASED FROM 129 TO 151 SEATS SHORT HAUL OPERATIONS FREQUENCY DISTRIBUTION INDEX VS. DISTANCE AND AIRCRAFT CAPACITY

Source: OAG, Airbus

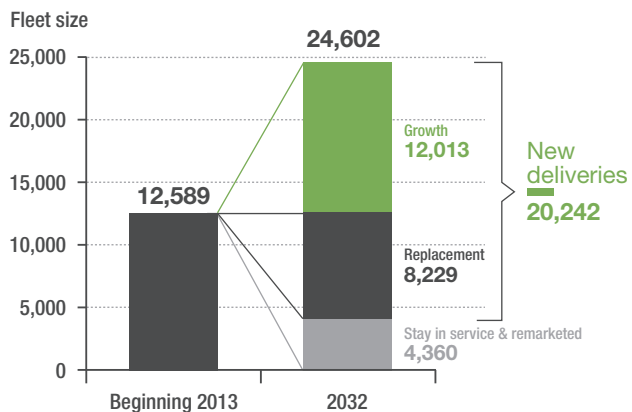


The Single-Aisle market has evolved over time, with not only the number of aircraft in this segment increasing, but also the size and range over which these aircraft operate. In 2012, around 5% of the fleet was used on what is traditionally considered long-haul routes, over 2,000nm; a trend that it is likely to continue, with the introduction of newer, more range capable variants over the forecast period, like the A320/A321neo. It is noticeable from the heat map above that ranges have increased, but there has also been a very noted increase in size with average

aircraft used in this segment growing from 129 to 151 seats. One reason for this is simply that existing routes have grown and the simplest, most efficient way to meet demand is through up-gauging in terms of aircraft size rather than adding extra frequency. This has been achieved by the purchase of larger Single-Aisle units like the A321 and 737-900, but also through the densification of existing aircraft cabins through the use of such innovations as slim back seats.

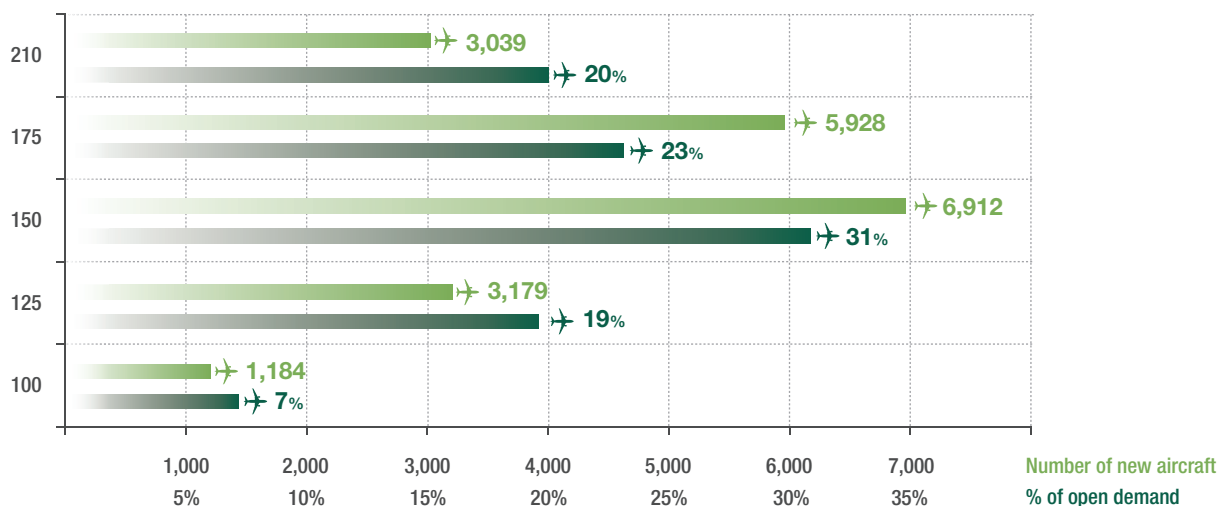
The seating configurations in the Single-Aisle market are broad, with the types segmented between 100 to 210 seats. Our forecast predicts that the centre of gravity for the category will remain at 150 to 175 seats. Larger capacity types will be more significant in volume than smaller types, with for example more than 8,900 deliveries or 43% of all Single-Aisle demand, expected in the 175 and 210 seat categories over the period. This broad variation in operations, ranges and seating capacity is why Airbus believes providing a family of aircraft, with the broadest capability, will remain key to meeting the needs of airlines and their passengers in the coming years.

> SINGLE-AISLE FLEET IN SERVICE EVOLUTION

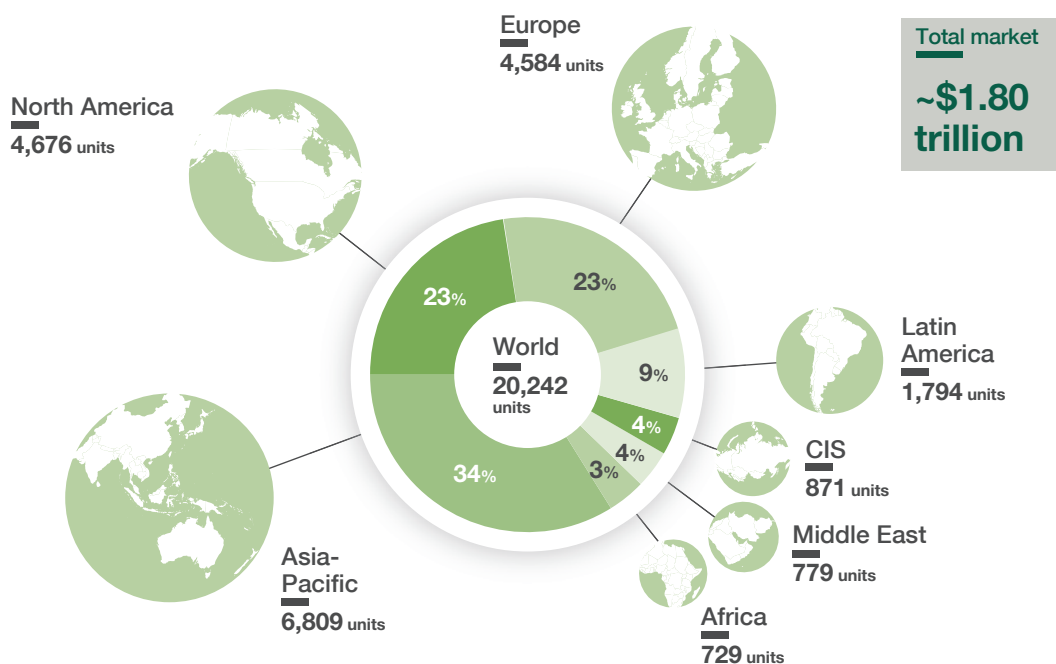


> NEW DELIVERIES & OPEN DEMAND FOR SINGLE-AISLE AIRCRAFT

Neutral Seat category



> NEW DELIVERIES OF SINGLE-AISLE AIRCRAFT BY REGION



Twin-Aisle

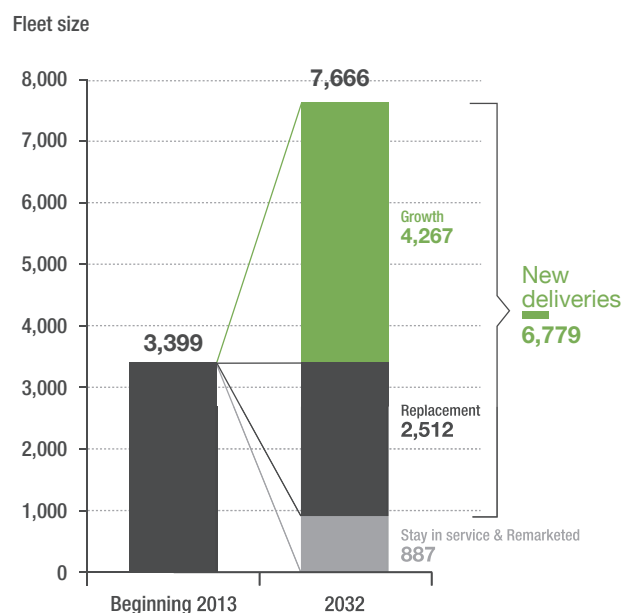
A FOCUS FOR NEW TECHNOLOGY

The future importance of this segment of aircraft is clear: not only because it will generate value from aircraft deliveries over the next 20 years, but because of the effort aircraft manufacturers will make to deliver aircraft, with the latest technologies, meeting airline demand, which has already created a significant backlog for these types.

Like the smaller Single-Aisle aircraft, Twin-Aisle aircraft also provide a varied and broad operational capability to the market. These aircraft take passengers on their journeys on high density, short-haul routes, like many in China or other parts of Asia, or low-density long-haul routes, many between the more mature markets and emerging economies. Some 37% of all RPKs were flown on the 3,399 Twin-Aisle aircraft in service at the beginning of 2013. By 2032, the fleet of Twin-Aisle aircraft will more than double to almost 7,670 aircraft. These aircraft will be used to connect major aviation hubs across the globe, but also to connect major hubs to secondary cities. 37% of the deliveries, 2,510 aircraft, will replace existing, less fuel efficient aircraft with new, eco-efficient aircraft like the A350XWB. Some 4,270 aircraft will be used for growth. Asia-Pacific will be the largest contributor to the demand for growth in this market segment with nearly half of all Twin-Aisle deliveries over the next 20 years.

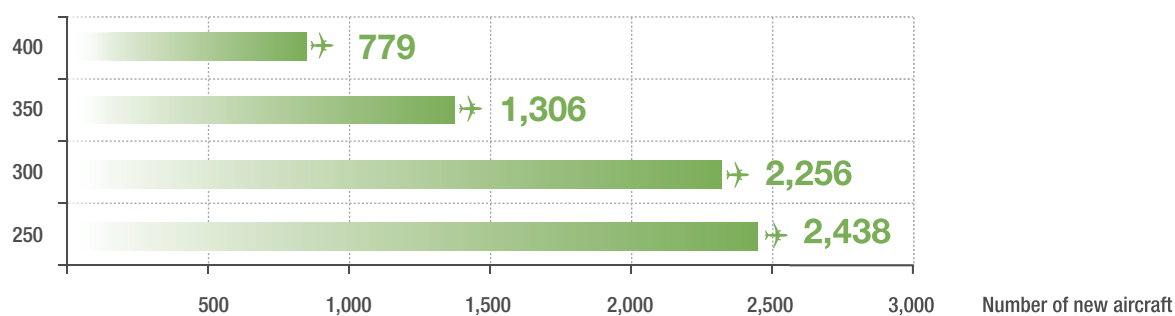
TWIN-AISLE FLEET IN SERVICE EVOLUTION

Source: Airbus

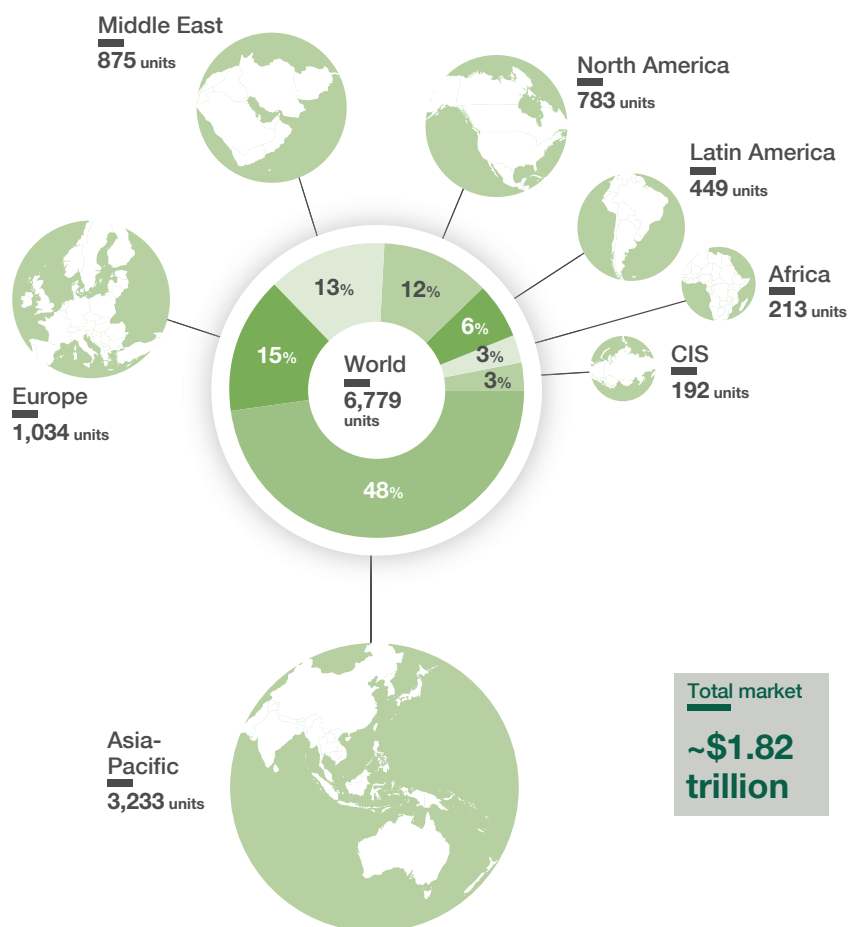


NEW DELIVERIES OF TWIN-AISLE AIRCRAFT

Neutral Seat category



> NEW DELIVERIES OF TWIN-AISLE AIRCRAFT BY REGION



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 categories, which is expected to represent 70% of the Twin-Aisle demand, a market where the A350XWB,

A330 and 787 compete today. But, aircraft in the 350-400 category will still represent nearly 2,100 units over the next 20 years, a segment where the A350-1000XWB and other competing types will meet demand in the years to come.



Very Large Aircraft

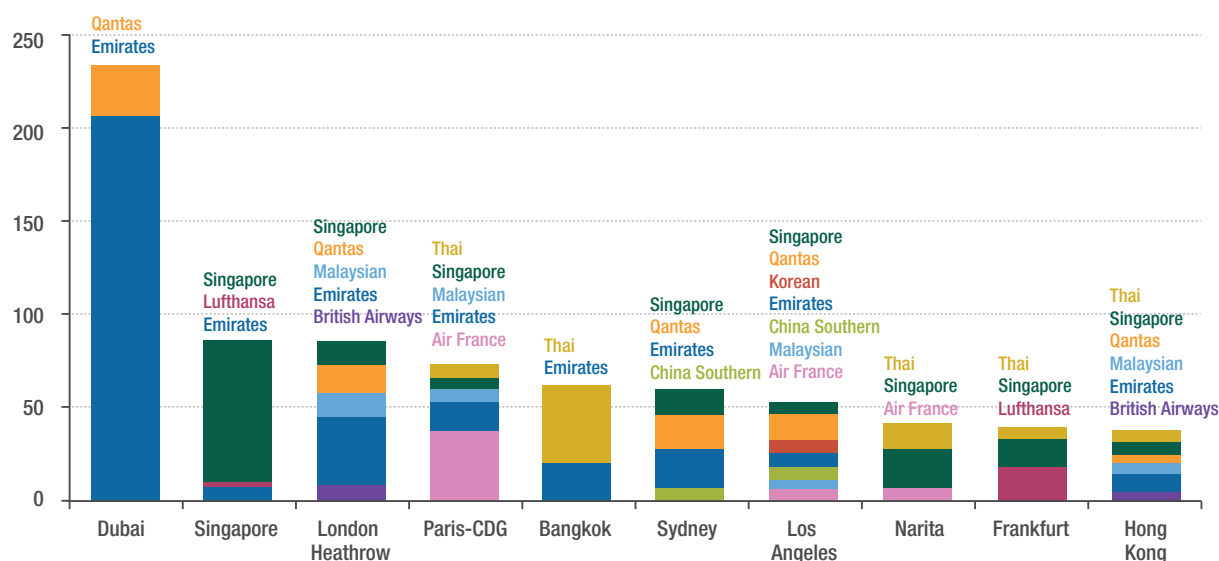
MOVING PEOPLE BETWEEN THE BIG POINTS

Because the Airbus GMF is based on demand rather than a pure supply model, it identified the need for Very Large Aircraft (VLA) many years ago. It is only today, with more than 100 aircraft in operation, aircraft like the A380, that the benefits of this segment have become more than analysts' predicted. VLAs are truly connecting the world, whether major hub or secondary city, with well over 100 flights a day carrying more than a million passengers every month. Many of these passengers have chosen to fly on a VLA due to the comfort and overall passenger experience this category of aircraft can provide.

> A380s LINK THE WORLD'S AVIATION MEGA-CITIES

A380 weekly departures: December 2013 - Source: OAG, Airbus

Top 10 A380 airports ranked by average weekly departures



↘ Over 150 flights per day carrying more than a million passengers per month.

Today, some airlines are operating the A380 for example, at an extremely comfortable 407 seats. Offering airlines the opportunity to pamper their high yield passengers, and at the same time giving passengers at the back of the plane more space and comfort than other aircraft types. Airline customers have chosen various seating configurations from this luxurious arrangement, right up to single class layouts of 840 seats, 13 less than the maximum capacity of 853 seats. This gives airlines' the flexibility to mix comfort, revenue and cost per seat to more precisely match their own distinct brands and business models. Today, A380 configurations are typically between 500-520 seats, and include three and four class configurations.

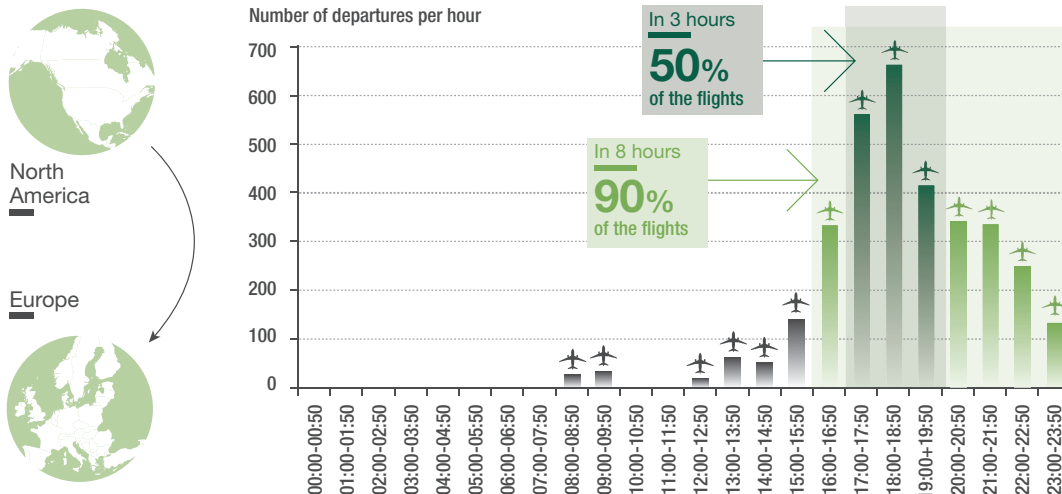
At an operating level, this capacity flexibility allows airlines to deploy the right capacity at the right time, critical to optimally serve their trunk routes, which are the driver of revenue on their networks. Long-haul flights, especially between mature and expanding markets, are characterised by two daily demand peaks. VLAs allow an airline to capture these peaks in the most cost efficient way by reducing or eliminating the need for closely spaced multiple departures, which add complexity and cost to the network. There is also a revenue advantage as these peaks are in part also driven by passenger preference to have a night or convenient day flight option, for which they will pay a premium.

The requirement for VLAs will grow with the world's network and as the ability of more and more of the world's people to fly grows. By 2032, 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 and

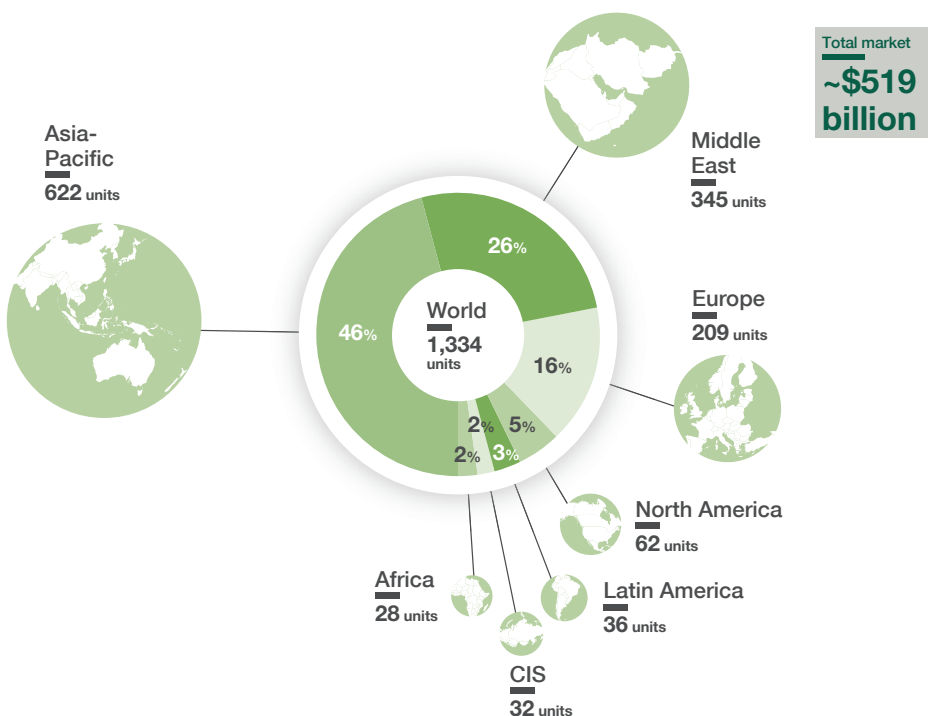
urbanisation trends, it is unsurprising that the region's airlines will take 47% of these aircraft over the next 20 years. The Middle East will be the second largest region in terms of demand for VLAs, at 26%. This can be seen today in the size of the backlog of A380s within Middle Eastern carriers.

> CONCENTRATION OF FLIGHTS IN LONG-HAUL MARKETS

August 2012 Schedules - Source: OAG, Airbus



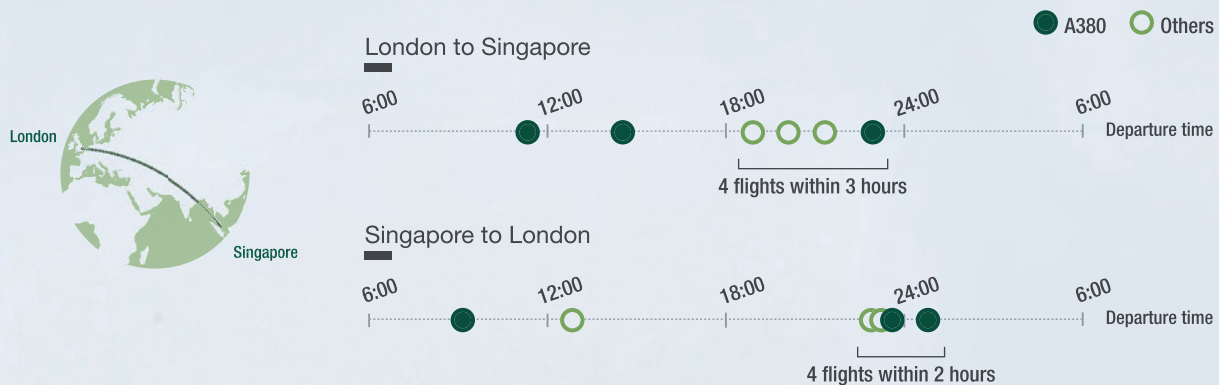
> NEW DELIVERIES OF VERY LARGE AIRCRAFT BY REGION





> CONCENTRATION OF FLIGHTS BETWEEN MEGA-CITIES

August 2013 Schedules – Source: OAG, Airbus



Slot and time zone constraints drive frequency concentration. The A380 is the most efficient solution for growth.



05

Demand by region





Asia-Pacific

MORE FLYING, NEAR AND FAR



After a decade of tremendous growth, the Asia-Pacific region is recognised as one of the world's major economic centres. Taking in the five biggest economies in Asia, it is actually the most important in terms of GDP, ahead of North America and the EU. While a number of countries in the region can be considered emerging, they are by no means small or insignificant. In fact, they contribute meaningfully to the strength, diversity and future growth that the region as a whole represents.

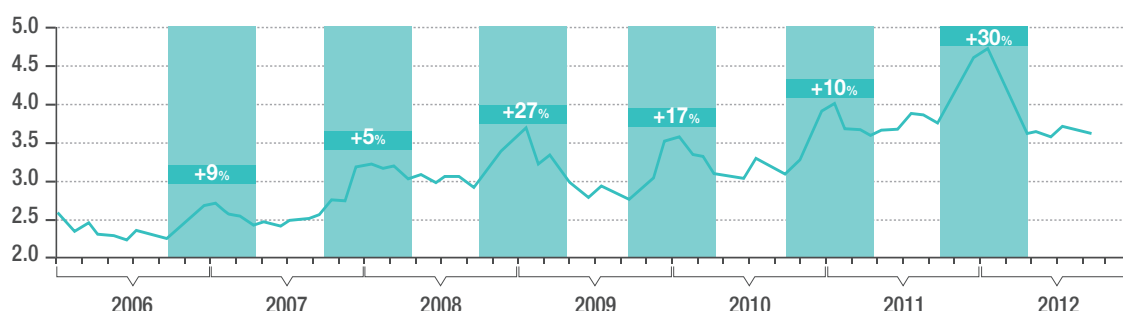
The people of Asia will continue to enjoy the economic development the region has witnessed in the past. Looking at the evolution of household earnings, forecasts published by The Economist Intelligence Unit, show that the share of households earning more than 10,000 US\$ per year in China will grow from 5.9% in 2012 to 14.9% in 2017. Similarly, in India it will increase from 5.3% to 8.8% over the same period. In addition, the size of the middle-class in the region is currently booming with this influential socio-economic group characterised by people

mainly living in urban areas and already highly connected to the world, with easy access to information and communication technology. Historical data shows these positive developments have already started to shape the aviation market. Examining traffic evolution on some intra-Asia flows, it can be seen that seasonality, for example, is increasing. This trend towards higher seasonality in regional traffic shows that leisure travel associated with holidays and tourism seasons are increasingly driving the shape of demand for air travel in Asia.

SEASONALITY IS INCREASING ON THE PRC-PACIFIC FLOW

Source: OAG, Airbus

Billions of ASKs



% is based on the difference between peak and end of seasonal period

Increasing seasonality signifies growing regional tourism.

If we take the specific example of China, the weight of tourism and leisure travel is becoming increasingly important. China's expenditure on travel abroad reached US\$ 102 billion in 2012, which represents an increase of 40% from 2011. It is, therefore, not a surprise that China has become the number one source in the world in terms of tourist spending according to UNWTO.

With these positive drivers, Asia-Pacific traffic has grown

rapidly; faster than in the rest of the world and in particular traffic within the region itself. Domestic traffic will increase 6.4% on average every year over the next 20 years. In 2012, Asia-Pacific's domestic traffic represented 36% of global domestic traffic in terms of RPKs and will reach 52% by 2032. Domestic and intra-regional traffic for Asia-Pacific combined will account for more than 25% of total global RPKs by the end of our forecast period.

Already developed but much more to come

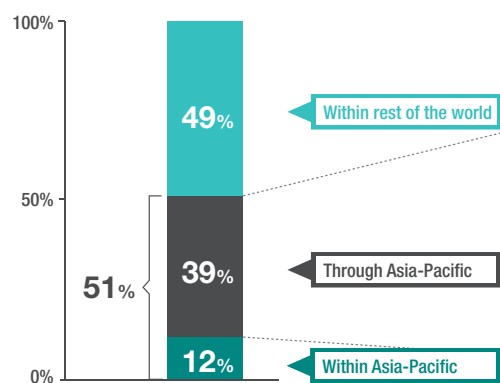
In China, there are currently three aviation Mega-Cities in coastal areas (Beijing, Shanghai and Hong Kong), while there are none in the western part of the country. Using a tool to indicate concentration, such as the Herfindahl index, it is possible to compare the split of traffic in different regions in the world. Using this index we can see that the concentration of air traffic is twice as big in China than in the US and four times more than Europe. However, western regions of China are catching up: if we look at real GDP growth in the third quarter of 2012 for China, IHS Global Insight indicates that economic growth was 9.4% in the coastal areas, and 11.9% in the

western area, heralding the prospect of greater need and, therefore, greater development in air travel to and from these regions.

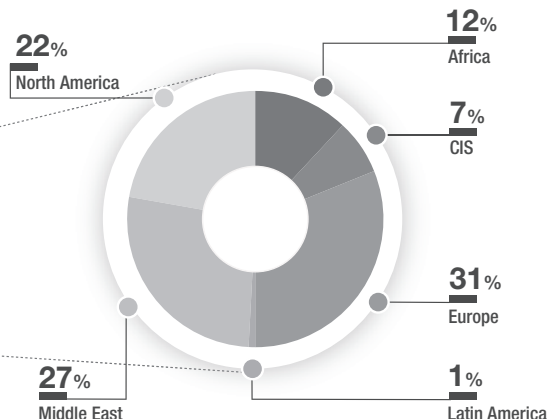
Projected future global network development in Asia-Pacific will have an important role in shaping the future global network as a result of the dynamic air travel market in the region. Examining just the long-haul routes, more than 50% of the new routes created between 2013 and 2032 will be connected to Asia-Pacific. This gives a flavour of the dynamic nature of air transportation in the region.

NETWORK DEVELOPMENT WILL BE PARTICULARLY ACTIVE IN ASIA-PACIFIC

Share of new long-haul* routes opened on the 2013-2032 period



Repartition of destinations of new routes opened from Asia-Pacific to the rest of the world



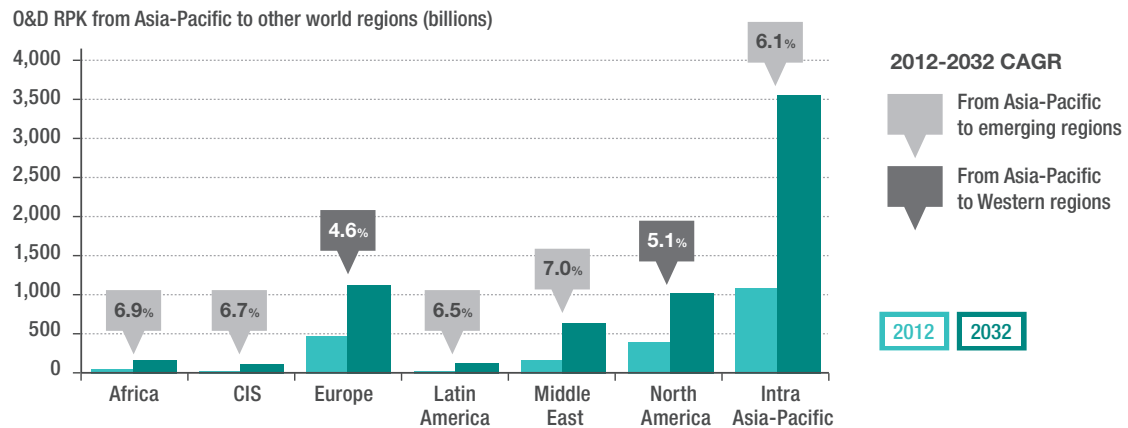
* Route length > 2000nm

More than 50% of new long-haul routes will touch the Asia-Pacific region.

Traffic from Asia-Pacific to the rest of the world will continue to increase and will experience the most significant growth in origin and destination (O&D) traffic

on flows connecting Asia-Pacific to other emerging regions. As a result we are moving to a more balanced air transportation network.

TRAFFIC BETWEEN ASIA-PACIFIC AND EMERGING REGIONS WILL INCREASE AT A HIGH RATE

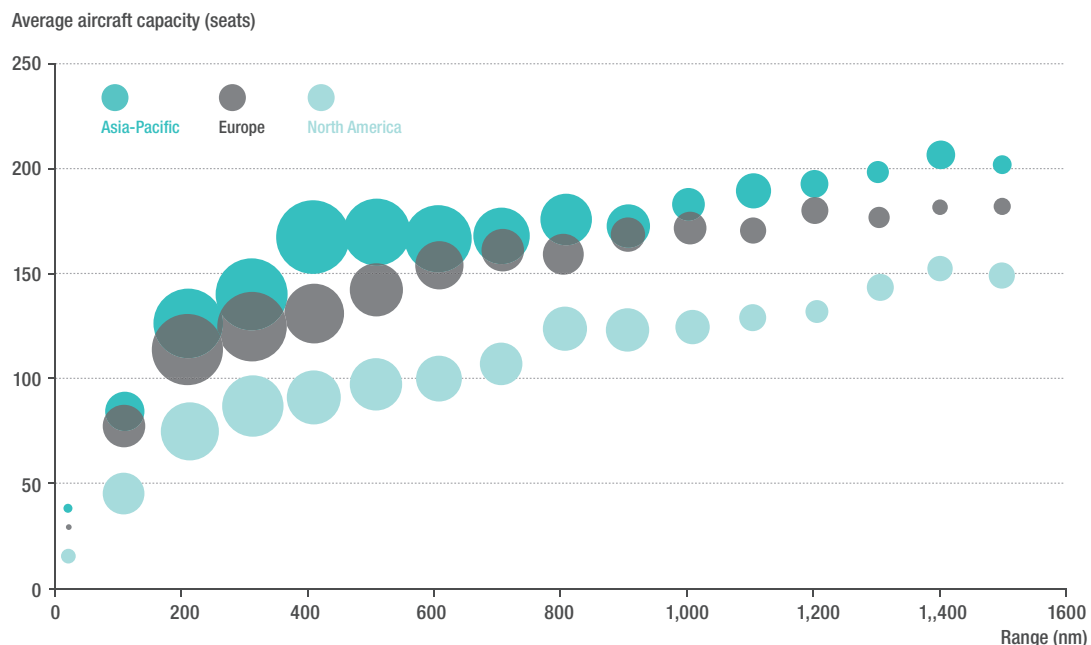


With its unique combination of characteristics including geography, country mix, economic potential and large

population centres, Asia also has distinct aviation market characteristics.

AVERAGE CAPACITY ON INTRA-REGIONAL ROUTES

Source: OAG, Airbus – September 2012



Intra-regional routes are operated with higher capacity in Asia-Pacific.

As previously mentioned, intra-regional traffic volumes are very important in Asia-Pacific. Combined with a relatively high concentration of traffic, this results in routes that are enjoying huge and growing volumes of traffic. As a result, the way the need for capacity is handled in Asia is different to other regions, such as Europe and North America; aircraft size plays a bigger role. For example, the average aircraft capacity on routes of around 400nm is between 150 and 200 passengers in Asia, much higher than in North America where the average capacity

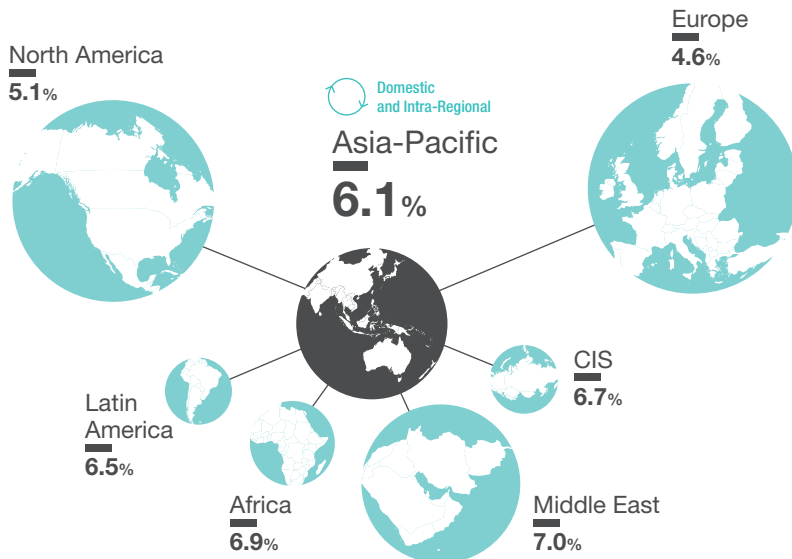
is between 50 and 100 passengers. It is not a surprise therefore, that the Asia-Pacific market is one where the A380, the largest passenger aircraft in the world can be used effectively on intra-regional routes.

Another differentiating aspect of Asia-Pacific, is the aircraft average age of its fleet. Asian carriers' fleets are among the youngest in the world. Contrary to other emerging regions the weight of remarketed aircraft (i.e. aircraft coming from another operator), is low in the region, with airlines favouring new more efficient aircraft to meet their requirements.

Results

RPK TRAFFIC GROWTH FROM/TO ASIA-PACIFIC BY REGION

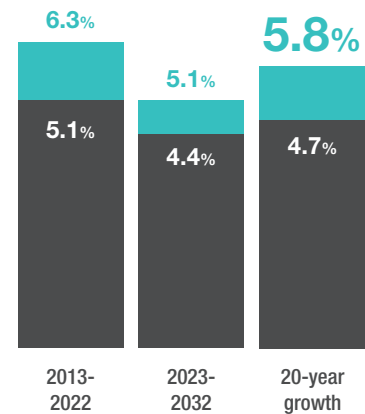
Size of bubbles proportional to RPK volumes



TOTAL RPK TRAFFIC GROWTH

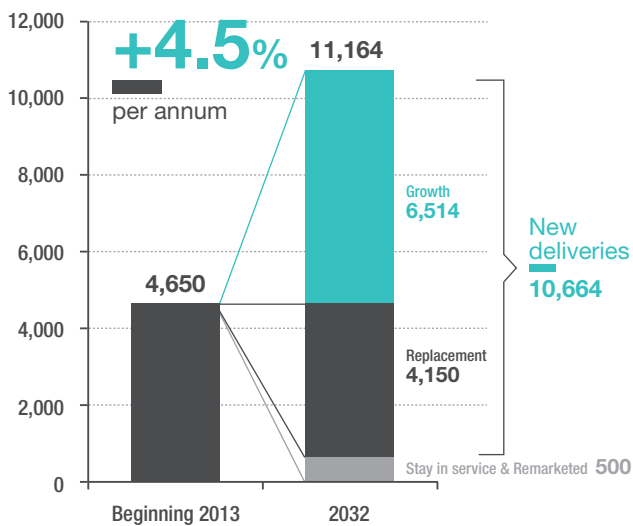
Asia-Pacific

World



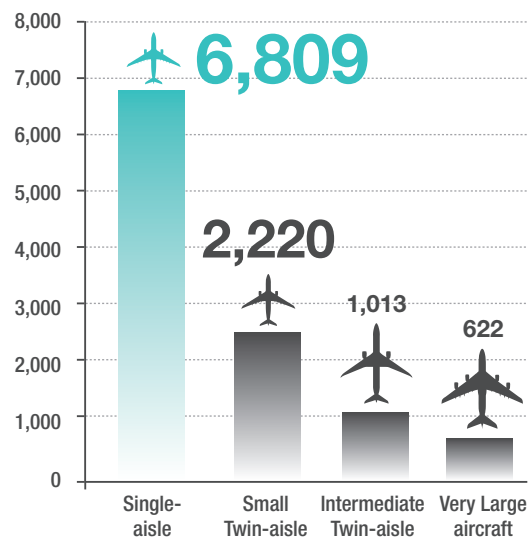
FLEET IN SERVICE EVOLUTION

Fleet size*



NEW DELIVERIES BY SEGMENT

Number of new aircraft



ECONOMY**

Real GDP

4.5%

Real Trade

6.5%

Urban population

1.9%

TRAFFIC**



Intra-regional & domestic

6.1%



Inter-regional

5.5%

Total traffic

5.8%

FLEET*

Fleet in service

Beginning 2013

4,650

In 2032

11,164

20-year new aircraft deliveries

10,664

* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

Europe

FLYING THROUGH THE TURBULENCE



Although the long-term trend of a more equitable distribution of global wealth will reduce the weight of developed countries in the future, Europe, whose airlines contributed 26% of world-wide ASK in 2012, is a heavy weight of the air transport market. Its in-service fleet is forecast to represent 20% of the world's total by 2032.

Economy

The Eurozone economy is beginning to stabilise, even if today confidence levels remain relatively low. IHS Global Insight forecasts a slight contraction in Europe in 2013 and then returning to low growth in 2014 onwards. Southern Europe is expected to see a slightly longer period before a return to growth, partly due to tough austerity programs, tight credit and a strong euro. But, by 2015 this is expected to change and southern Europe

will return to growth. By 2022, Southern European economies are expected to surpass their pre-2008 peaks in GDP. Even with these on-going difficulties, Europe will still represent 23% of the world economy by 2032. Real trade is one area of the European economy that is expected to see strong growth, with a forecast of 3.6% CAGR over the next 20 years, signalling the continued importance of Europe to the global economy.

Market trends

The European air transport market landscape has changed dramatically in the last 15 years. Low-cost carriers have not only stimulated demand on short-haul markets, but also captured some market share from flag carriers and charter operators. Traditional carriers have in many cases, adjusted their operating mode to take the best from the LCCs recipe: increased aircraft utilisation, unbundled fares, etc. This quest for a lower cost base has also paved the way for more airline alliances, mergers and acquisitions. Given the financial difficulties some

European airlines still face, this round of consolidation is likely to continue in the coming years.

With an increasingly challenging environment, airlines seek productivity improvements wherever they can. A very common avenue is to maximize aircraft utilisation, because the fixed cost of ownership can be amortized on a higher number of flight hours. This is what the top 20 European airlines have achieved over the last 15 years, with the notable exception of 2009/2010 crisis,

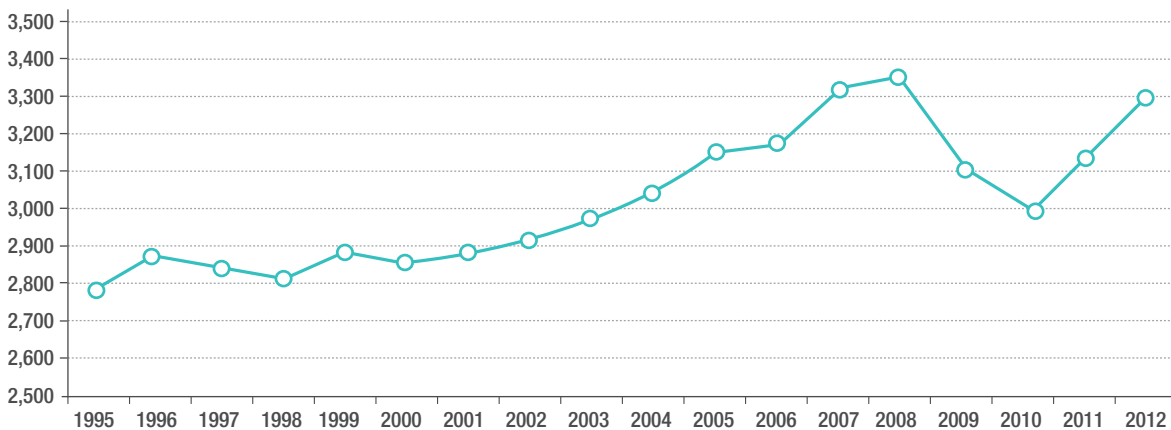
which saw airlines cutting flights to match lower levels of demand. In this GMF it is projected that aircraft utilisation

improvement trend will continue in the future, with up to a 5% improvement by 2032.

TOP 20 EUROPEAN AIRLINES AVERAGE AIRCRAFT UTILISATION HAS IMPROVED

Source: ASCEND, Airbus

Utilisation
(annual flight hours per aircraft)



Except during crisis, European airlines keep increasing their aircraft average utilisation.

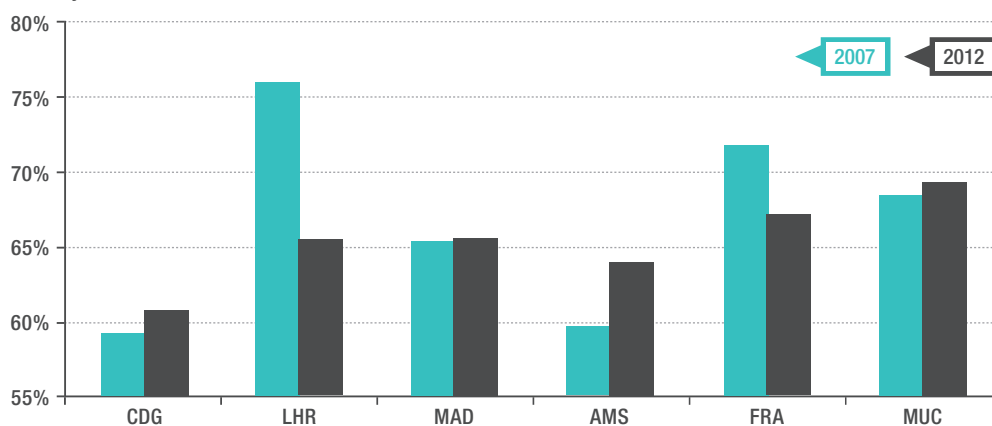
Another aspect that needs to be examined is hub efficiency, which is particularly important for airlines that rely on connecting traffic to feed their network. The numerous hub and spoke systems in Europe provide passengers with a large set of different possible travel itineraries. These appeal more or less to the potential customer depending on, amongst other things, total elapsed time of the journey or the time available for the passenger to connect at a hub. Obviously flight

schedules, as the primary product offered by an airline, have to be attractive to passengers, and airlines have taken the opportunities to offer more connections with fewer flights. Considering a hub efficiency indicator, which is constructed by dividing the number of good on-line connections offered by the theoretical maximum number of connections, it can be illustrated that many European hub and spoke airlines have improved their flight schedule at their respective hub over the last five years.

HUB EFFICIENCY INDEX EVOLUTION FOR MAJOR EUROPEAN AIRPORTS

Source: OAG, Airbus

Hub efficiency index



European majors have improved their flight schedule connectivity wherever possible.

While the efficiency index increased at most European hubs, it appears that flight schedule connectivity at the most congested airports, London Heathrow and Frankfurt International, hasn't improved over time. This is mainly due to the difficulty of optimising a flight schedule with extreme slot constraints, whilst at the same time accommodating market growth. Congestion at major European airports has been a long

standing issue that has not yet been fully addressed. Even though Frankfurt inaugurated a fourth runway in 2011, London airports future remains unclear, with no existing short-term plans to expand Heathrow or build a brand new airport. One possible solution for constrained airports in the short to medium term is for airlines to increase the average size of their aircraft to preserve their market positioning.

Focus on the "Kangaroo route"

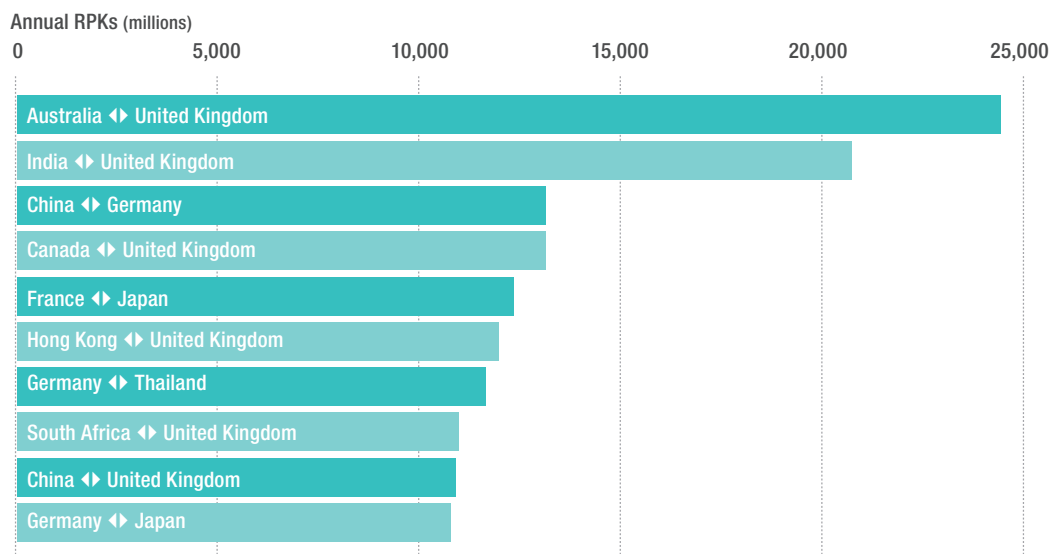
With nearly 1,500,000 passengers a year, the market between Australia and the United Kingdom, also known as the Kangaroo route, is the largest non trans-Atlantic international market from Europe.

Through its membership of the Commonwealth, Australia has always had strong links with UK both economically and demographically, leading to significant demand levels both on the business and Visiting Friends and Relatives (VFR) segments.

THE KANGAROO ROUTE IS ONE OF EUROPE'S LARGEST MARKETS

Source: Sabre Global Demand Data, Airbus

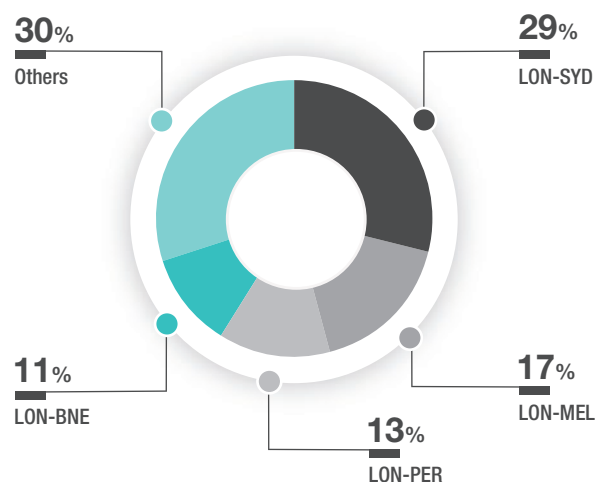
2012 Top international country pairs from/to Europe, ex trans-Atlantic



A VERY CONCENTRATED MARKET

Source: Sabre Global Demand Data, Airbus

2012 Top origin/destinations between Australia and United Kingdom



Unlike the majority of international markets from Europe, the kangaroo route is challenging as it can not be achieved with direct flights, and it is relatively concentrated with only four origin/destinations contributing to 70% of the total demand.

This configuration has prompted many airlines to organise their flight schedule to address specifically this market, significantly increasing the level of competition.

Thus, the number of one-stop connecting opportunities between Australia and the UK rose 80% between 2003 and 2012. At the same time, the market share of UK and Australian carriers dropped 10 percentage points, primarily to the benefit of Middle Eastern airlines which now carry about one third of the demand.

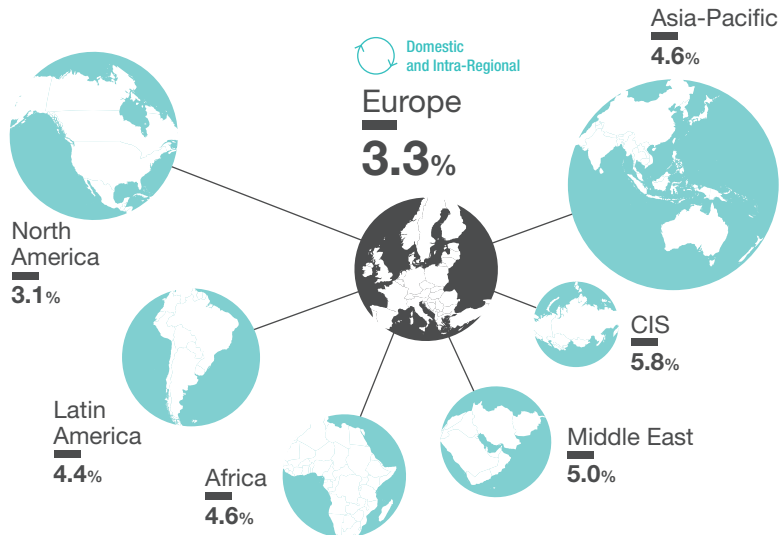
Recent partnerships formed by Gulf carriers with traditional network airlines should contribute to further evolve the market, enabling passengers to benefit from an expanded and increasingly attractive offer. Over the next 20 years, traffic on the Kangaroo Route is expected to grow at a robust average annual rate of 4.0%.

Despite the challenging context faced by European airlines, their traffic is expected to grow at 4.1% per year over the next 20 years, generating a demand for 5,800 new aircraft, 56% of which to accommodate the market growth.

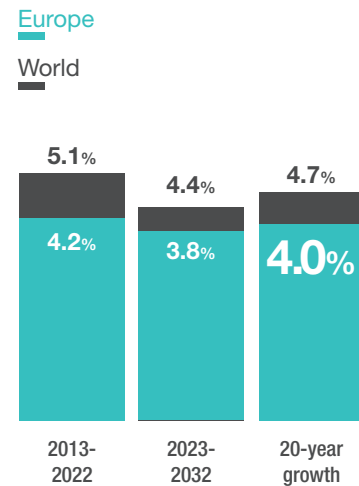
Results

RPK TRAFFIC GROWTH FROM/TO EUROPE BY REGION

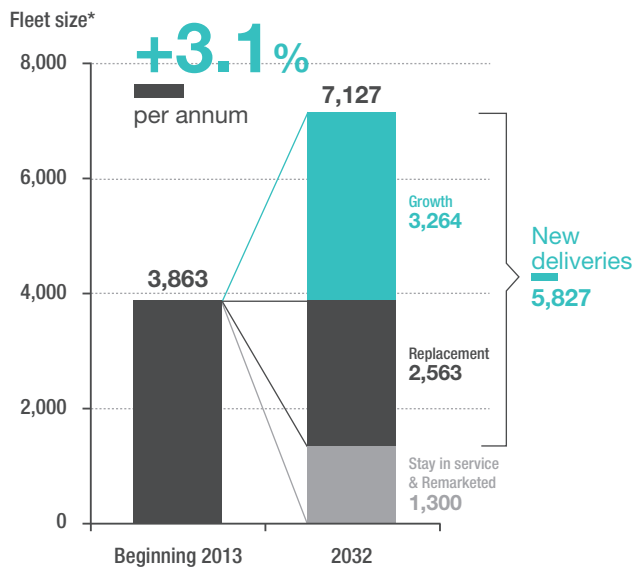
Size of bubbles proportional to RPK volumes



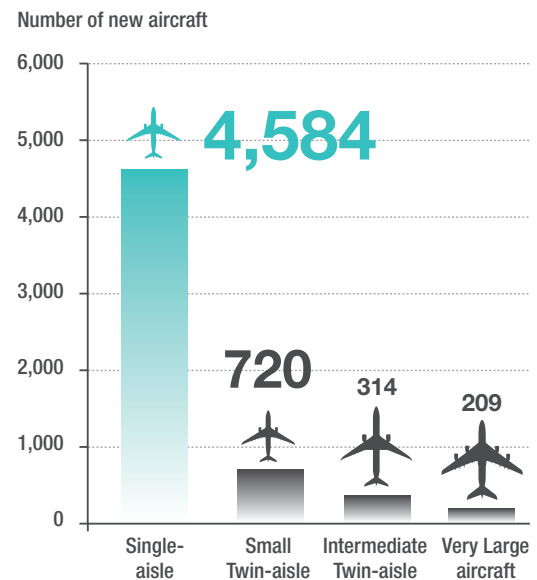
TOTAL RPK TRAFFIC GROWTH



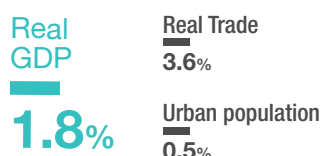
FLEET IN SERVICE EVOLUTION



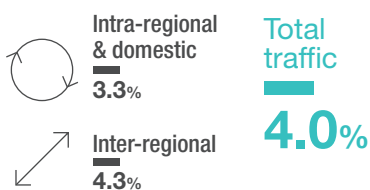
NEW DELIVERIES BY SEGMENT



ECONOMY**



TRAFFIC**



FLEET*



* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

North America

WHERE MATURE MEANS BIG



The importance of aviation to North Americans and the importance of North America to the aviation industry today and in 20 years is undeniable. There are more than 800 million passengers originating and/or ending their trips in North America, driving a 29% share of all world passengers in 2012. Even with slower growth rates in North America compared to emerging markets, a small amount of growth in such a huge market has a profound impact. Over the last ten years, origin and destination (O&D) passengers to/from/within North America has grown at a rate of 1.9% per year. If in 2013 O&D passengers grow again by 1.9%. The delta in number of passengers between 2013 and 2012 is about one and a half times the population of New York City. Airbus recognises the great importance of this region and has displayed its commitment this year by starting work on the new final assembly line in Mobile, Alabama.

Economy

The economy of North America is moving in the right direction: unemployment rates remain below that of other mature markets and the general economy is again seeing growth. Unemployment rates are expected to return to below 6% per year by 2016 and continue its decline through 2020. Over the same period, private consumption, which represents around 70% of the US GDP is expected to rise at a rate of 2.3% over the next

ten years. There are still some on-going concerns around national debt levels, but the worst concerns seem to be decreasing. Over the next 20 years, the real GDP of North America is expected to grow at 2.5% per year, slightly lower than the world-wide average of 3.1%. However, this means that the North American economy will still represent over 17% of the world GDP in 2032.

Market Trends

There are several trends in North America that cannot be ignored, such as the pending replacement demand for ageing aircraft and the on-going wave of consolidation. These two trends have a large impact on how airlines will purchase aircraft and satisfy demand in coming years: one driving demand mostly for Single-Aisle aircraft and the other driving up-gauging. In recent GMFs, we have discussed these trends and how they will affect our industry. There are three other trends that we have not as emphasised that are worth exploring; capacity management/profitability, pockets of growth in mature markets and the contribution of Visiting Friends and Relatives (VFR) traffic in North America.

Over the last ten years, airlines in North America have given a great deal of focus to increasing profitability through stricter capacity management and revenue from ancillary services. As an example of their success in ancillary revenue, carriers in the US have increased their revenue from baggage fees by 650% over the last five years; reaching \$3.5 billion in revenue last year. Capacity management has also been key. Focusing on increasing aircraft utilisation and increasing load factors means that airlines in North America were able to absorb growth while their fleet size has remained relatively stable. However, the amount of

growth that can be absorbed through these mechanisms is limited, and airlines in North America will need to expand their fleet size or up-gauge their aircraft to meet this demand.

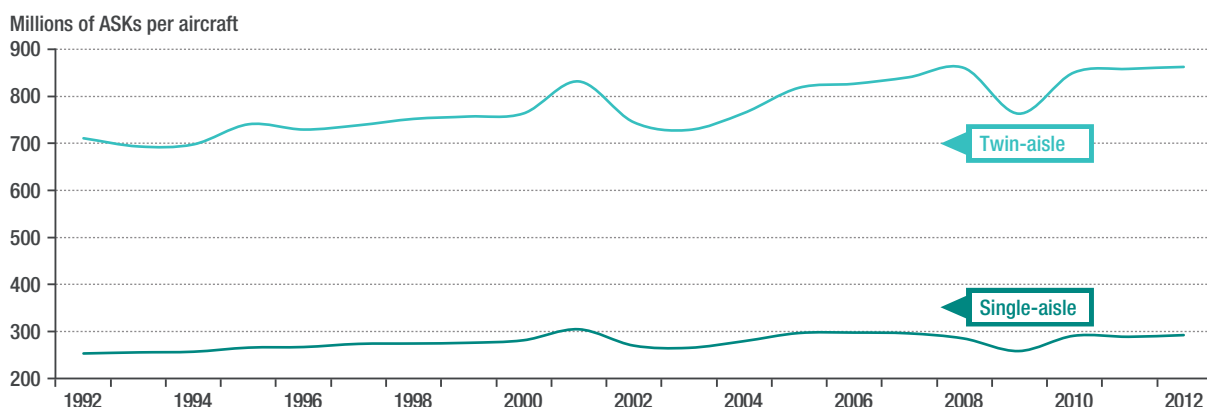
Over the past 20 years, airlines from the region have grown load factors from 61% to 82%. Some airlines from North America are setting the standard for strong load factor performance. Over the same period, the level of ASKs carried by each Twin-Aisle and Single-Aisle aircraft in the North American fleet has grown by 21% and 15% respectively. But, to continue the growth in the number of passengers airlines can capture they will need to increase their capacity either through more frequencies or through larger aircraft. As explained in the GMF Methodology section, for each of our regions/flows we analyse a number of factors to determine whether it is probable for an airline to increase frequencies, increase frequencies and aircraft size or solely through increases in aircraft capacity. North America is known for favouring increases in frequencies over increases in capacity; but over the last 20 years, the average size of aircraft flying on domestic routes and routes between the US and Canada have grown by 9.5%. This is a trend that we see continuing into the future.



> NORTH AMERICAN CARRIERS STILL MORE EFFICIENT

Source: OAG, ASCEND, Airbus

North American carriers' aircraft utilization, expressed in ASKs per aircraft in service



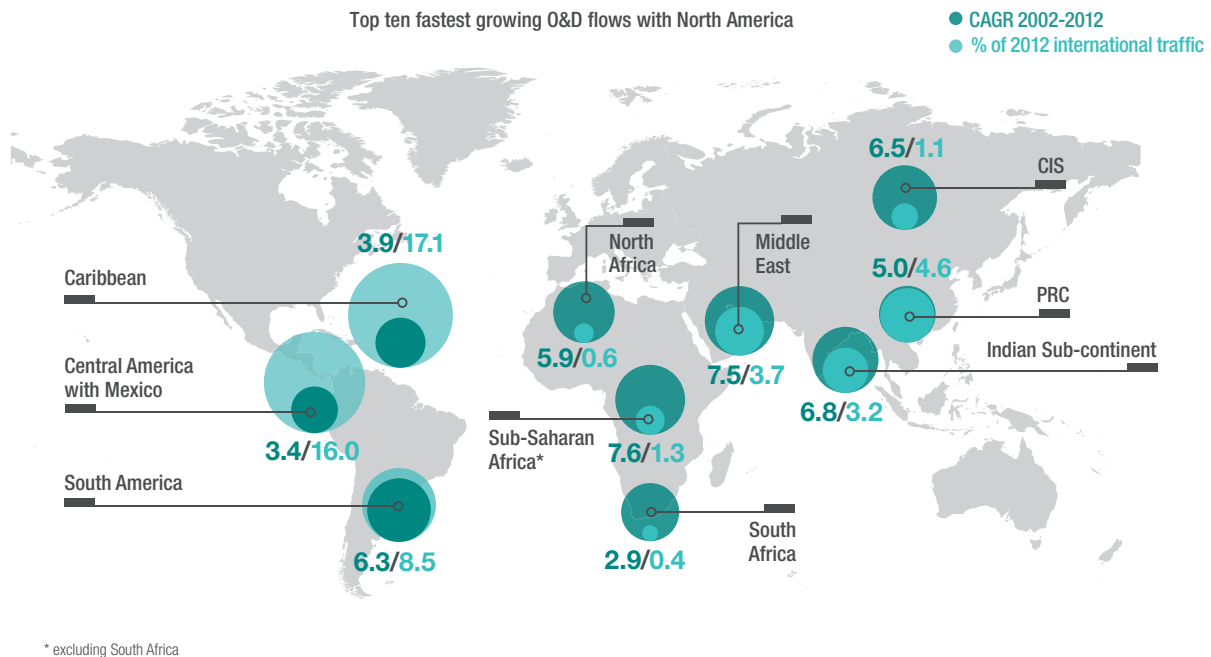
Over the last 20 years, ASKs per aircraft in service have grown by 21% and 15% for Twin-Aisle and Single-Aisle aircraft respectively.

Over the past ten years, O&D passengers to/from/within the region have grown at 1.9% per year according to Sabre. This low level of growth is mostly a result of the maturity of the region. The two most important flows in the region are domestic and intra-regional traffic (which represent 75% of passengers for the region) and traffic

between North America and Europe (representing 7% of passengers in 2012). Both of these flows are highly mature with a huge number of seats being offered. But, it is not all low growth for North America; there are a number of regional O&D passengers flows that are displaying strong growth rates.

> POCKETS OF GROWTH IN A MATURE ECONOMY

Source: Sabre, Airbus



▮ The top ten fastest growing international O&D flows for North America represent more than 55% of all international O&D traffic.

Each of the top six fastest growing flows to/from North America has grown faster than the world-wide average over the last ten years. In 2002, these flows represented 14% of inter-regional O&D traffic to/from/within North America, whereas today these flows represent over 20%. This growth highlights many of the topics that have been discussed in the drivers of traffic section. When examining the last decade in terms of country-pair O&D growth, it is important to note that the majority of the fastest growing flows to/from North America are in relation to Canada. An example of this is the growth in traffic between Canada and Mainland China which has grown at more than 10% per year over the last ten years.

Immigration and International students are major drivers of air traffic, as it drives traffic back to home countries and VFR. In 2011, 42% of American residents selected VFR travel as their primary purpose for traveling overseas. North America is one of the largest destinations for both immigrants and international students. According to

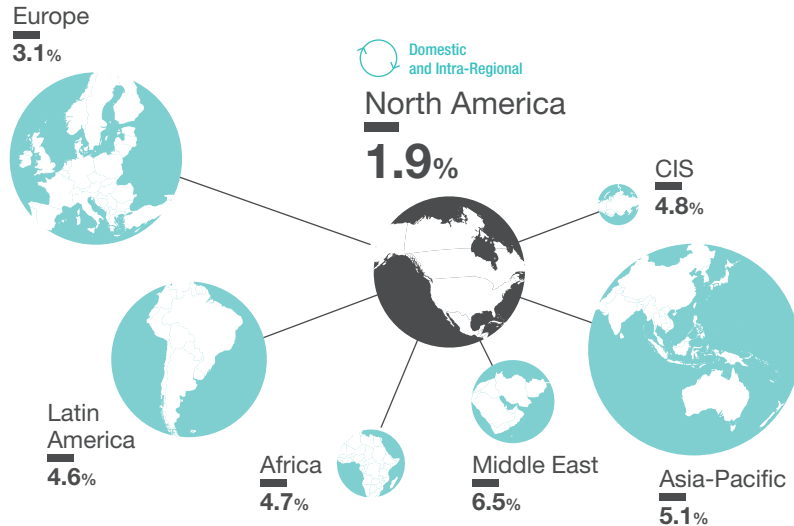
the UN Population Division, there are over 50 million immigrants living in North America with nearly 43 million living in the United States; making the US the largest destination country in the world. Immigrants represent nearly 20% of the population of North America between the ages of 20-64 making it a major contributor to the demographic landscape within the region. Internal migration within North America is another major contributor of air traffic. According to a survey by Gallup, 24% of all adults have changed cities within the North America in the last 5 years.

There are also a large number of international students in North America which further contributes to the amount of VFR to, from and within North America. According to UNESCO, there are over 780,000 international students studying in North America, representing 22% of all international students in the world. Of these, over 680,000 study in the US making it the largest destination in the world for foreign students.

Results

RPK TRAFFIC GROWTH FROM/TO NORTH AMERICA BY REGION

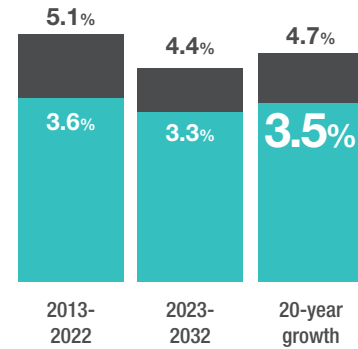
Size of bubbles proportional to RPK volumes



TOTAL RPK TRAFFIC GROWTH

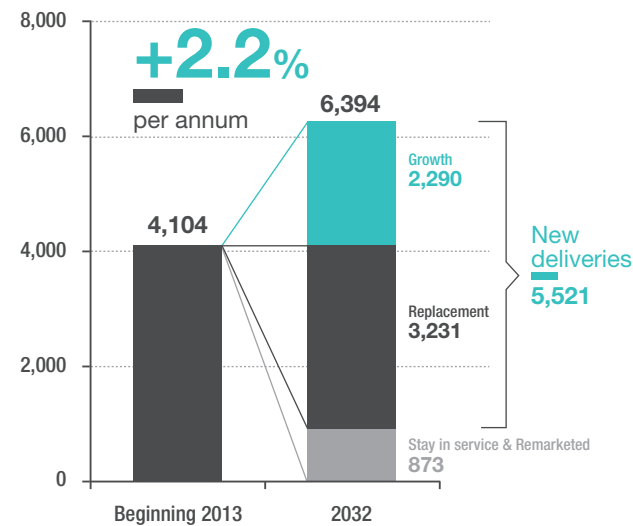
North America

World



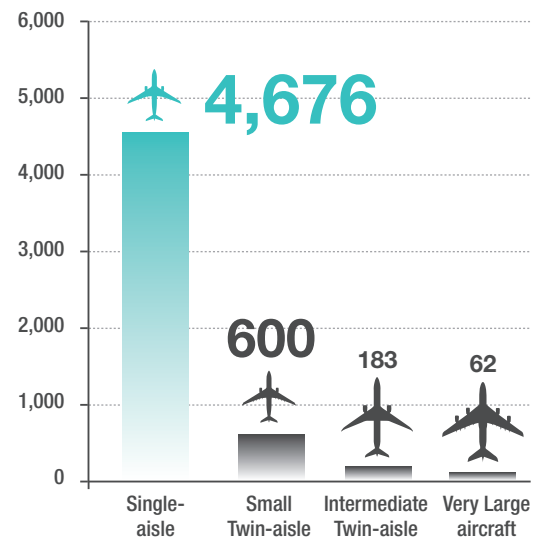
FLEET IN SERVICE EVOLUTION

Fleet size*



NEW DELIVERIES BY SEGMENT

Number of new aircraft



ECONOMY**

Real GDP

2.5%

Real Trade

4.7%

Urban population

1.0%

TRAFFIC**

Intra-regional & domestic

1.9%

Inter-regional

4.4%

Total traffic

3.5%

FLEET*

Fleet in service

Beginning 2013
4,104

In 2032

6,394

20-year new aircraft deliveries

5,521

* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

Middle East

GLOBAL SCALE WITH A GLOBAL PRESENCE



The last three decades have been witness to the tremendous changes in the Middle East region. From the hot sands of the gulf desert striking new skyscrapers have risen into cloudless skies, artificial islands have been created, major business centres developed, leisure areas for booming tourism, highways connecting expanding cities, with major airlines and airports on a global scale providing the connectivity and capacity needed for this dynamic region to continue its rise. The Middle East is a very diverse region, with some of the fastest growing markets and economies in the world in some countries, and on-going economic and geo-political difficulties in others.

Despite some difficulties, many governments in the region, are aware of the rising importance of aviation to the world economy and to their own. They have made its development a cornerstone of strategic plans to establish the region as a key element of globalisation and in the world's current and future aviation network. The result of this voluntary policy is the impressive growth of the Middle Eastern carriers who enjoyed a remarkable 8.2% traffic growth rate in 2012. Major carriers have confirmed their resolution to pursue ambitious commercial strategies to expand both their short and long-haul networks by confirming orders for latest new and efficient aircraft, including the A320neo, A350XWB and A380.

If the unique geographic situation of the region is enabling the local carriers to be best positioned to capture and satisfy travellers coming from all over the world, with intra-regional air transportation also growing.

STEADY GROWTH OF THE TRAFFIC FROM, TO OR WITHIN MIDDLE EAST COUNTRIES

Source: OAG, Airbus

Middle East monthly traffic evolution
ASKs (billions)



This has been very clearly displayed in the rapid expansion of LCC operations and the capture of traffic by LCCs, both within the region and to/from the region. This is largely driven by a young and dynamic population, many sharing the same language and eager to seek opportunities for work and leisure both abroad and within the region. The traffic within Middle Eastern countries has doubled during the last decade. Both international and regional air transport are expected to keep growing, with billions of dollars being invested in airlines and airports to meet increasing demand and regional aspirations.

Economy

The Middle East is a very diverse region, with some of the fastest growing countries in terms of GDP and some of the most troubled. Overall, the Middle East is forecast to have slower economic growth in 2013 (up 2.6% over 2012) due to lower fuel prices and continued weak demand due to the on-going economic difficulties of some major importers. But, strong growth is expected to return in 2014 with IHS Global Insight forecasting an average of 4.1% annual growth from 2014 to 2020. Over the full 20-year period, almost all of the countries of the Middle East

are forecast to surpass the global average growth rate. Part of the forecast growth in GDP comes from continued increases in private consumption; over the next 20 years, real private consumption is expected to grow at 4.6% per year, far above the world-wide average of 2.9% per annum. The Middle East is expected to further leverage its position as a key economic hub between Africa, Asia-Pacific and Europe to continue to enhance their global status in trade and economic development.

Middle East aviation's impressive numbers

- **81%**, the world's population is less than 8 hours flight from one of the Middle East's major hubs
- **22%**, the market share of LCCs between countries in the Middle East region
- **200 million** passengers were handled by Middle Eastern airports in 2012. Further investments are on-going to boost the airport capacity to accommodate ever increasing demand
- **200** international routes with over 500 daily passengers departing from or arriving to Middle Eastern airports

in 2012. In comparison, there were only 43 such routes in 2002

- **\$1.5 billion** profit generated by Middle East airlines in 2011 and 2012; up by 10% in comparison to 2010 despite the gloomy economic situation in Europe and the civil unrest affecting some parts of the region
- Almost **1 million** seats offered on A380s every month at Middle Eastern airports underlining the need for bigger and fuel efficient aircraft

The region's diversification goals enabled by aviation

Gulf countries are using the funds generated by their oil and gas industries to invest and extend their global influence especially in emerging markets. The investment internationally is not solely focused on oil and gas: Gulf countries are looking at numerous fields such as other energy sources, chemicals, financial services or even sports. In 2012, the Gulf Cooperation Council (GCC) members had more than US\$160 billion worth foreign direct investment abroad.

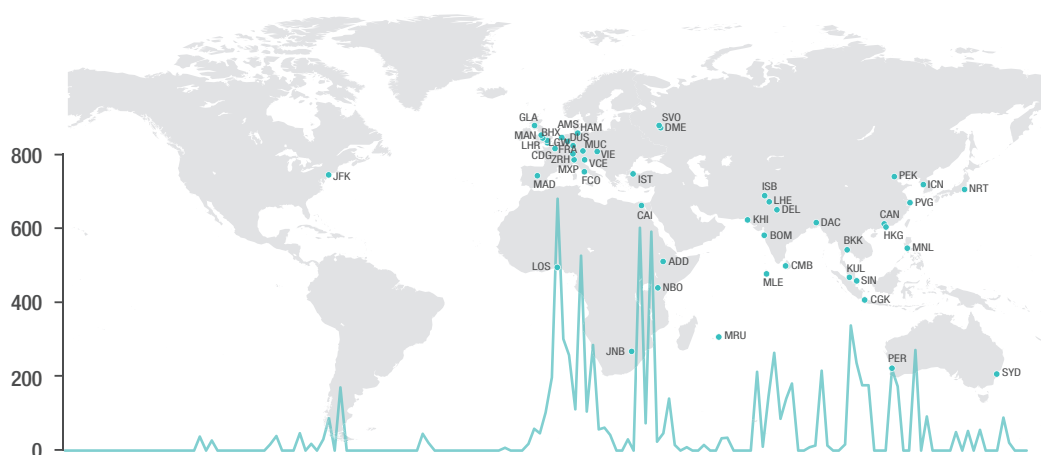
To illustrate the region's commitment to be recognised and play a more important global role, Qatar, is going to

host 2022 World Cup, bringing the world's attention to a country which has just two million inhabitants. Today, Qatar is one of the world fastest growing economies with a yearly average growth rate above 15% per annum between 2005 and 2012. In addition, the Qatari government plans to invest more than US\$225 billion over the next 5 years, to transform the country into a regional and world-wide business hub. The aviation industry will receive its part being considered in Qatar and in the Middle East in general as a powerful tool for economic development.

MIDDLE EAST CONNECTING THE WORLD

Source: OAG, Airbus

Monthly available seats on wide-body aircraft in 2012 (thousands)



78 distinct routes departing from a Middle Eastern airport were offering more than 1,000 daily seats in 2012.

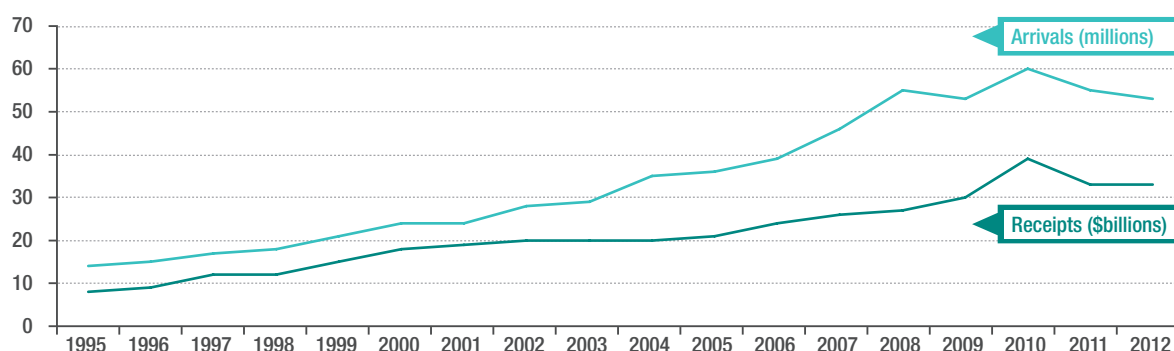
Dubai, with its two million inhabitants, is one of the seven Emirates of the United Arab Emirates. The city-state has a long history with aviation and since 1960 government and industry have been carrying out a consensus-based partnership favouring a liberal environment to drive the local carriers and benefit the Emirate's economy as a whole. Investments in the infrastructure have propelled Dubai to become a major actor in the aviation sector, with an open skies policy making it possible for 150 airlines to operate out of Dubai International Airport. To date, the UAE has signed full liberalisation agreements with 113 countries.

According to Oxford Economics, aviation supported 150,000 direct and indirect jobs in Dubai and another 160,000 in the tourism industry in 2012 and for the first time more than 10 million tourists visited. Aviation contributes to over \$22 billion of Dubai's GDP, from which \$10 billion is generated by the tourism sector. The study predicted that the contribution of the aviation sector to rise from 19% today to 32% of the Dubai's GDP by 2020. Abu Dhabi also expects 162,000 jobs to be supported by the aviation industry and will contribute up to \$11 billion to its GDP by 2016.

MIDDLE EAST TOURISM CONTINUES TO GROW

Source: UNWTO, Airbus

Middle East tourism evolution



In 10 years, the number of tourists visiting Middle East has doubled.

Fleet development

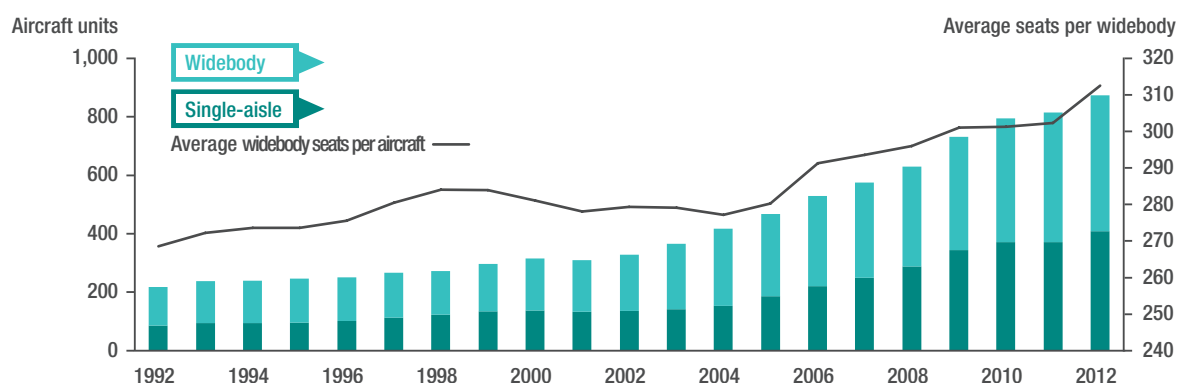
The surge of the aviation industry in the Middle East is second to none in the world. In the last 20 years, the fleet size of the region's carriers has quadrupled from 218 aircraft of over 100 seats in 1992 to 875 at the beginning of 2013. More than half of these aircraft are operated on medium and long-haul routes, highlighting the global strategy adopted by the region's airlines, which aim to be able to connect any two cities in the world. But, there has also been a very impressive growth rate in the Single-Aisle market, largely driven by the emergence of LCCs in the region. The growth in the fleet of Single-Aisle aircraft

for the region has outpaced the growth in Twin-Aisle and VLA aircraft at 8.1% per year, compared to 6.5% per year for widebody aircraft.

The influx of new fuel efficient aircraft into local carrier fleets, has helped them offer their customers the best and most comfortable aircraft available in the market. Today, the average aircraft age domiciled in the Middle East is nine years old compared to 13 years in 1992. Some airlines statistics are even more impressive, with an average age of only five years for the aircraft in their fleets.

MIDDLE EAST TWIN AISLE FLEET MULTIPLIED BY 2.5 IN THE LAST 10 YEARS

Source: ASCEND, Airbus

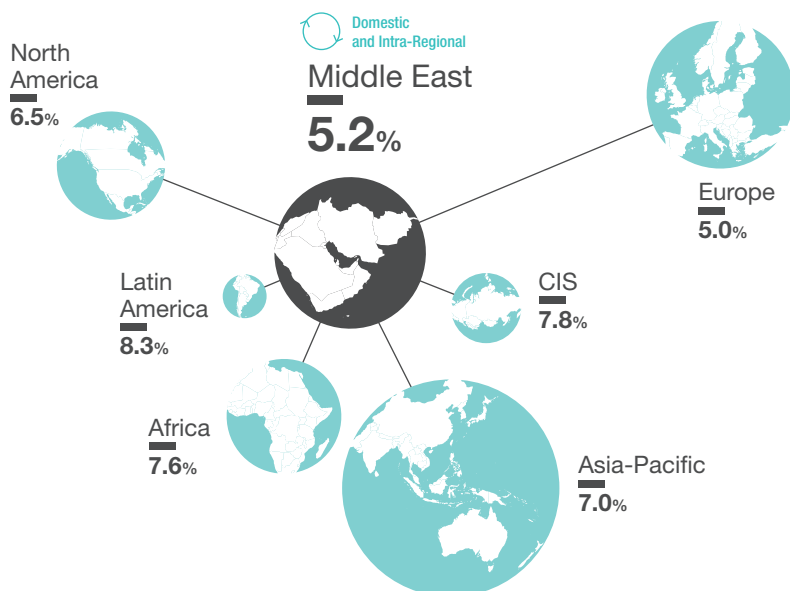


The twin aisle fleet is growing in number and in size, with the average seat count increasing by 12% in the last 10 years.

Results

RPK TRAFFIC GROWTH FROM/TO THE MIDDLE EAST BY REGION

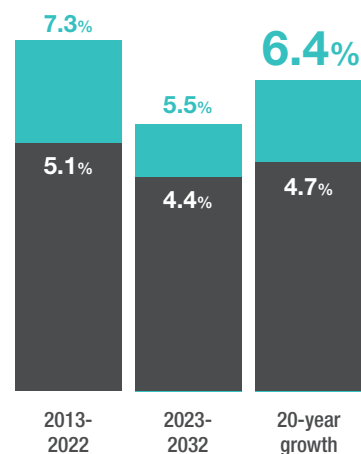
Size of bubbles proportional to RPK volumes



TOTAL RPK TRAFFIC GROWTH

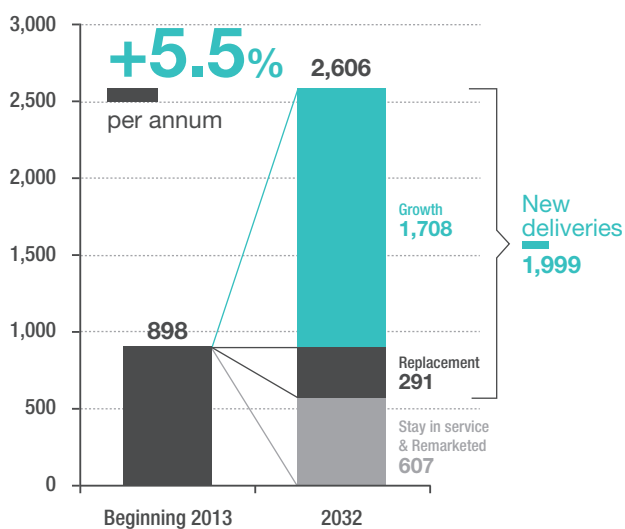
Middle East

World



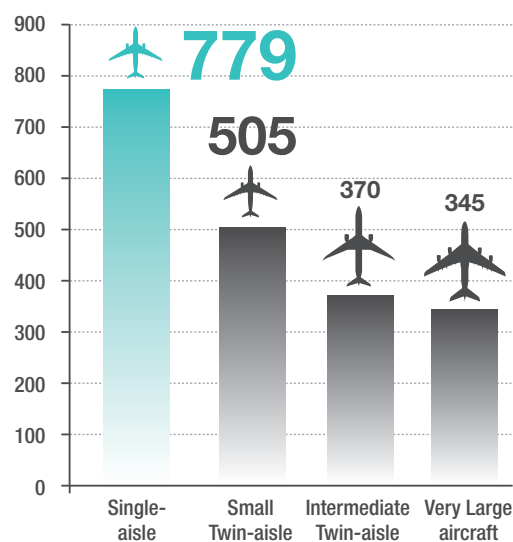
FLEET IN SERVICE EVOLUTION

Fleet size*



NEW DELIVERIES BY SEGMENT

Number of new aircraft



ECONOMY**

Real GDP

3.7%

Real Trade

3.8%

Urban population

2.0%

TRAFFIC**



Intra-regional & domestic

5.2%



Inter-regional

6.5%

Total traffic

6.4%

FLEET*

Fleet in service

Beginning 2013

898

In 2032

2,606

20-year new aircraft deliveries

1,999

* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

Latin America

A VIBRANT REGION WITH VIBRANT GROWTH



Latin America has a long tradition in aviation. With aviation links to other parts of the world going back to its earliest days. One of the pioneering aviation companies, Aéropostale, founded in Toulouse in 1918, had regular flights between Toulouse and Rio de Janeiro as early as 1927, which later were extended to Argentina and Chile. Aviation has developed significantly in recent years in Mexico, Argentina, Chile, Colombia and, notably, Brazil. There is no doubt of either the importance or the need for aviation for the people of Latin America. This is particularly true when one considers the long distances that separate the southern most point, Tierra del Fuego, in Argentina, and the northern most point in Tijuana, Mexico; or when we think of the need to navigate across the Andes Mountains, the Atacama Desert or the Amazon Basin.

In the future, Latin America will continue to be a successful story in aviation. Benefitting from sound macro-economic fundamentals, growing tourism and a high level of urbanisation, the region's long-term perspective is good. With 5.3% annual air traffic growth expected over the next 20 years, the region outperforms the forecast for world air transport expansion at 4.7%. As IATA noted recently concerning Latin America: "...the economic potential of this vast and varied geography can only be realised with a successful aviation industry."

Strong fundamentals, to spill over to air traffic

Most Latin American countries have sound macro-economic fundamentals, improving debt profiles, substantial foreign-exchange reserves and increasingly stable financial systems. Central American countries and Mexico, the second largest Latin American economy, are highly tied to the economic development of the US and have felt the strain of the economic slowdown in that region. But, as the North American economy is expected

to continue its recovery, this will provide significant growth opportunities for the region. Brazil, the largest and one of the fastest growing markets in Latin America, is expected to see accelerated growth rates in GDP as foreign investors consider greater investment after a slight decline in 2012. Brazil's government has also put in place a number of monetary and fiscal stimuli ideas to help boost the economy in the coming years.

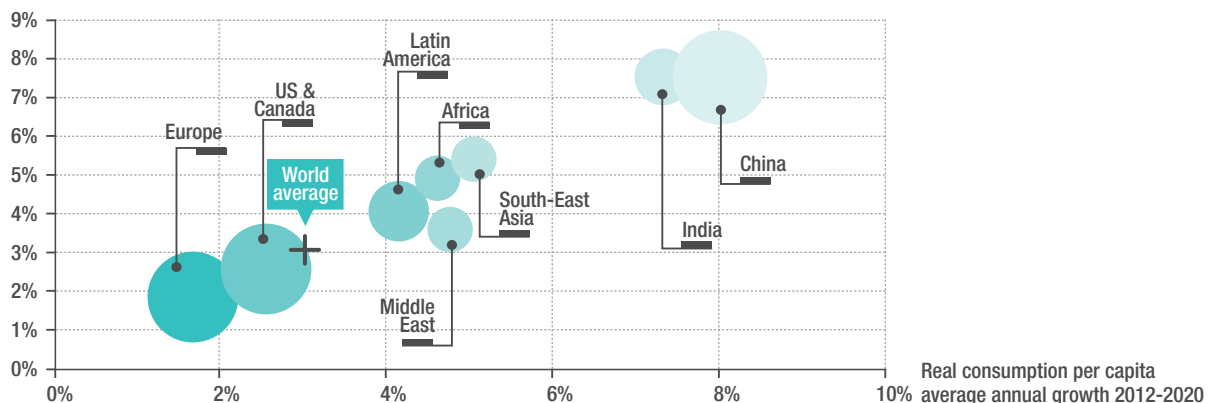
As global economic conditions improve in 2014 and beyond, the economic development of Latin America is expected to reap the rewards. Longer-term, we expect the region to be amongst those emerging regions driving long-term economic growth,

with economic growth of 4% per annum, well above the 3.2% world annual increase over the next 20 years. Because air transport is highly correlated with economic growth, this economic expansion will help drive air traffic growth in the region.

> LATIN AMERICA'S ECONOMY WILL PERFORM ABOVE THE WORLD AVERAGE

Source: IHS Global Insight, Airbus

Real GDP average annual growth 2012-2020



Bubble diameter proportional to real GDP at PPP (Purchasing Power Parity) in bn. US\$ in 2020

Apart from economic growth, tourism and urbanisation are key drivers of Latin America air transportation

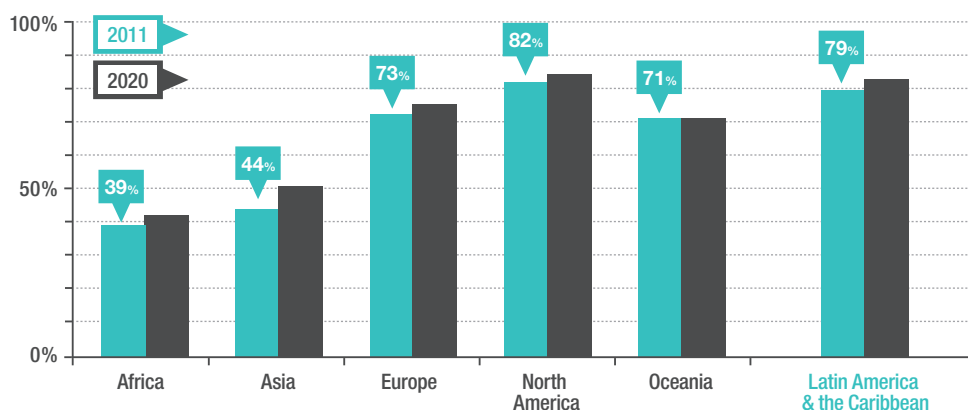
Tourism has been and will continue to be a major driver of air transport in the region, again outperforming the world tourism developments. Exemplifying this, as reported by the UNWTO (United Nations World Tourism Organisation), international tourist arrivals in Latin America have increased 4.6% per annum since 1990, above the 4% increase at a world level over the same period. Tourism will continue to stimulate air transport growth.

Urbanisation is the second key driver. According to United Nations Department of Economic and Social Affairs, the region has an exceptionally high level of urbanisation (79%), higher than that of Europe and closer to North America. As urban populations tend to fly more often, this is good news for air transportation prospects in Latin America.

> URBANISATION LEVELS IN LATIN AMERICA ARE NEAR THE HIGHEST IN THE WORLD

Source: United Nations, Department of Economic and Social Affairs, Airbus

Percentage of urban population, 2011 and 2020



Challenges and opportunities

Being one of the success stories in aviation in recent years, the need for airport infrastructure developments could potentially become a constraint to future growth in the region. Investment in airport infrastructure, runways and other airport facilities, will be key to ensure the rapid expansion of the sector.

To give some examples, Sao Paulo Guarulhos and Mexico City international airport, which handle 17% and 34% of Brazil's and Mexico's air traffic, respectively, are two of the largest Latin American airports facing congestion and delay issues. Moreover, the upcoming

2014 World Cup and 2016 Olympic Games in Brazil may add additional pressure.

Governments, however, are aware of the issue, and are acting. Brazil has set out several initiatives to address this, for example privatisations, modernisation of Infraero airports and a new airport to replace Congonhas. The Brazilian government is not alone. Other governments in the region are following similar initiatives, with planned investment developments in Buenos Aires, Lima and Bogota airports; and the newly inaugurated airport in Quito.

Traffic and Fleet

Traffic to, from and within Latin America is expected to grow at 5.3% annually over the coming 20 years. Looking at the distribution of this traffic growth, it can be seen that from the 60 flows studied in the GMF that link Latin America, 40 of them are expected to grow at an annual pace above 4.7%.

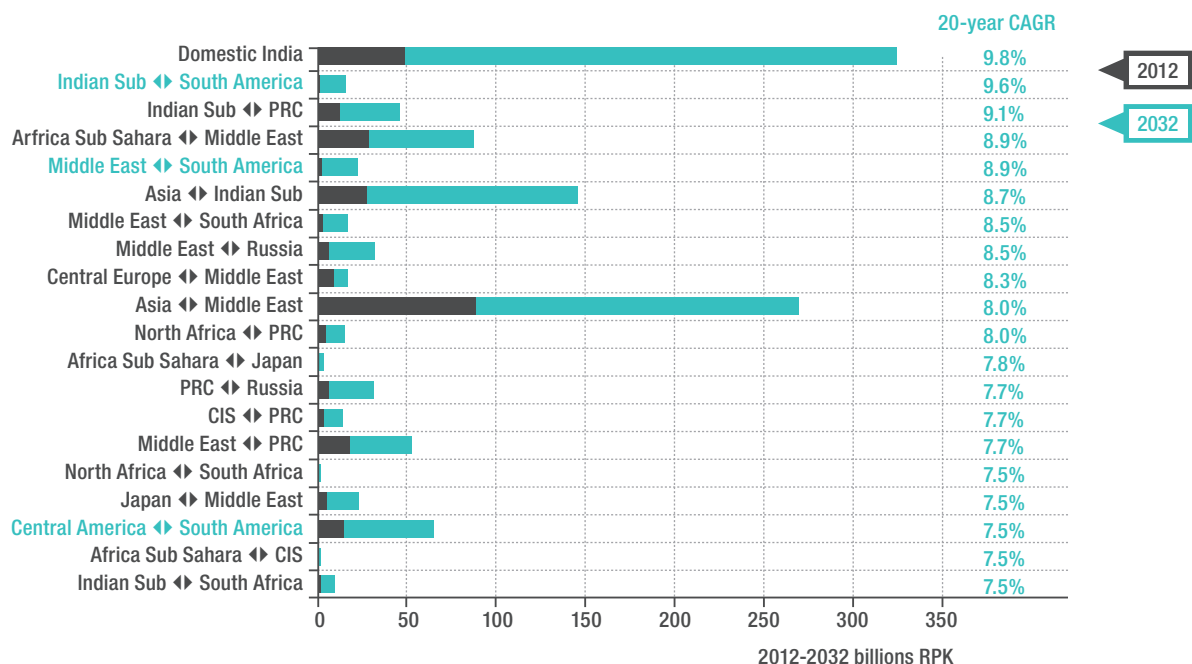
Consistent with the recent history, over the next 20 years, traffic within the region is forecast to grow at 5.2% annually, above the overall regional 6.3% average annual increase. The largest intra-regional traffic flow is Domestic Brazil, with a predicted 7% annual expansion, to represent 43% of total traffic within Latin America, in 2032. Reinforcing the integration of the region, the traffic flows that connect countries in Latin America with each other, are expected to evolve at a robust pace: Central

to South America will expand at a strong 7.5% per year, Intra-South America at 5.4% and Intra-Central America, at a 5.2% per annum.

Traffic to and from Latin America is forecast to grow at 4.8% annually. Within inter-regional traffic, the two largest traffic markets for Latin America are Europe and North America. We expect that they will grow at a 4.4% and 4.6% annual pace, respectively, to account for almost 86% of inter-regional traffic, in 2032.

Finally, rapid growth is expected to come from traffic to the emerging economies, like the Indian sub-continent, the Middle East, PRC and Africa. The top five fastest growing traffic flows will expand at almost 8.0% per year until 2032.

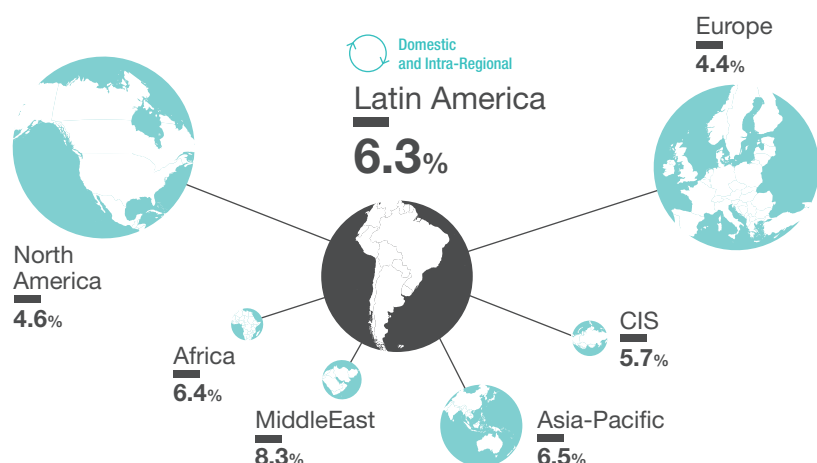
THREE OUT OF THE TOP 20 FASTEST GROWING O&D TRAFFIC FLOWS IN THE WORLD LINK TO LATIN AMERICA



Results

RPK TRAFFIC GROWTH FROM/TO LATIN AMERICA BY REGION

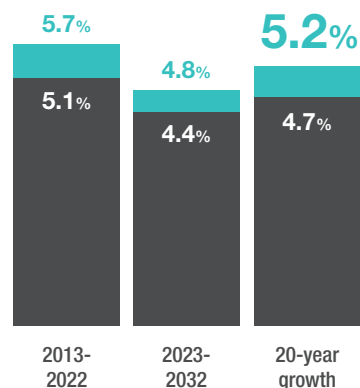
Size of bubbles proportional to RPK volumes



TOTAL RPK TRAFFIC GROWTH

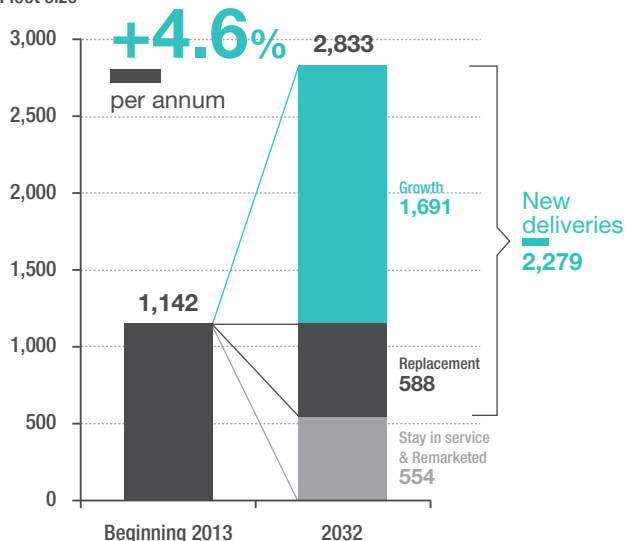
Latin America

World



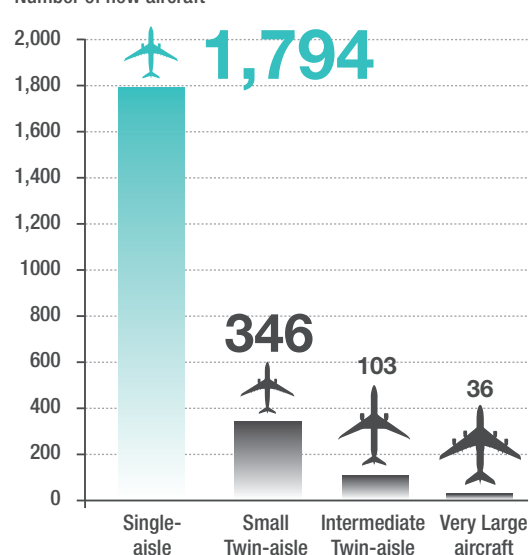
FLEET IN SERVICE EVOLUTION

Fleet size*



NEW DELIVERIES BY SEGMENT

Number of new aircraft



ECONOMY**

Real GDP

4.0%

Real Trade

4.5%

Urban population

1.2%

TRAFFIC**

Intra-regional & domestic

6.3%

Inter-regional

4.8%

Total traffic

5.2%

FLEET*

Fleet in service

Beginning 2013

1,142

In 2032

2,833

20-year new aircraft deliveries

2,279

* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

CIS

AVIATION FACILITATING CHANGE



100: The number of airlines in the CIS region studied by the GMF. Even if in 2012, the 10 biggest airlines represented more than 70% of the total RPKs produced by the airlines of the region, this number of airlines and the variety of business models in the region underline the importance of CIS for the world-wide aviation market.

The dynamics of CIS favour a large potential for growth in air transport for the region. From 2000 to 2012, ASK traffic from/to/within the region increased by almost 10% annually, and real GDP increased by 5.1% per year on average, which had a positive impact on the economic development of its population.

Combined with this high growth potential, the region is characterised by a large demand for replacement: in 2013, only 53% of the CIS fleet is new generation aircraft, with 72% remarketed aircraft.

Economy

The CIS region is forecast to have strong economic growth up to 2020, despite some countries experiencing difficulties from the fallout of the global economic situation, particularly from Europe. The fastest economic growth rate is expected to be in the second and third largest economies in the CIS, Ukraine and Kazakhstan. Even with the faster growth in the smaller economies in the region, Russia is expected to continue to represent more than 70% of the regions GDP in 2032. International trade, a key driver for the region, is expected to grow strongly over the 20 year period with growth in imports tripling and growth in exports doubling.

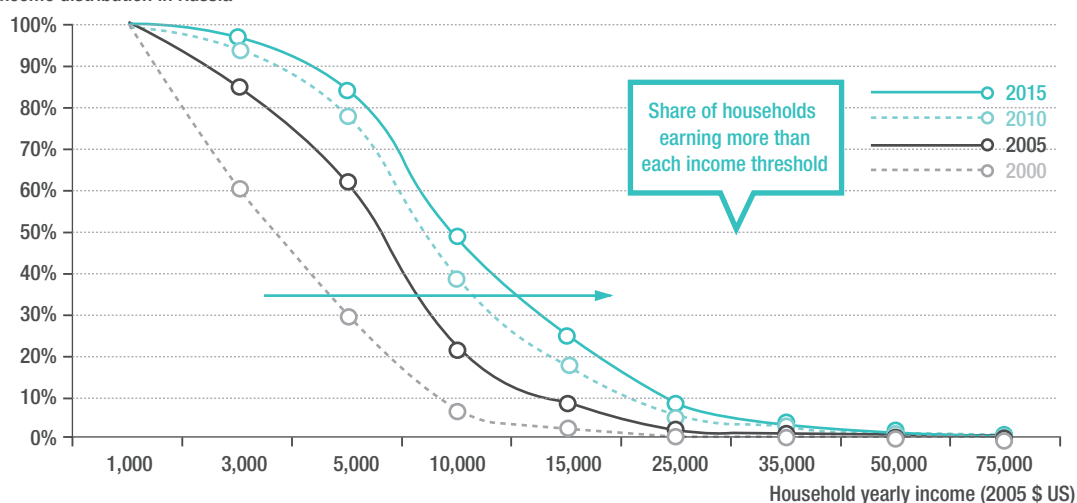
Aviation, tourism and the middle-class

The strong development in consumer behaviours and the rapidly growing middle-class have perfectly set the stage for growth in air transportation within the region. The successes of the CIS economic transitions were keenly felt from 2000 to 2012, with a GDP annual average growth rate of 5.1%, which translated into the economic development of its population. In 2012, 43% of the Russian households earned more than \$10,000 per year (US\$ 2005), this figure being expected to reach 50% in 2016.

RUSSIA'S MIDDLE-CLASS WILL CONTINUE TO DEVELOP

Source: EIU, Airbus

Income distribution in Russia

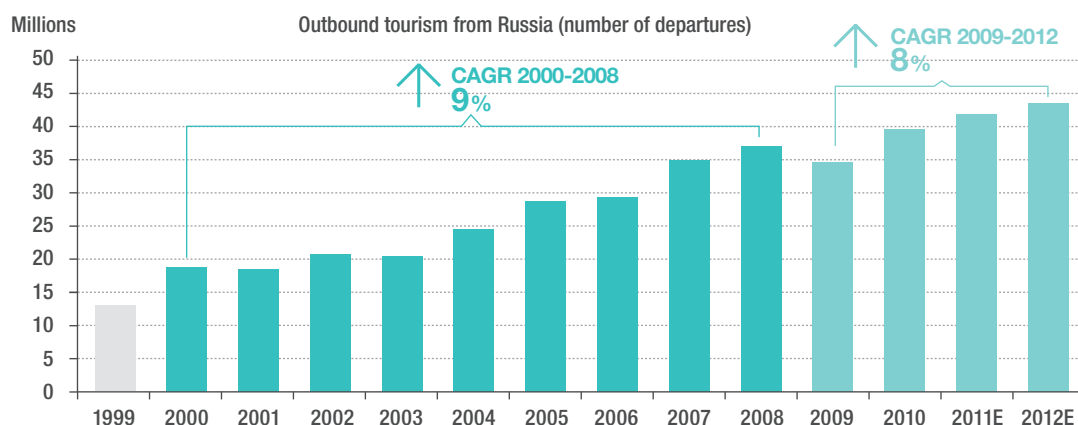


According to IHS Global Insight, this trend will continue in the long-term: Russian consumer purchasing power will be close to convergence with major advanced economies by the time the end of our forecast period in 2032 is reached. Real disposable personal income is expected to increase by 3.5% per year on average between 2012 and 2022, whilst it will remain below 1.5% per year for major advanced economies. The development of a middle-class in Russia and the rest of CIS, and their willingness to diversify their consumption basket, has helped to drive

outbound tourism. Between 2002 and 2012, the number of Russian international tourists increased at 7.9% per year on average. According to the UNWTO, this number reached almost 40 million in 2010, the main destinations being Ukraine, Turkey, Egypt, China and Kazakhstan (these five countries received more than 15 million Russian tourists). This endogenous development of tourism through the middle-class will in turn have positive impact on the Russian economy and air transport industry, thanks to the induced additional services which will be put in place.

OUTBOUND TOURISM HAS BEEN STIMULATED BY THE WEALTH EFFECT

Source: UNWTO, EIU (estimates), Airbus



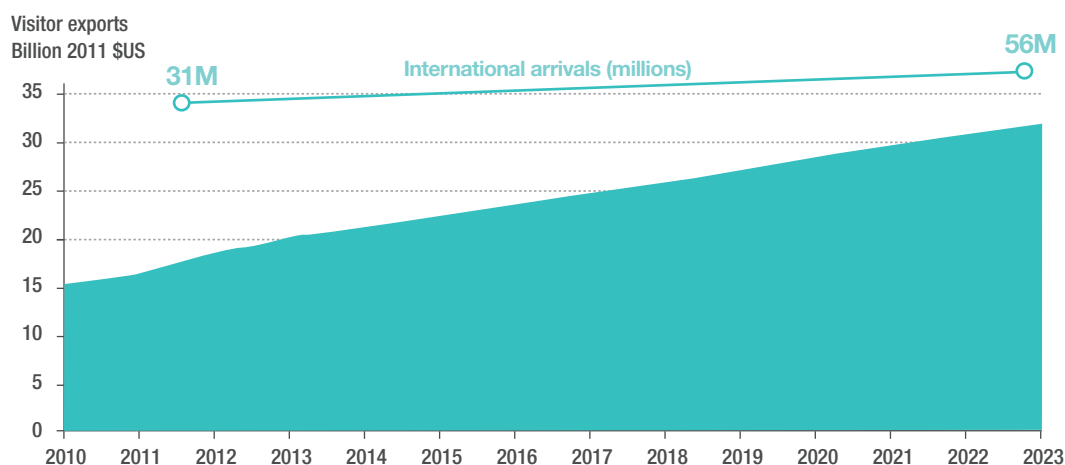
Over the same period of time, the number of international air passengers (including foreigners) with Russia as the origin or destination, increased by 13.7% per year on average, this faster than outbound tourism. This increase of the air transport markets share with respect to other modes of transportation, underlines the importance of the aviation sector in a more connected and globalised world, where mobility is key for economic development.

Inbound tourism, which was below its potential in recent years, is expected to boom in the next decade: the WTTC forecasts that international arrivals will reach 56 million in 2023, from 31 million in 2012. As a result, visitor

exports will increase by 5.1% per year on average, so that they will represent almost 4% of all Russian exports in 2023, compared to 3% in 2012. This will be achieved through a simplification of travel procedures, notably with the facilitation of visa procedures. Many policy changes have been applied during the last decade (2000–2010), but a recent study from the WTTC shows that in 2011, 28% of all tourist arrivals in Russia required visas, less than the US (36%) or South Korea (35%), but above the G20 group average (17%). The study also shows that the facilitation of visa procedures may enable the G20 group of countries to receive between 20 and 112 million additional international tourists by 2015.

INTERNATIONAL TOURISTS WILL BOOST RUSSIA'S ECONOMY: FROM 3% OF ALL EXPORTS IN 2012 TO 4% IN 2023

Source: WTTC, Airbus

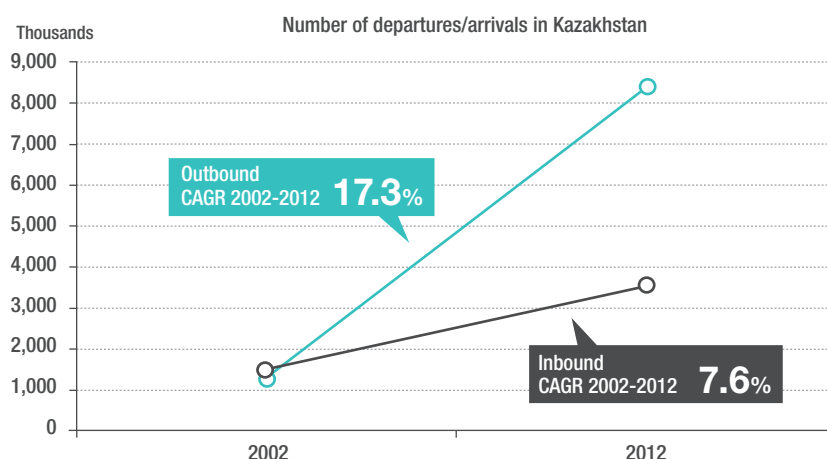


According to the UNWTO, Kazakhstan was the fastest growing country of the region for tourism in the last decade: its international attractiveness made the number of arrivals increase by 7.6% per year on average from

2002 to 2012. Over the same period, personal disposable income per capita, expressed in real 2005 \$US, increased by 9.1% per year on average, which made the number of departures increase by 17.3% per year on average.

KAZAKHSTAN WAS THE FASTEST GROWING CIS COUNTRY FOR TOURISM

Source: UNWTO, EIU (estimates), Airbus



All of the growth in middle-class and expansion of the tourism in the region will continue to stimulate the air transportation industry to/from within the region. This development coupled with the continuously increasing

economic activity in these countries and their increasing connection to other emerging markets, such as China, will stimulate growth both in lower-yield economy traffic and higher-yield business traffic.

Potential for low-cost carriers

The dynamics of the Russian and other CIS countries' middle-classes and the appeal of outbound and inbound tourism provide a strong platform for the development of LCCs in the region. In May 2013, the LCC market share reached 14% of total ASK from Russia to Middle East, 8% from Russia to Western Europe, 4% from Central/Eastern Europe to Russia. The potential for growth is significant for European and Russian carriers that have already expressed their interest in this market: the low-cost market share from Europe to Russia could eventually reach the same levels as in the intra-Europe zone (around 50% of ASK in 2013).

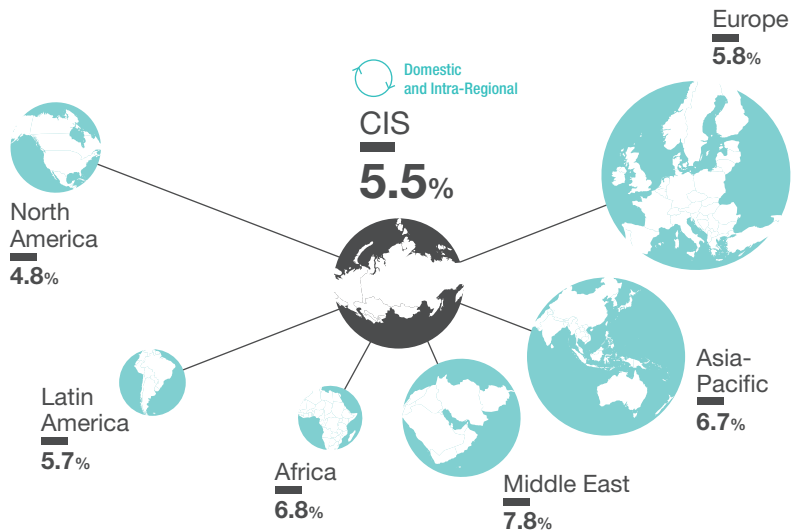
Russia will likely follow in Ukraine's steps, where LCCs are now well established on the markets to Europe, within CIS and to the Middle East. In May 2013, the LCC market share on international traffic from/to Ukraine is now more than 20% in terms of ASK. Remarkably, the LCC market share from Ukraine to Middle East reached nearly 60% in May 2013.

Development of LCC traffic to/from/within the region is expected to further stimulate traffic growth and as a result is likely to increase the demand for Single-Aisle aircraft here.

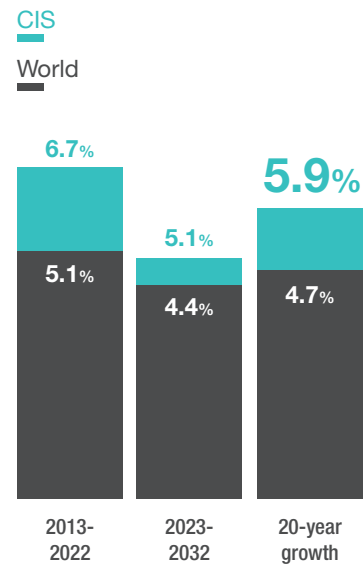
Results

RPK TRAFFIC GROWTH FROM/TO CIS BY REGION

Size of bubbles proportional to RPK volumes

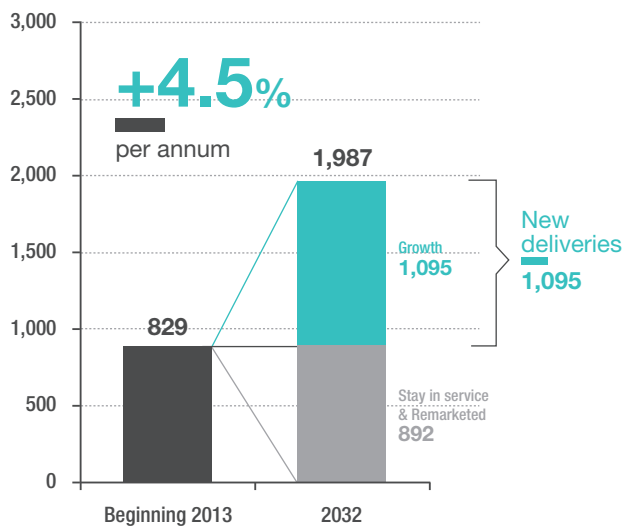


TOTAL RPK TRAFFIC GROWTH



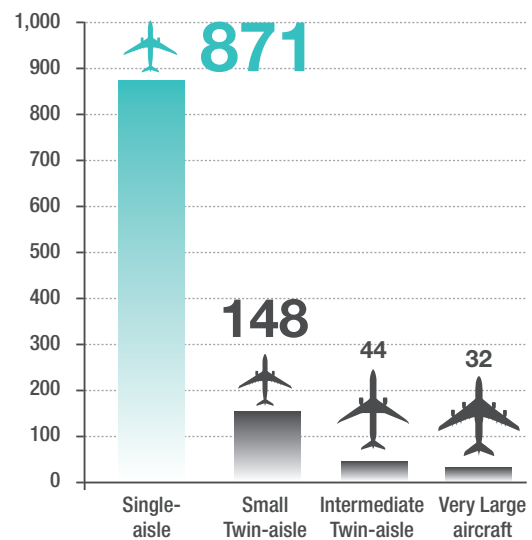
FLEET IN SERVICE EVOLUTION

Fleet size*

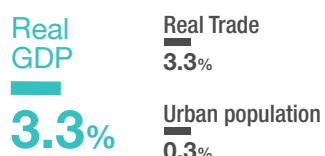


NEW DELIVERIES BY SEGMENT

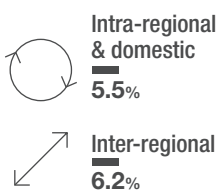
Number of new aircraft



ECONOMY**



TRAFFIC**



FLEET*



* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

Africa

AVIATION FACILITATING ECONOMIC DIVERSITY



Africa is a huge and diverse region, in terms of its people, languages, landscape, history and importantly, in the way its aviation infrastructure has developed. It has long been a region where analysts have seen a huge potential for growth in the use of aviation. After all, what better way to get to where you want to go, either travelling from outside the region or within it, with its large distances, patchy ground transportation infrastructure and at times difficult terrain. In the past, aviation had its strongest presence in northern and southern Africa. Then the west of the continent with its large population centres and its eastern region started to grow strongly. Today, the whole region is seeing positive development, as airlines both from within Africa and from outside seek to capture growing demand. New airlines are also emerging, who are adopting the low cost model seeking to further tempt Africa into achieving its aviation potential.

Africa's economic activity taking new directions, mainly up

A recent Frost & Sullivan report stated that much has changed since The Economist labelled Africa as "The Hopeless Continent" ten years ago, with the latest predictions forecasting that seven of the world's top ten fastest growing countries in 2015 will be in Africa. Long relying on its much sought after natural resources, Africa is now beginning to achieve some success in economic diversification. In numerous countries, value-added processing of agricultural commodities, light manufacturing, the retail sector, and the services sector are now the principal drivers of economic expansion. A tendency towards convergence of the GDP growth rates of oil-exporting countries and non-oil-exporting nations

is a welcome indication of this development. Primary, extractive industries typically have less employment potential and have a low economic multiplier, compared to value-added processing and the range of tertiary-sector activities that make up a consumer-based economy. In the best-managed African countries, a self-sustaining cycle of consumer-oriented economic expansion involving the growth of retail trades and skilled services is starting to take a hold. It is in this environment that aviation will have its biggest impact and benefit, not only in terms of the skilled jobs it brings itself, but by facilitating connectivity and acting in some cases as a nucleus for the business diversification that is developing.

Migration, a driver for aviation demand

Movement of people seeking to improve their economic situation and to help provide for their families is nothing new. But this demographic phenomenon is particularly strong in Africa. In a recent Gallup survey, residents of Sub-Saharan Africa remain the most likely world-wide to express a desire to migrate permanently. Sub-Saharan African residents are also the most likely

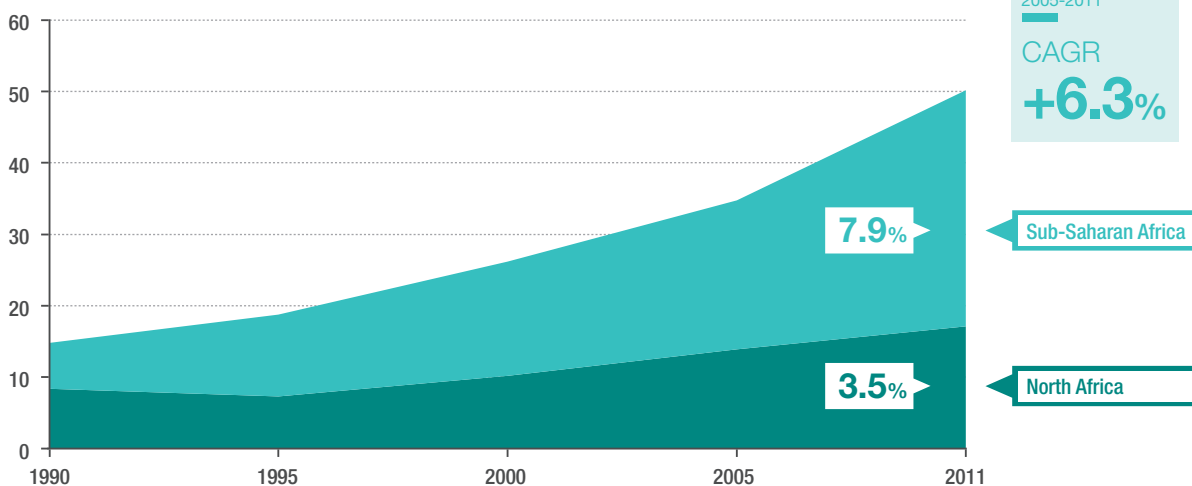
world-wide to say they would like to work temporarily in another country, with nearly half of adults across the subcontinent expressing this desire. Aviation, and its increasing accessibility, both physically and economically will no doubt aid this process, with the Visiting Friends and Relatives (VFR) component of air travel also likely to increase.

Tourism, significant growth, coming or going!

> AFRICA'S TOURISM GROWTH FASTER THAN THE AVERAGE FOR EMERGING ECONOMIES

Source: UNWTO 2012 Tourism Highlights Report, Airbus

International tourist arrivals (millions)



Tourism is another important component in the growth in air transportation in the region. Over 50% of tourists world-wide arrive by air, with international tourist arrivals in Africa growing almost five times since 1990, at an impressive rate of 6.3% per annum. Taking Sub-Saharan Africa alone, tourist arrivals have grown even more quickly at nearly 8% per year, faster than the average for all emerging countries which stood at 5% between 2005 and 2011 according to the UNWTO. World tourist arrivals grew at 3.5% per year over the

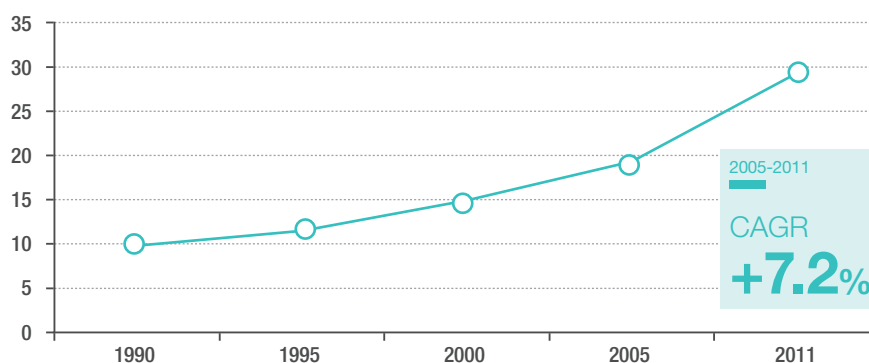
same period. Latest data shows that the resulting tourist receipts for African nations in one year totalled some \$30.4 billion (\$US).

But tourism has not been one way, with the growing wealth and middle-class in the region, tourism from Africa has also grown significantly in recent years. Over the same period, international tourist arrivals originating from Africa have reached close to 30 million people, having grown at more than 7% per year since 2005.

> INCREASING WEALTH DRIVING INCREASED TOURISM FROM AFRICA

Source: UNWTO, Airbus

International tourist arrivals originating from Africa (millions)

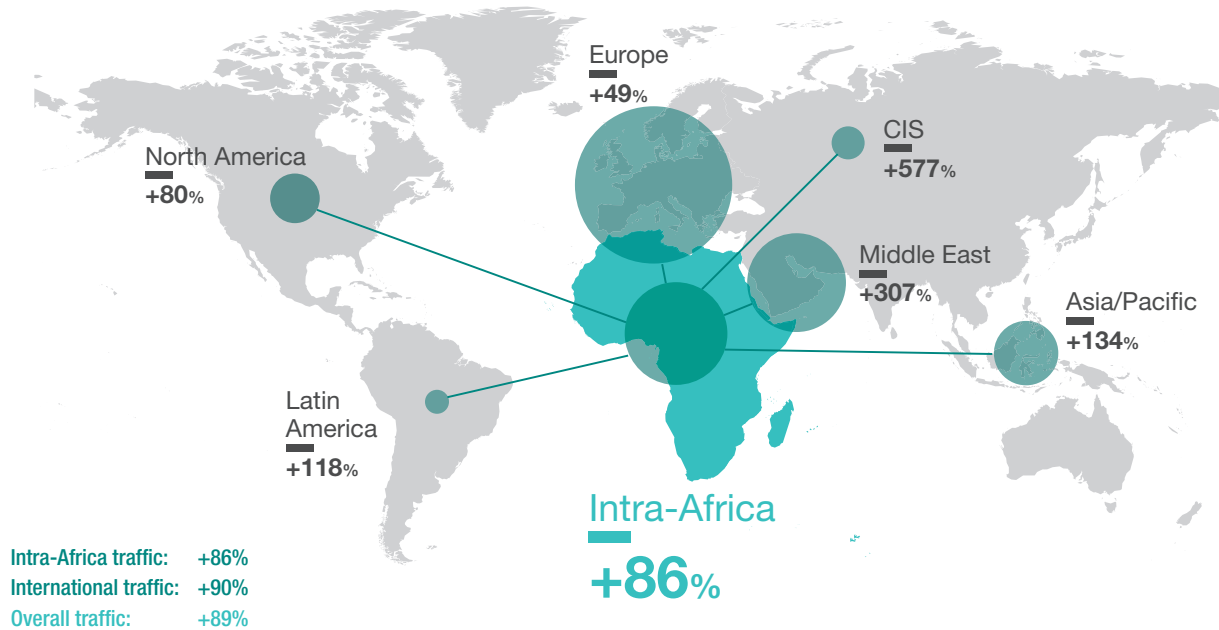


Africa's aviation developments

> 2012 TRAFFIC TO/FROM AND WITHIN AFRICA WELL ABOVE 2000 LEVELS

Source: September traffic from OAG, Airbus

Traffic to/from Africa (Available Seat Kilometers), 2012 vs. 2000



Despite the continued impediments to growth that exist in Africa, including some protectionism, high taxation on departures and fuel, and high air fares in some cases, there have been positive improvements across the region in all of these areas. Very often where this has happened, strong growth in aviation traffic has followed, a fact that will not be lost on countries where progress has been slow. A 2006 study quoted by Aviation Week found selected markets that had been opened up benefitted from increased passenger numbers. For example, the route between Nairobi and Johannesburg grew 69-fold once liberalised. In other markets, fares fell and passenger numbers went up. This is clearly not a lone example, with traffic within Africa having grown 86% over all since 2000. However, the difficulties that some new carriers faced to cut through the barriers that persist, in terms of access

and cost, shows there is still much yet to be achieved. International travel has also grown significantly since the start of the new millenium, with 90% more international traffic since 2000.

A significant portion of this is flown by airlines from outside of the region, with Africa's airlines carrying just under 40% of passenger traffic in 2012 and their share having fluctuated around 45% for much of the last two decades. However, given the level of new capacity flying to and from Africa in recent years, it shows that African airlines are both able and willing to compete with the higher levels of competition they have been facing. Today, many airlines are developing their own effective hub strategies to compete more effectively in Africa's future market.

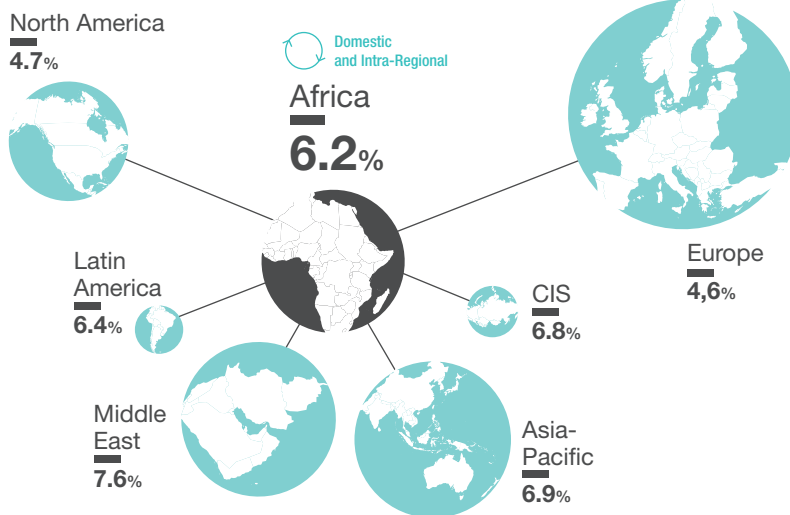
90%

More international traffic since 2000.

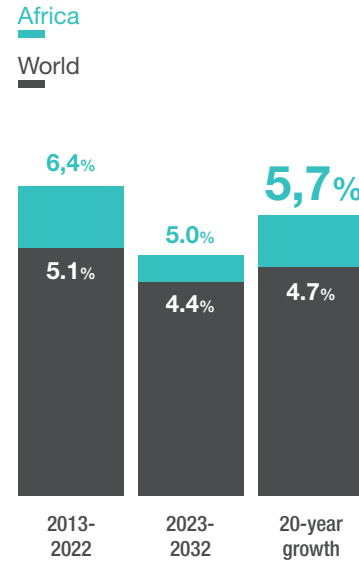
Results

RPK TRAFFIC GROWTH FROM/TO AFRICA BY REGION

Size of bubbles proportional to RPK volumes

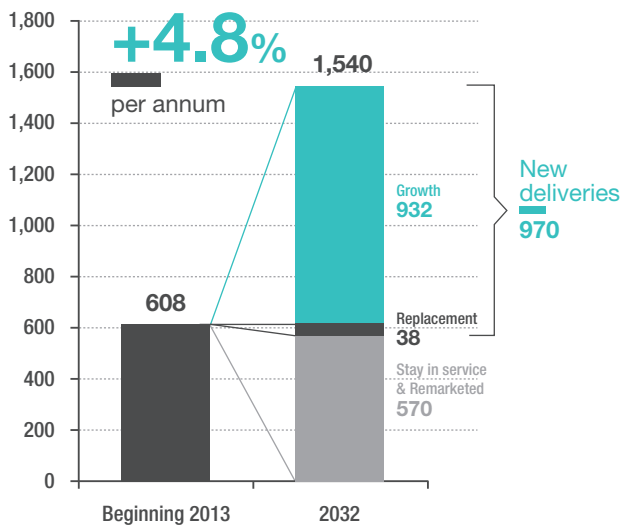


TOTAL RPK TRAFFIC GROWTH



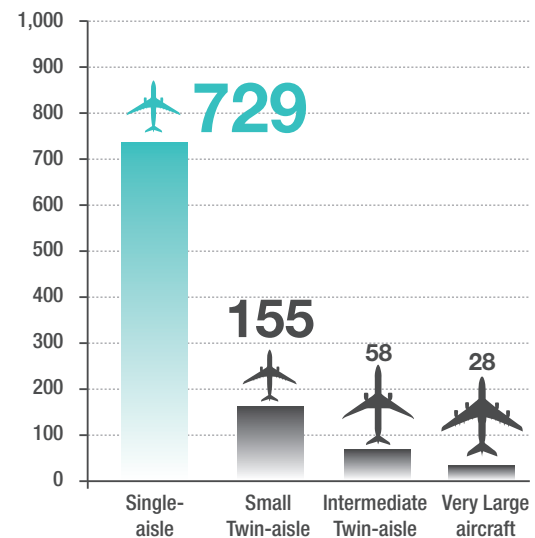
FLEET IN SERVICE EVOLUTION

Fleet size*

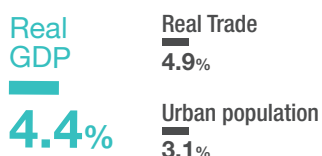


NEW DELIVERIES BY SEGMENT

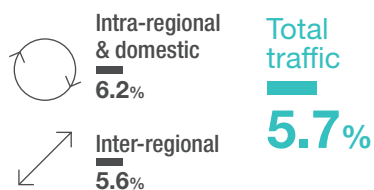
Number of new aircraft



ECONOMY**



TRAFFIC**



FLEET*



* Passenger aircraft ≥100 seats

** 2013-2032 CAGR

06

Demand for freighters _





There is no disguising that recent years have been very difficult for the freight industry. On a world-wide basis, freight traffic has stagnated for the last three years. The financial crisis has had a direct impact on people's willingness to spend and on international trade growth. In total, world trade has grown at just 2% in recent years with that growth largely driven by emerging economies. The mature markets, especially Europe, have been the most negatively impacted by on-going debt issues and as mature markets have been the biggest consumers of high value products (which tend to use air freight) this has had an increasingly important knock on effect on air freight. However, air transportation, with 30% of its value, is still hugely important to world trade.

These issues have caused many to question whether or not there has been a significant long-term shift away from air freight to other modes. However there are positive signs. The world economy is showing improvement, and as discussed in the economy chapter, many of the risks we were monitoring last year, whilst not gone completely, have become less of a concern. This is why Airbus has the view that growth will return to the air freight industry over the next year.

Customers still value the speed, reliability and quality of air transportation. Even with some on-going trends that we are monitoring in modal shift and near-sourcing, we believe that industry will continue to value these unique aspects of air freight. According to the data provided by Seabury, we see no clear trend indicating a modal shift. In fact, the split in terms of weight carried by aircraft vs shipping (after removing bulk commodities, such as oil and grains) has remained stable with around 1% of total weight carried by aircraft. In terms of near-sourcing, it is too early to say definitively how much of an impact this will have on traffic, but what is visible today, is that large multi-national corporations will continue to strive to optimise their supply chain and manufacturing costs based on global and regional trends.

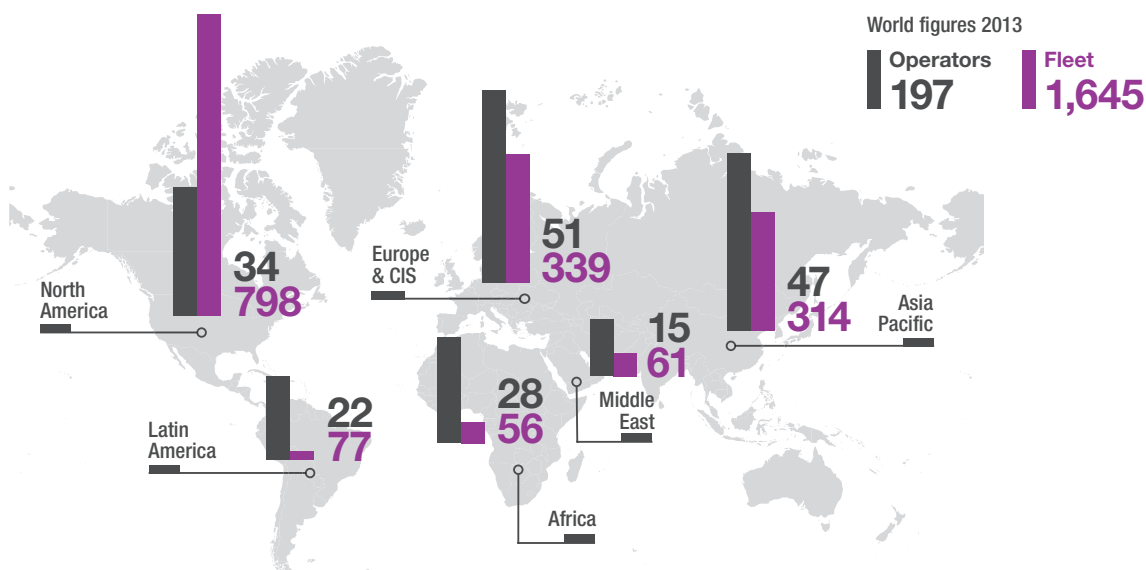
Freighter fleet today

During the last five years, the total number of freighters has changed little, remaining between 1,600 and 1,700 units. Today, North America represents 49% of the world's main deck freighter fleet followed by Asia-Pacific at 19% and Europe at 17%. Together, these three regions represent 85% of the fleet. High fuel prices and the persistent crisis in the air freight market, has triggered the early retirement of older freighter types such as the 747 classics and DC10F aircraft. In most cases these

freighters were replaced by more fuel efficient aircraft in a bid to drive down unit costs. Moreover, in some markets heavily affected by overcapacity issues, a number of large freighters have been parked in order to try and increase yields that are continuously driven down by a negative relationship between capacity and demand. For example, at time of writing, 33 large Asian freighters were parked compared to 17 just before the crisis with similar demand.

AIR FREIGHT INDUSTRY IN 2013

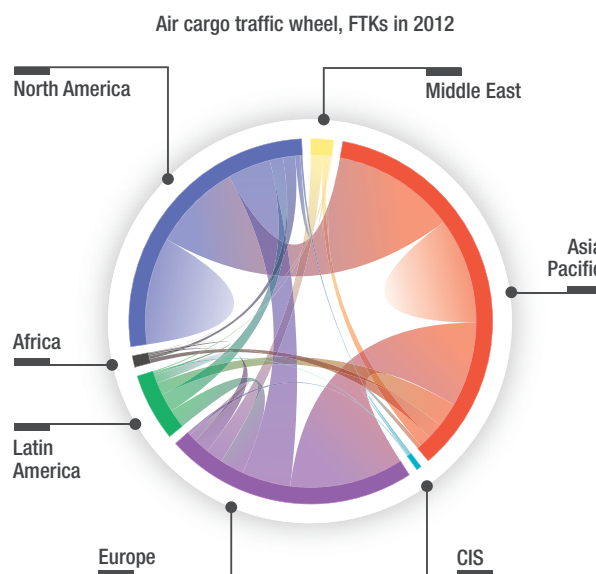
Source: ASCEND, Airbus



Traffic today

Even during this difficult period, air freight remains key in the supply chain of almost every industry in the world. The speed and reliability offered by main deck freighters services has a positive impact on the effectiveness and efficiency of high tech industries for example, who rely heavily on air cargo. Pharmaceutical businesses use temperature controlled containers to transport sensitive bio-chemicals and drugs by air. Flowers, cars parts, machinery, horses, fruits, mail are all commodities where air transportation is the only viable option. In 2012, world traffic in FTKs decreased 3% year on year, with the shift towards emerging economies continuing. Today, 70% of air freight traffic is with or between emerging countries, compared to just 64% 10 years ago.

NORTH AMERICA, ASIA-PACIFIC AND EUROPE COMBINED REPRESENTS 81% OF THE AIR CARGO TRAFFIC



Freight growth drivers

On top of the drivers from the airline and freight forwarders, there are a number of general economic trends that have a very large impact on the freight industry, namely:

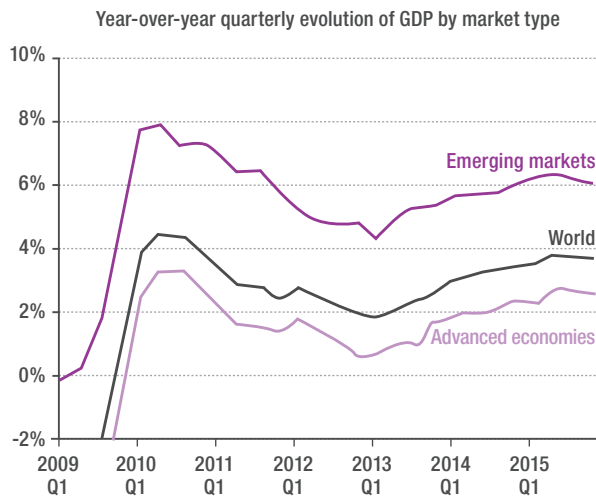
- Economic activity, expressed in GDP
- World trade flows, combined imports and exports
- Private consumption
- Industrial production

Each one of these factors, though inherently connected in the global economy, play a key role in the freight market.

World trade has continued to struggle since the depth of the crisis in 2009 when it was down 11% from 2008. In 2010 and 2011, emerging markets reacted quickly with trade rebounding to 27% above pre-crisis levels. But, trade is still depressed with IHS Global Insight forecasting improvements in the short to medium term. Over the 20 year period, trade is expected to grow at 3.8% per year with the recovery in 2014 expected to positively drive the freight industry to an improved result.

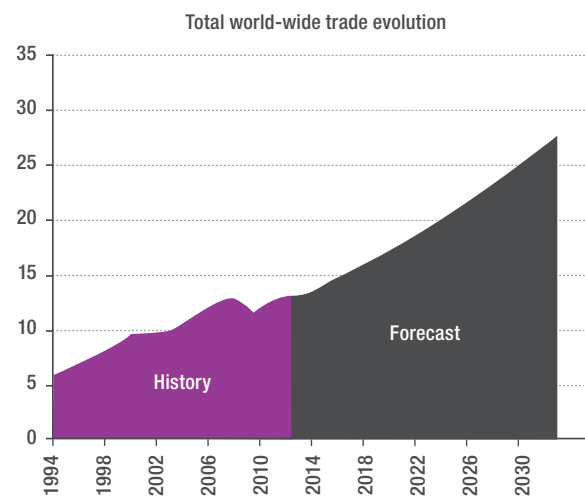
WORLD-WIDE ECONOMIC GROWTH IS EXPECTED TO STRENGTHEN THROUGH 2013

Source: IHS Global Insight, Airbus



WORLD-WIDE TRADE VOLUMES ARE EXPECTED TO MORE THAN DOUBLE IN THE NEXT 20 YEARS

Source: IHS Global Insight, Airbus



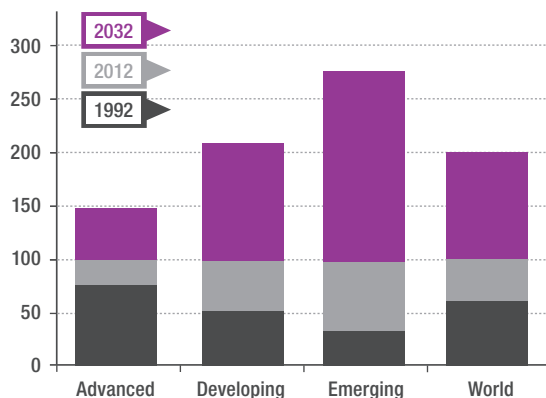
Outside of the key general economic trends driving the freight industry, there are two more economic indicators that have a key impact on freight volumes: industrial production and private consumption. The topics discussed in the earlier economic section of two speed worlds are even more apparent in these two indicators. Over the last 20 years, industrial production in emerging markets more than tripled, whilst at the same time,

industrial production in advanced markets grew by only 30%. Over the next 20 years, advanced markets will grow by nearly 50% and emerging markets will grow by nearly 180%. All of this growth in production is expected to spur the air freight market into further growth. On the opposite side of the market, private consumption is expected to return to substantial growth by Q4 2013, positively driving air freight growth.

INDUSTRIAL PRODUCTION BY MARKET

Source: IHS Global Insight, Airbus

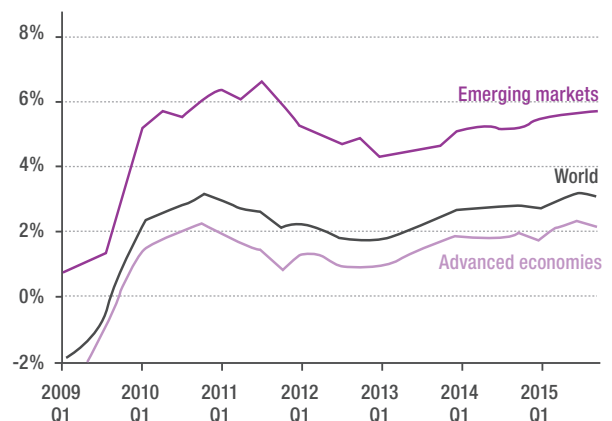
Industrial Production by market (base year 2012 = 100)



PRIVATE CONSUMPTION

Source: IHS Global Insight, Airbus

Quarter-over-quarter evolution (%)



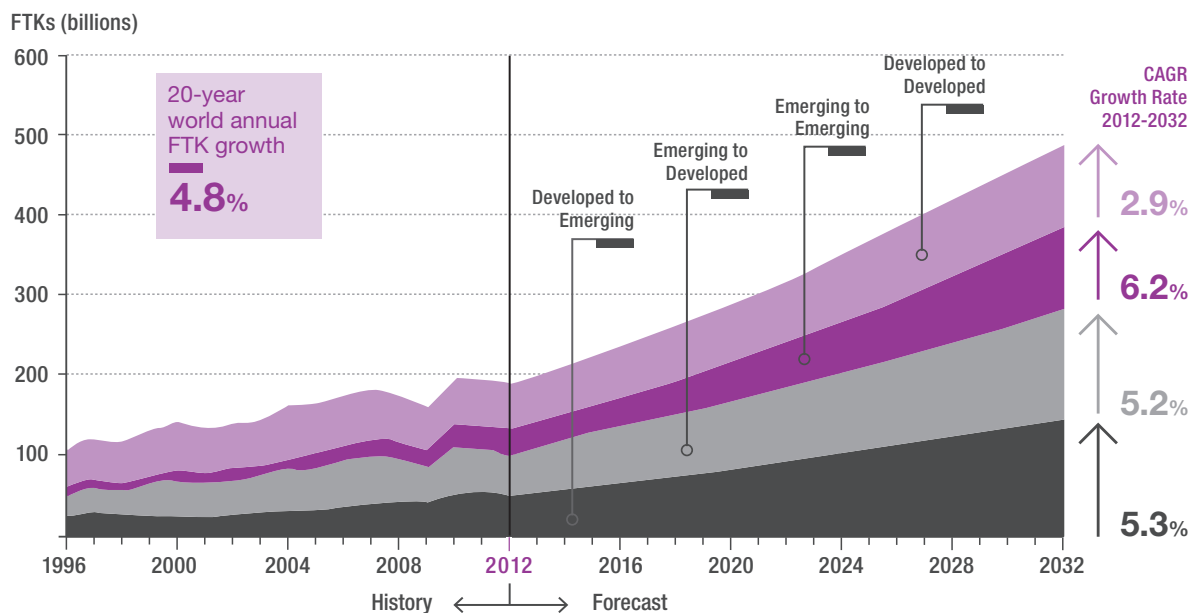
Focus on freight traffic growth

Based on the econometric variables previously described and many others, Airbus forecasts an annual CAGR of 4.8% per year for the next 20-years. Today, Asia-Pacific, including PRC and the Indian Sub-continent, represent the largest share of world traffic, 36% overall. These are followed by Europe & CIS and North America which jointly represent 51% of world-wide traffic. Unsurprisingly, PRC

is one of the largest drivers of international air freight traffic and will represent 22% of the global market by 2032, up from 15% today. Overall, traffic will be the fastest growing between emerging regions and the slowest between mature regions. Between mature and emerging regions, goods flowing from mature to emerging will grow at a slightly faster growth than the reverse flow.

FASTEST GROWTH FROM TRAFFIC BETWEEN AND WITHIN EMERGING REGIONS

Source: IATA, Seabury, US DOT, CAAC, Airbus



Belly capacity versus main deck

Belly capacity is increasing due to new Twin-Aisle aircraft which are more cargo capable. The A350-900XWB for example will be able to transport 20 tonnes of revenue cargo over 5000nm. Belly cargo is viewed as a complementary and opportunistic source of revenue for passenger operations. However, belly cargo will not completely replace dedicated freighter operations. This is because dedicated freighters offer reliability and quality of service not matched by belly freight operations, mainly because freight operations are secondary to the passenger business in some airlines. Also on some routes, demand for air cargo transportation far exceeds belly capacity: for example belly space alone is far from

being able to cope with the demand between the PRC and North America. In addition even if the belly capacity exists, some airlines won't use it because it would add in the complexity of their operations, slowing turnaround times for example. Moreover a specific department (sales/logistic) would have to be created adding surplus costs. According to US Department of Transportation data, the average load factors of revenue cargo transported in the belly of Twin-Aisle aircraft departing or arriving to the US does not exceed 30%. Some airlines are using more intensively their belly space, while others do not transport cargo in their passenger aircraft.

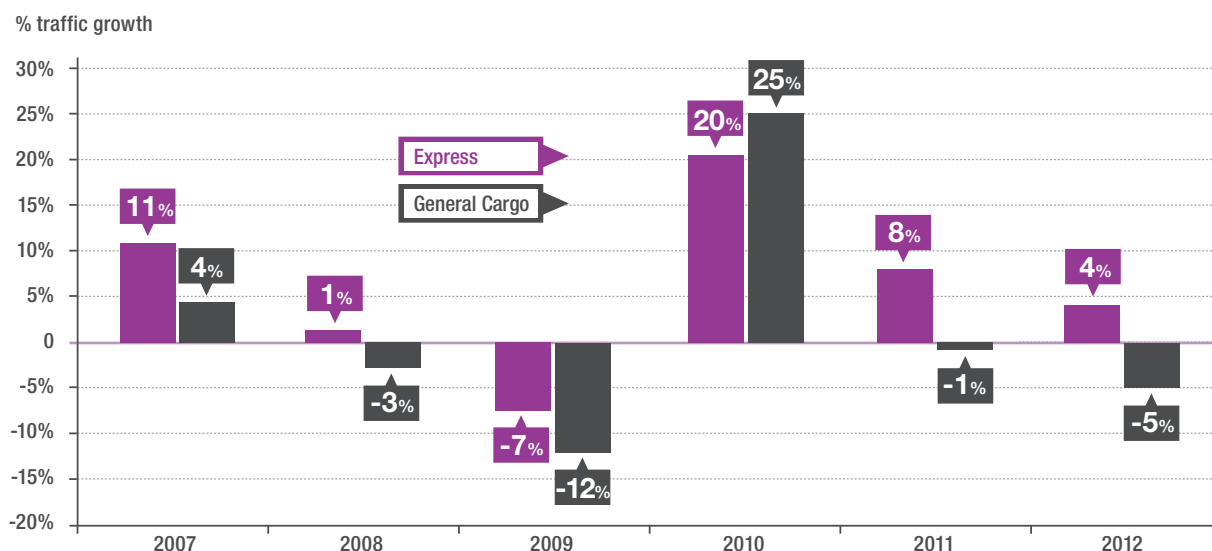
Express

In a world where time equals money, the express business model has been a great success, since it was first introduced in the US in the early 1970s, enjoying double digit growth in the US domestic market for more than two decades. Forty years later, it continues to go from strength to strength, even when other parts of the

freight business are suffering due to the recent economic situation and enlarging its market share versus general cargo. Next day delivery service has value for both end consumers wanting the product they have just acquired as quickly as possible and for industries to keep their supply chains as lean as possible.

EXPRESS MARKET HAS PROVED MORE RESILIENT TO THE CRISIS

Source: Seabury, Airbus



To satisfy an ever increasing demand for their services, integrators have rationalised their fleets in order to optimally organise their networks using small freighters as feeders or on thin routes, mid-size aircraft for their intra-regional routes and large freighters to transport packages between intercontinental hubs and some few large long-haul destinations. Today's integrator fleet comprises 96 small freighters, 459 mid-size freighters and 145 large freighters. Express services have proven resilient even during the on-going crisis with a 4% growth in 2012, while international general cargo traffic has decreased by 5%, according to Seabury data.

This said, the crisis has obliged the main integrators to review their strategies. One example is a greater focus on the emerging economies. The biggest potential for express business in the future is, without any doubt, China. Although it is difficult to get a clear picture on what quantity of the cargo carried domestically in China is express cargo, from the values provided by CAAC, express is rapidly taking a large share of the growth in the market. This trend is also visible in the carriers themselves, with foreign integrators investing in the region and a corresponding increase in investment by Chinese carriers.

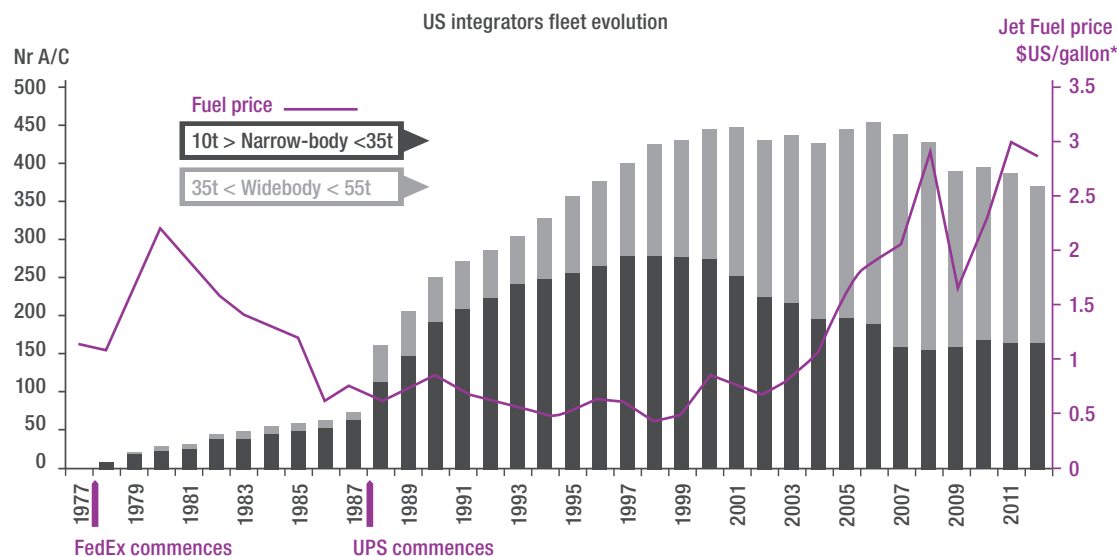
Fleet evolution

High fuel prices and the crisis are accelerating the retirement of old freighters which are being replaced by more fuel efficient aircraft. To stay profitable in a tough period where demand is weak, carriers are trying to reduce their costs by all means possible. In addition to modernising their fleets, airlines are striving to reduce their unit costs by replacing narrow-body aircraft with mid-sized aircraft and rationalising their networks, especially in more mature markets. One of the best examples is the domestic US fleet, where small wide-bodies are replacing the old fleet of 727s and DC9s. On the inter-regional and long-haul markets, range becomes one of the main criteria

when it comes to selecting an aircraft for a network. When long distances and big demand meet, such as on the Asia – North America route, big wide-bodies are often the chosen aircraft, combining range and impressive tonnage capabilities over 90 tonnes. On shorter routes, carriers try to optimise networks and adapt the correct size of aircraft to the demand they have to satisfy. Thanks to a higher flexibility and good adaptation to the market demand requirements, mid-size aircraft are often the choice on a large number of inter or intra-regional routes. Under 3000nm, 61% of the wide body operations are performed by medium-size wide-bodies more suited to these markets.

THE INTEGRATORS FLEET FOR DOMESTIC PURPOSES IN THE US IS SHIFTING FOR BIGGER AND MORE FUEL EFFICIENT MODULES

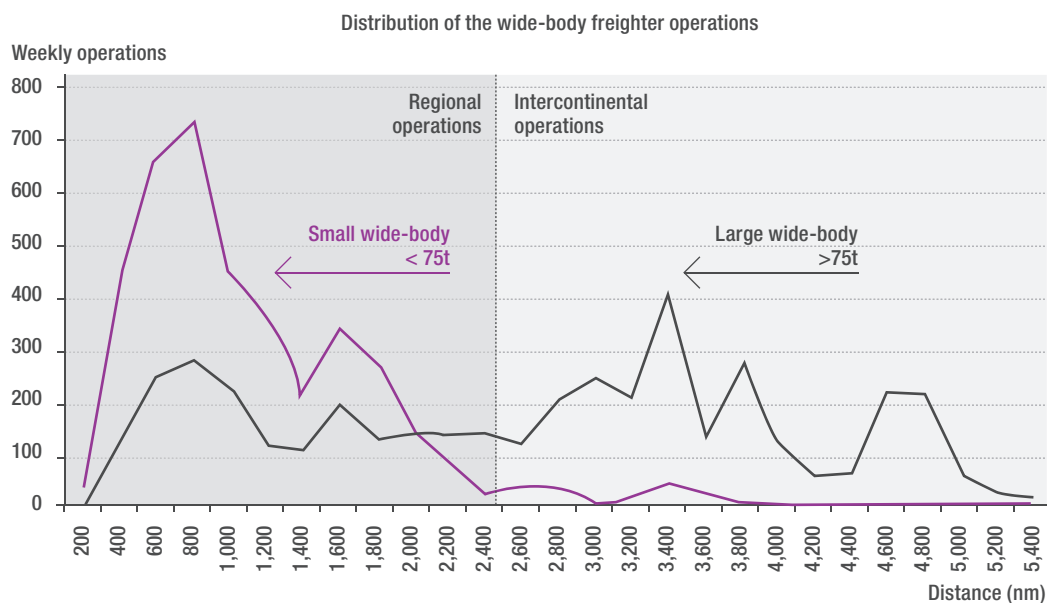
Source: ASCEND, Airbus



* Real price

~ 8500 WEEKLY SCHEDULED OPERATIONS ARE PERFORMED BY WIDE-BODY FREIGHTERS

Source: OAG, Innovata, DoT, Airbus



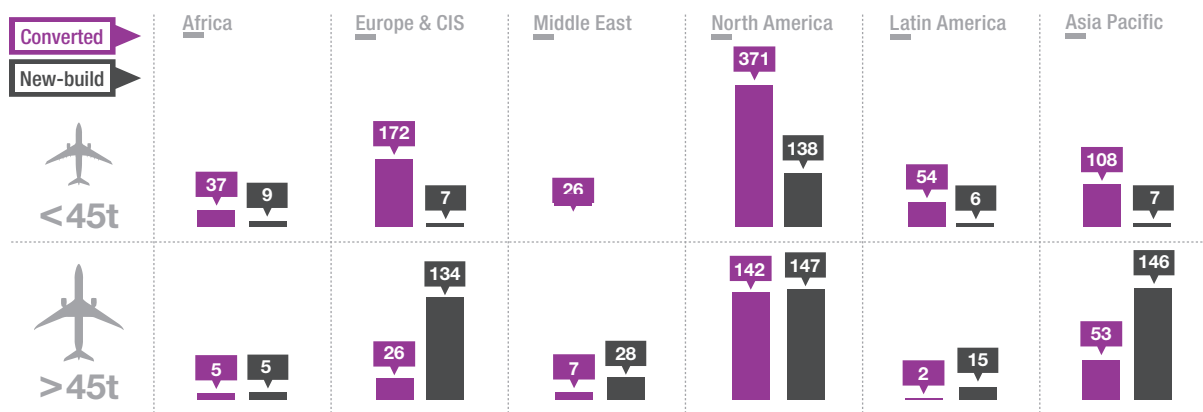
It is not a surprise that the cargo market is considered a very opportunistic business. Routes operated by carriers frequently change to accommodate evolving demand. New factory equipment in Kenya can generate extra operations; a drought in North America will stimulate the demand for fruit and vegetables from Latin America, etc.

This has direct consequences on the type of aircraft a carrier will choose. While new-build aircraft are directed to scheduled operations on traffic intensive routes to take full advantage of their fuel efficiency and their reliability, smaller markets subject to big seasonal effects will favour

low capital converted aircraft adapted to lower utilisation rates. Over the next 20 years, the air cargo industry will require over 1,800 converted aircraft and over 870 new-build freighters. Africa, Latin America, Europe and North America are the regions with the highest percentage of their fleet that are converted aircraft. CIS is at the other end of the spectrum, with only 18% of their fleet converted freighters, this due to the large number of Ilyushin purpose-built freighters in the region. Due to the on-going difficult situation in the air freight industry and the sustained high price of fuel a decline in the number of conversions has resulted in recent years.

> FLEET IN SERVICE IN 2013: CONVERSION VS NEW-BUILD. 39% OF THE FREIGHTERS ARE NEW-BUILD AIRCRAFT

Source: ASCEND, Airbus



A focus on...

SMALL FREIGHTERS

Small freighters have a broad spectrum of utilisation thanks to their versatility and flexibility. Carriers operate them to transport commodities over geographically difficult terrain such as mountains, forests or between islands where surface modes are inefficient or impractical. Today, their main activity is to serve as feeders for integrators. Thanks to the huge development of the express business, small freighters capable of transporting between 10 and 20 tonnes have replaced the smaller Dassault Falcon 20s used at the start of the express service business. The expected boom of the express services in emerging countries like China, India and at a lower scale Brazil, will boost the number of small freighters from 380 today to over 600 in 2032.

MID-SIZE FREIGHTERS

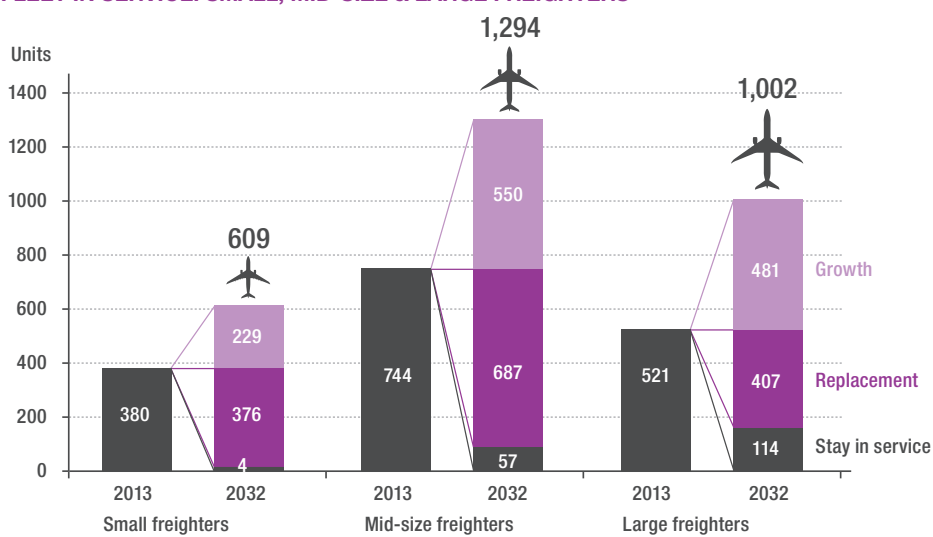
Mid-size freighters, such as the A330-200F, are the perfect aircraft to accommodate demand on regional routes where the demand is big enough to require a capable aircraft but where the capacity of a large aircraft is inherently higher risk. General carriers often adopt this solution to minimize the

risk while maximizing the revenue that they can generate when operating in intra-regional markets. These markets are expected to experience very high growth rates in the emerging regions. For example, the traffic within the Asian region is expected to grow at 6.1% over the next 20 years boosting the demand for regional freighters. Mid-size freighters are also used by integrators who need all capacities and capabilities of freight aircraft to optimise their hub system. This segment is expected to grow significantly to 1,294 units by 2032, up from 744 units in 2012.

LARGE FREIGHTERS

Due to the combination of high market demand and range capability, large freighters are the only freighter type operating on trans-Pacific routes. They are also the most popular freighters category on the US-Europe flow representing 10% of the world traffic, just behind the belly space of passenger aircraft. The segments growth is mainly driven by the high density trade lanes forming the tripod Asia, Europe and North America, which require bigger aircraft to accommodate the demand. It is forecast that the fleet of large aircraft will nearly double in the next 20 years.

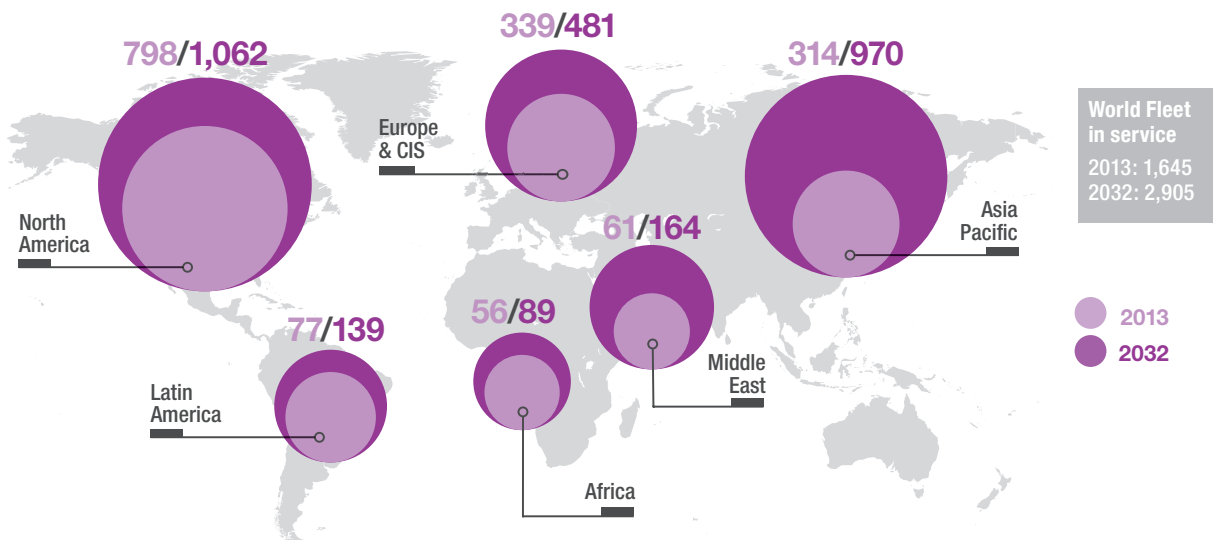
> FLEET IN SERVICE: SMALL, MID-SIZE & LARGE FREIGHTERS



Results

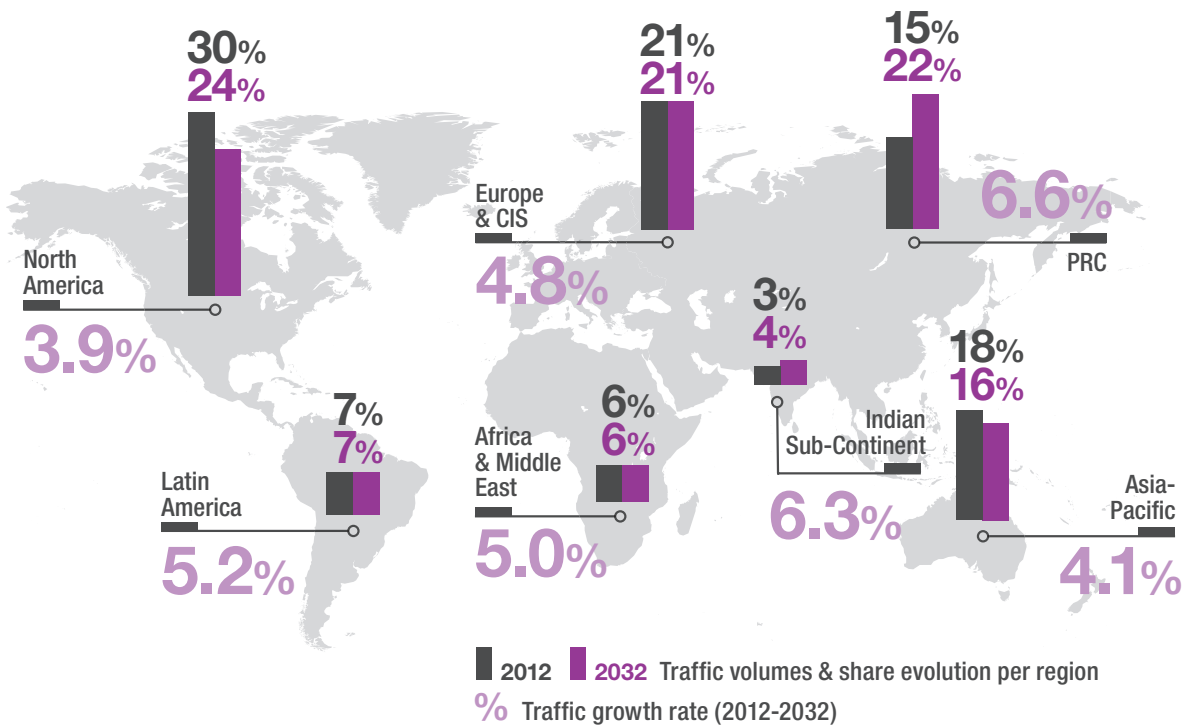
> FREIGHTERS FLEET IN SERVICE EVOLUTION (2013-2032)

Source: ASCEND, Airbus

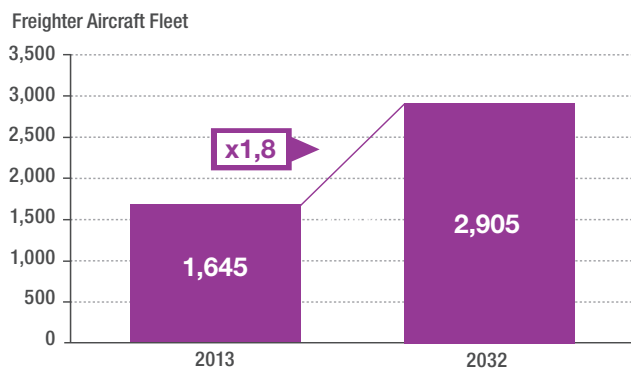


> THE CARGO MARKET CENTRE OF GRAVITY IS SLOWLY BUT CONSTANTLY MOVING TOWARD THE EAST

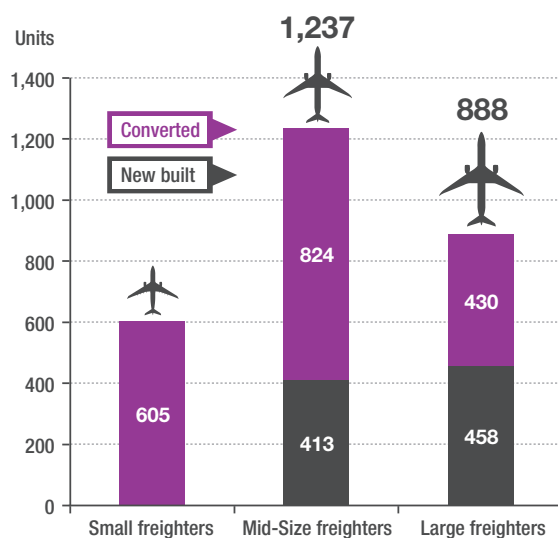
Source: Airbus



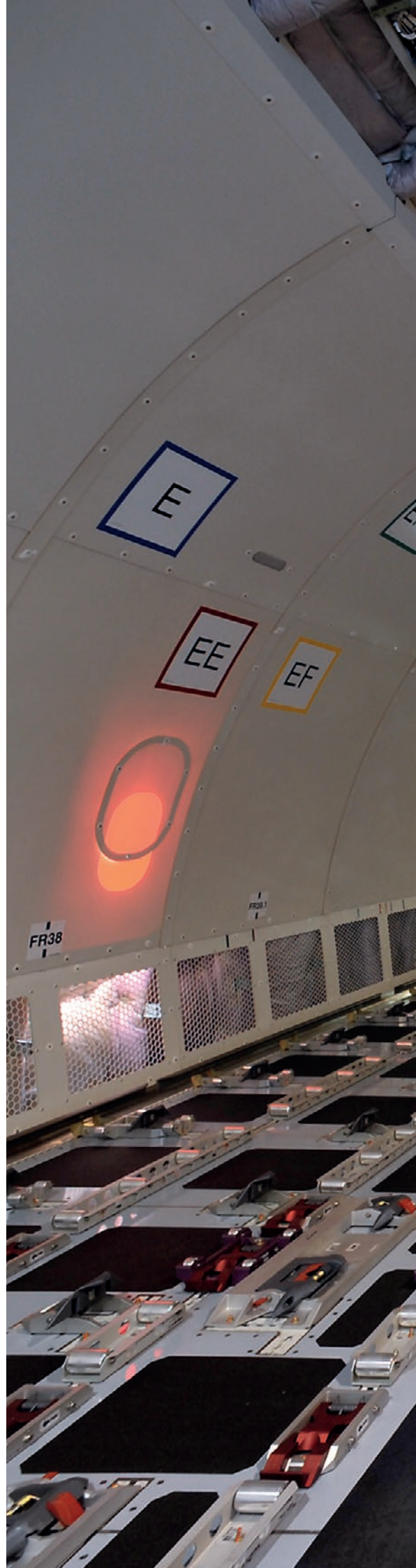
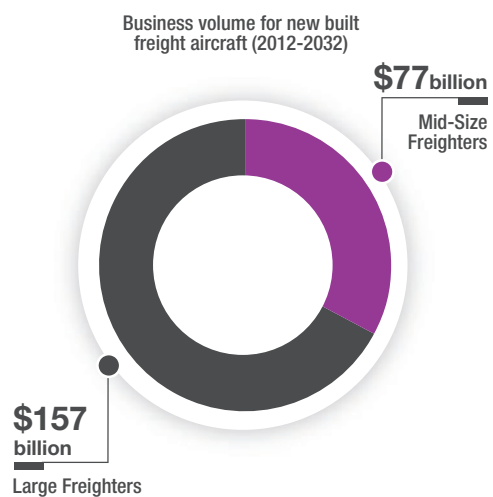
➤ **FREIGHTER FLEET TO NEARLY DOUBLE OVER THE NEXT 20 YEARS**



➤ **OVER 870 NEW-BUILD AIRCRAFT WILL BE REQUIRED DURING THE NEXT TWO DECADES**



➤ **THE BUSINESS VOLUME FOR NEW-BUILD FREIGHT AIRCRAFT WILL REACH \$234 BILLION OVER THE NEXT 20 YEARS**





07

Summary & methodology



Summary of results

Passenger Traffic Flow

Passenger Traffic Flow	CAGR 2013-2032	Passenger Traffic Flow	CAGR 2013-2032
Asia - Australia/NZ	4.7%	Canada - Western Europe	3.7%
Asia - Canada	4.4%	Caribbean - Central America	5.2%
Asia - Caribbean	4.0%	Caribbean - Central Europe	3.1%
Asia - Central America	4.6%	Caribbean - CIS	4.3%
Asia - Central Europe	5.6%	Caribbean - Indian Sub Continent	4.8%
Asia - CIS	6.3%	Caribbean - Japan	2.2%
Asia - Indian Sub Continent	8.7%	Caribbean - Middle East	4.7%
Asia - Japan	2.7%	Caribbean - North Africa	4.4%
Asia - Middle East	8.0%	Caribbean - Pacific	2.3%
Asia - North Africa	7.4%	Caribbean - PRC	5.4%
Asia - Pacific	5.1%	Caribbean - Russia	6.1%
Asia - PRC	6.2%	Caribbean - South Africa	4.0%
Asia - Russia	6.4%	Caribbean - South America	5.4%
Asia - South Africa	6.8%	Caribbean - United States	2.4%
Asia - South America	7.1%	Caribbean - Western Europe	3.5%
Asia - United States	4.2%	Central America - Central Europe	3.6%
Asia - Western Europe	4.3%	Central America - CIS	4.7%
Australia/NZ - Canada	4.0%	Central America - Indian Sub Continent	6.3%
Australia/NZ - Caribbean	4.0%	Central America - Japan	4.3%
Australia/NZ - Central America	4.3%	Central America - Middle East	4.3%
Australia/NZ - Central Europe	5.1%	Central America - North Africa	4.8%
Australia/NZ - CIS	6.0%	Central America - Pacific	2.5%
Australia/NZ - Indian Sub Continent	5.0%	Central America - PRC	6.3%
Australia/NZ - Japan	3.3%	Central America - Russia	5.2%
Australia/NZ - Middle East	5.8%	Central America - South Africa	5.4%
Australia/NZ - North Africa	4.6%	Central America - South America	7.5%
Australia/NZ - Pacific	4.8%	Central America - United States	5.4%
Australia/NZ - PRC	6.0%	Central America - Western Europe	4.1%
Australia/NZ - Russia	5.6%	Central Europe - Indian Sub Continent	6.0%
Australia/NZ - South Africa	5.5%	Central Europe - Japan	3.7%
Australia/NZ - South America	6.2%	Central Europe - Middle East	8.3%
Australia/NZ - United States	3.7%	Central Europe - North Africa	4.7%
Australia/NZ - Western Europe	4.3%	Central Europe - Pacific	3.3%
Canada - Caribbean	6.0%	Central Europe - PRC	6.5%
Canada - Central America	6.1%	Central Europe - Russia	6.5%
Canada - Central Europe	3.9%	Central Europe - South Africa	6.0%
Canada - CIS	4.5%	Central Europe - South America	5.4%
Canada - Indian Sub Continent	6.4%	Central Europe - United States	4.2%
Canada - Japan	2.6%	Central Europe - Western Europe	5.9%
Canada - Middle East	5.6%	CIS - Central Europe	5.7%
Canada - North Africa	4.6%	CIS - Indian Sub Continent	4.4%
Canada - Pacific	3.3%	CIS - Japan	5.1%
Canada - PRC	6.2%	CIS - Middle East	7.2%
Canada - Russia	4.0%	CIS - North Africa	6.5%
Canada - South Africa	4.6%	CIS - Pacific	6.8%
Canada - South America	5.9%	CIS - PRC	7.7%
Canada - United States	2.2%	CIS - Russia	6.3%

Passenger Traffic Flow

CAGR 2013-2032

CIS - South Africa	6.8%
CIS - South America	5.3%
CIS - United States	4.7%
CIS - Western Europe	5.8%
Domestic Asia	5.7%
Domestic Australia/NZ	3.1%
Domestic Brazil	7.0%
Domestic Canada	2.3%
Domestic Caribbean	1.3%
Domestic Central America	5.7%
Domestic Central Europe	3.5%
Domestic CIS	5.4%
Domestic India	9.8%
Domestic Indian Sub Continent	3.3%
Domestic Japan	1.7%
Domestic Mexico	5.0%
Domestic Middle East	3.2%
Domestic North Africa	5.2%
Domestic Pacific	4.4%
Domestic PRC	7.0%
Domestic Russia	5.1%
Domestic South Africa	5.0%
Domestic South America	5.8%
Domestic Sub Saharan Africa	6.6%
Domestic Turkey	6.8%
Domestic United States	1.9%
Domestic Western Europe	2.1%
Indian Sub Continent - Japan	5.6%
Indian Sub Continent - Middle East	6.1%
Indian Sub Continent - North Africa	6.2%
Indian Sub Continent - Pacific	6.2%
Indian Sub Continent - PRC	9.1%
Indian Sub Continent - Russia	6.8%
Indian Sub Continent - South Africa	7.5%
Indian Sub Continent - South America	9.6%
Indian Sub Continent - United States	6.6%
Intra Asia	6.1%
Intra Australia/NZ	3.2%
Intra Caribbean	1.3%
Intra Central America	5.2%
Intra Central Europe	5.0%
Intra CIS	6.1%
Intra Indian Sub Continent	6.5%
Intra Middle East	5.5%
Intra North Africa	5.5%
Intra Pacific	2.3%
Intra South America	5.4%
Intra Sub Saharan Africa	7.2%
Intra Western Europe	2.9%
Japan - Middle East	7.5%
Japan - North Africa	6.8%
Japan - Pacific	2.9%
Japan - PRC	5.7%
Japan - Russia	4.2%
Japan - South Africa	6.6%
Japan - South America	5.3%
Japan - United States	3.0%

Passenger Traffic Flow

CAGR 2013-2032

Mexico - United States	4.2%
Middle East - North Africa	6.3%
Middle East - Pacific	6.6%
Middle East - PRC	7.7%
Middle East - Russia	8.5%
Middle East - South Africa	8.5%
Middle East - South America	8.9%
Middle East - United States	6.7%
North Africa - Pacific	6.8%
North Africa - PRC	8.0%
North Africa - Russia	6.7%
North Africa - South Africa	7.5%
North Africa - South America	5.4%
North Africa - United States	5.0%
Pacific - PRC	6.2%
Pacific - Russia	5.7%
Pacific - South Africa	6.1%
Pacific - South America	5.5%
Pacific - United States	2.3%
PRC - Russia	7.7%
PRC - South Africa	6.4%
PRC - South America	7.2%
PRC - United States	6.5%
Russia - South Africa	6.4%
Russia - South America	5.7%
Russia - United States	5.1%
South Africa - South America	6.7%
South Africa - United States	4.9%
South America - United States	5.3%
Sub Saharan Africa - Asia	6.9%
Sub Saharan Africa - Australia/NZ	4.9%
Sub Saharan Africa - Canada	4.3%
Sub Saharan Africa - Caribbean	5.4%
Sub Saharan Africa - Central America	4.9%
Sub Saharan Africa - Central Europe	5.9%
Sub Saharan Africa - CIS	7.5%
Sub Saharan Africa - Indian Sub Continent	6.9%
Sub Saharan Africa - Japan	7.8%
Sub Saharan Africa - Middle East	8.9%
Sub Saharan Africa - North Africa	7.0%
Sub Saharan Africa - Pacific	4.5%
Sub Saharan Africa - PRC	7.1%
Sub Saharan Africa - Russia	7.1%
Sub Saharan Africa - South Africa	6.0%
Sub Saharan Africa - South America	7.1%
Sub Saharan Africa - United States	4.7%
Sub Saharan Africa - Western Europe	4.5%
Western Europe - Indian Sub Continent	5.2%
Western Europe - Japan	2.8%
Western Europe - Middle East	4.8%
Western Europe - North Africa	4.5%
Western Europe - Pacific	3.1%
Western Europe - PRC	5.7%
Western Europe - Russia	5.6%
Western Europe - South Africa	4.9%
Western Europe - South America	4.8%
Western Europe - United States	3.0%

Freight Traffic Flow

Freight Traffic Flow	CAGR 2013-2032
Africa to Asia	4.9%
Africa to Central America	5.7%
Africa to CIS	6.1%
Africa to Europe	4.7%
Africa to Indian Sub Continent	7.2%
Africa to Japan	2.2%
Africa to Middle East	5.3%
Africa to North America	4.8%
Africa to Pacific	4.4%
Africa to PRC	6.9%
Africa to South America	4.2%
Asia to Africa	5.3%
Asia to Central America	5.7%
Asia to CIS	5.6%
Asia to Europe	3.9%
Asia to Indian Sub Continent	5.8%
Asia to Japan	2.9%
Asia to Middle East	4.3%
Asia to North America	4.2%
Asia to Pacific	4.1%
Asia to PRC	5.0%
Asia to South America	5.1%
Central America to Africa	5.3%
Central America to Asia	5.9%
Central America to CIS	4.6%
Central America to Europe	4.1%
Central America to Indian Sub Continent	7.8%
Central America to Japan	3.6%
Central America to Middle East	5.5%
Central America to North America	1.9%
Central America to Pacific	5.7%
Central America to PRC	7.1%
Central America to South America	5.7%
CIS to Africa	4.5%
CIS to Asia	4.6%
CIS to Central America	3.4%
CIS to Europe	2.8%

Freight Traffic Flow	CAGR 2013-2032
CIS to Indian Sub Continent	5.5%
CIS to Japan	3.7%
CIS to Middle East	3.0%
CIS to North America	3.6%
CIS to Pacific	4.8%
CIS to PRC	7.0%
CIS to South America	5.1%
Domestic Brazil	4.1%
Domestic India	8.3%
Domestic PRC	7.5%
Domestic United States	2.1%
Europe to Africa	4.7%
Europe to Asia	5.2%
Europe to Central America	4.4%
Europe to CIS	4.9%
Europe to Indian Sub Continent	7.0%
Europe to Japan	2.2%
Europe to Middle East	4.2%
Europe to North America	3.3%
Europe to Pacific	3.7%
Europe to PRC	6.7%
Europe to South America	5.0%
Indian Sub Continent to Africa	6.5%
Indian Sub Continent to Asia	6.7%
Indian Sub Continent to Central America	7.7%
Indian Sub Continent to CIS	5.0%
Indian Sub Continent to Europe	5.5%
Indian Sub Continent to Japan	4.3%
Indian Sub Continent to Middle East	6.6%
Indian Sub Continent to North America	4.1%
Indian Sub Continent to Pacific	4.8%
Indian Sub Continent to PRC	7.6%
Indian Sub Continent to South America	6.5%
Intra Africa	5.1%
Intra Asia	4.5%
Intra Central America	5.2%
Intra CIS	4.1%

Freight Traffic Flow CAGR 2013-2032

Intra Europe	4.0%
Intra Indian Sub Continent	6.6%
Intra Middle East	3.2%
Intra North America	3.1%
Intra Pacific	1.5%
Intra South America	6.1%
Japan to Africa	4.0%
Japan to Asia	2.7%
Japan to Central America	2.4%
Japan to CIS	4.0%
Japan to Europe	2.9%
Japan to Indian Sub Continent	5.2%
Japan to Middle East	3.4%
Japan to North America	2.5%
Japan to Pacific	3.4%
Japan to PRC	4.6%
Japan to South America	3.9%
Middle East to Africa	4.3%
Middle East to Asia	4.0%
Middle East to Central America	5.5%
Middle East to CIS	5.3%
Middle East to Europe	2.9%
Middle East to Indian Sub Continent	6.2%
Middle East to Japan	2.2%
Middle East to North America	3.3%
Middle East to Pacific	3.5%
Middle East to PRC	5.6%
Middle East to South America	4.4%
North America to Africa	4.8%
North America to Asia	4.1%
North America to Central America	2.4%
North America to CIS	5.2%
North America to Europe	4.3%
North America to Indian Sub Continent	6.4%
North America to Japan	1.4%
North America to Middle East	4.8%

Freight Traffic Flow CAGR 2013-2032

North America to Pacific	3.5%
North America to PRC	6.3%
North America to South America	4.8%
Pacific to Africa	4.4%
Pacific to Asia	2.7%
Pacific to Central America	6.1%
Pacific to CIS	5.7%
Pacific to Europe	2.5%
Pacific to Indian Sub Continent	3.8%
Pacific to Japan	3.5%
Pacific to Middle East	4.7%
Pacific to North America	2.2%
Pacific to PRC	5.1%
Pacific to South America	5.6%
PRC to Africa	6.3%
PRC to Asia	5.6%
PRC to Central America	6.7%
PRC to CIS	6.2%
PRC to Europe	6.6%
PRC to Indian Sub Continent	8.5%
PRC to Japan	4.3%
PRC to Middle East	6.7%
PRC to North America	6.4%
PRC to Pacific	6.3%
PRC to South America	6.8%
South America to Africa	5.2%
South America to Asia	5.5%
South America to Central America	5.9%
South America to CIS	5.7%
South America to Europe	4.5%
South America to Indian Sub Continent	6.4%
South America to Japan	4.3%
South America to Middle East	4.7%
South America to North America	4.5%
South America to Pacific	5.5%
South America to PRC	6.5%

Summary data

> NEW PASSENGER AIRCRAFT DELIVERIES BY REGION

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Single-Aisle	729	6,809	871	4,584	1,794	779	4,676	20,242
Small Twin-Aisle	155	2,220	148	720	346	505	600	4,694
Intermediate Twin-Aisle	58	1,013	44	314	103	370	183	2,085
Very large	28	622	32	209	36	345	62	1,334
TOTAL	970	10,664	1,095	5,827	2,279	1,999	5,521	28,355

> NEW PASSENGER & FREIGHT AIRCRAFT DELIVERIES BY REGION

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Single-Aisle	729	6,809	871	4,584	1,794	779	4,676	20,242
Twin-Aisle	223	3,349	205	1,095	475	906	1,020	7,273
Very Large	36	783	40	273	38	390	151	1,711
TOTAL	988	10,941	1,116	5,952	2,307	2,075	5,847	29,226

Passenger aircraft ≥100 seats and freight aircraft ≥10 tonnes

> 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
Mid-size	8	81	13	47	26	21	217	413
Large	10	196	8	78	2	55	109	458
TOTAL	18	277	21	125	28	76	326	871

> CONVERTED FREIGHT AIRCRAFT DELIVERIES BY REGION

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Small	29	342	11	65	61	7	90	605
Mid-size	29	147	24	123	38	39	424	824
Large	11	158	12	56	2	28	163	430
TOTAL	69	647	47	244	101	74	677	1,859

> TOTAL FREIGHT AIRCRAFT DELIVERIES BY REGION

	Africa	Asia-Pacific	CIS	Europe	Latin America	Middle East	North America	TOTAL
Small	29	342	11	65	61	7	90	605
Mid-size	37	228	37	170	64	60	641	1,237
Large	21	354	20	134	4	83	272	888
TOTAL	87	924	68	369	129	150	1,003	2,730

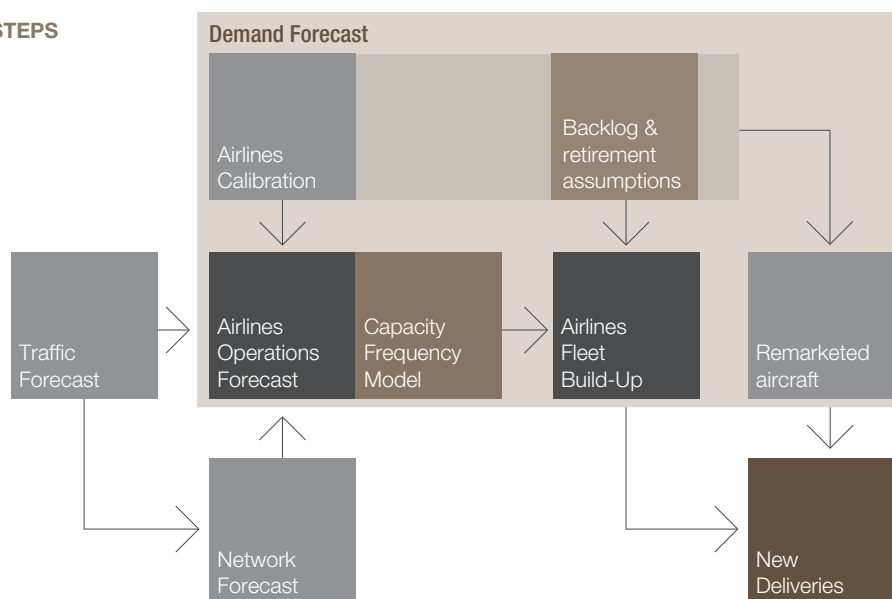
Passenger methodology



The making of the Airbus Global Market Forecast follows a process that has been continuously improved 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) has 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 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 very differently from the rest of the region, a new, specific flow is created, taking into consideration some more country-related specific characteristics. This process

resulted in 208 flows for the GMF 2013. 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 fed into econometric equations to identify 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, economic forecast data is used to derive future traffic volume.

Forecasting the network

Airline networks evolve over time and airlines keep on adding and removing routes from their network, 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. The impact sometimes even visible at a level as high as the traffic flow. 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 to quantify these impacts.

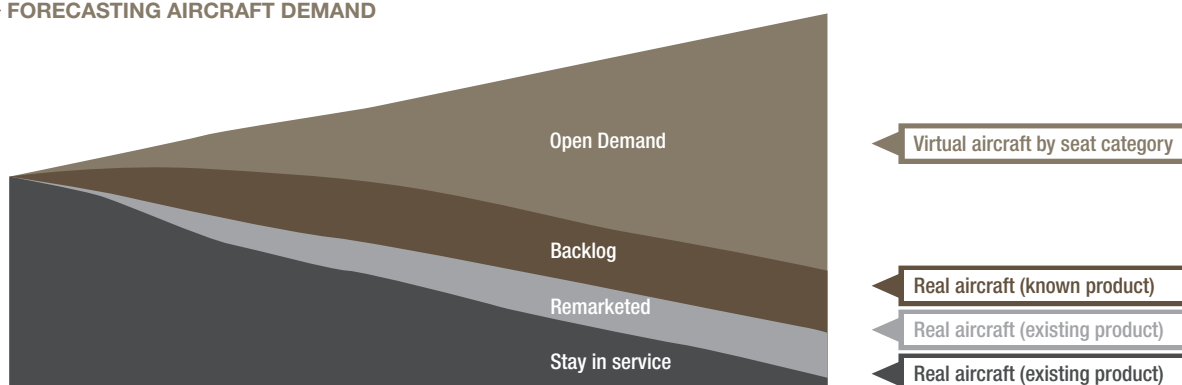
Among the very large set of potential new routes, a subset of reasonable candidates is devised for each airline, based on the carrier's current network and the potential size of new markets. This set of routes is fed into a 'Quality of Service Index'- based model, which determines for each new route the traffic potential and the point in time when it could be opened.

Forecasting aircraft demand

The demand forecast estimates the number of aircraft that will be required over the next 20 years to satisfy the world's airline needs. 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 that 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. Examining the market at a route by route and airline by airline level then also supports a large number of other activities from discussions with airlines to our supplier partners for example.

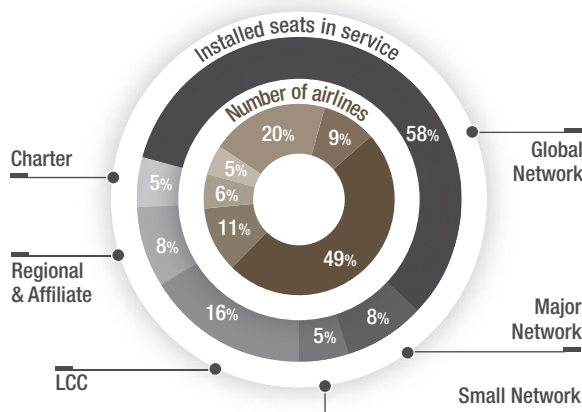
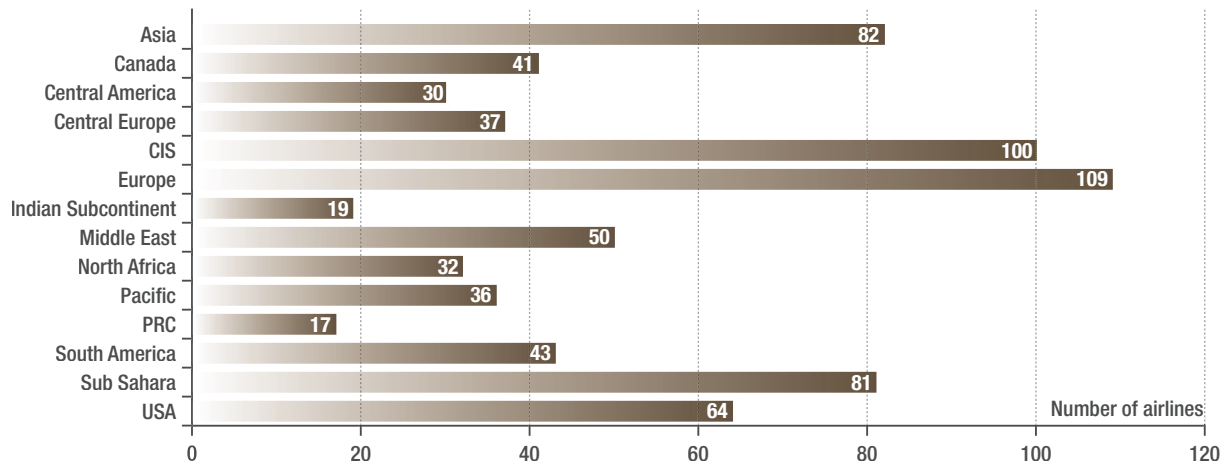
> FORECASTING AIRCRAFT DEMAND



The airline calibration process

The Airbus GMF 2013 covers 741 passenger airlines and their subsidiaries world-wide.

> 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 to determine the way an airline utilises its aircraft on their network.

Airline operation forecasts

Once the calibration of an airline has been carried out, real aircraft are converted into virtual aircraft in a way that keeps the overall number of seats in the fleet constant. The whole forecast is then based on neutral seat categories e.g. 100, 125, 150, 210 for Single-Aisle types.

Traffic growth rates are applied to each airline's routes, 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 utilisation, frequency or capacity increase.

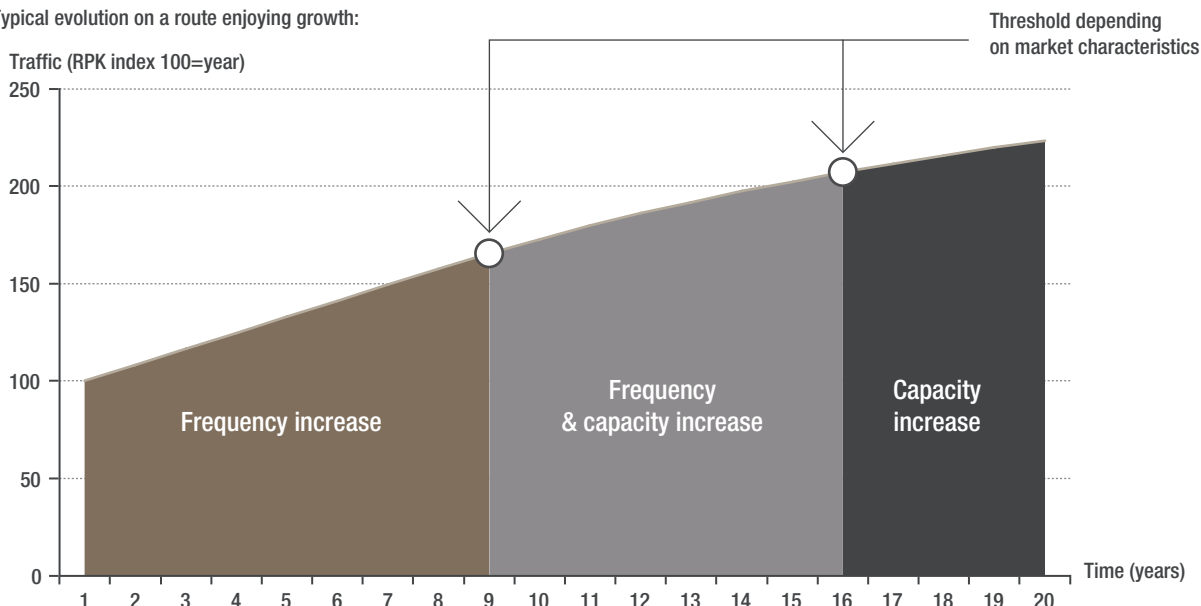
The split between frequency increase and/or capacity increase is one of the most important factors influencing the shape of the future demand. A dedicated model (the Airbus Capacity/Frequency Model) has been developed to address this issue. The general principle is that airlines grow on a route by adding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

minimum level airlines grow with a mix of both frequency and capacity increase, 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 characteristics. Passengers in North America for instance, are used to a 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 airlines 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/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 utilisation, flight frequencies and capacity) expressed in neutral categories for the complete network of each airline.

Airline 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 adapted for 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, utilisation, load factors, etc.

Remarketed aircraft

The final step of the GMF process is estimating remarketed deliveries, which account for a significant share of the total demand.

Survival curves applied to the GMF start fleet and backlog per aircraft type, allow identification of the gap between the statistical world fleet attrition and the shape of those that stay in service from the GMF fleet build-ups. The delta corresponds to the maximum potential for remarketed

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 world-wide basis and then refined by region and by airline. At the end of the process, these remarketed deliveries are subtracted from total deliveries, leaving only the new deliveries which are the figures given in this publication.

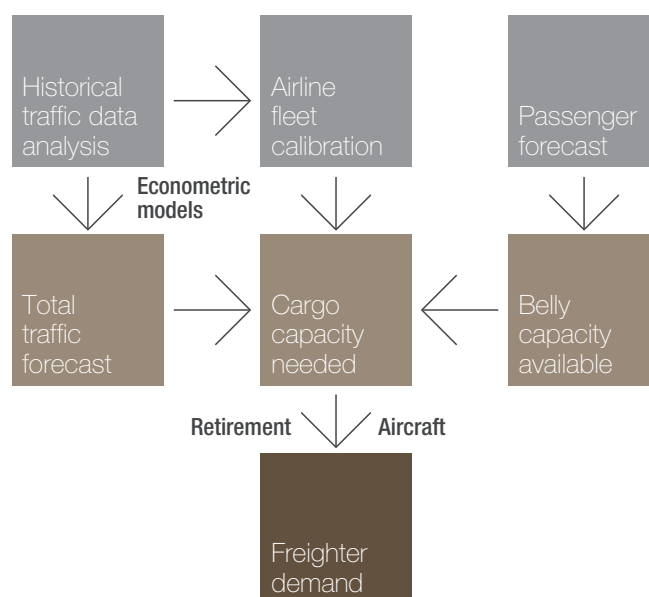
Freight forecast methodology



The freighter GMF has been part of the Airbus forecasting process for more than ten years and is 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 freighter forecast process can be divided into three main steps: the traffic forecast resulting from econometric projections for each directional flow, the integration of the belly traffic co-ordinated with the passenger aircraft forecast and the demand forecast evaluating how many freighters will be needed in the next 20 years (and whether they will be new build or converted freighters).

> THE FREIGHTER FORECAST PROCESS

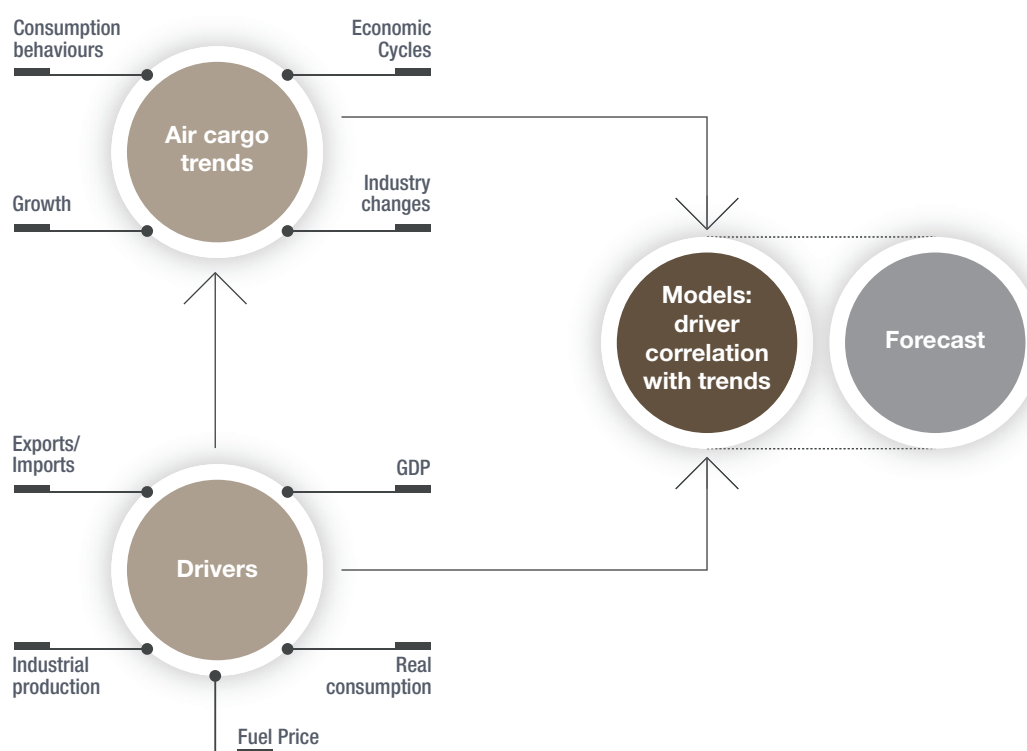


Traffic forecast

Once the calibration of an airline has been carried out, the first step in the traffic forecast is assessing the relationship between macro-economic 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 best

comparison to growth in traffic. Alongside these macro-economic 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.

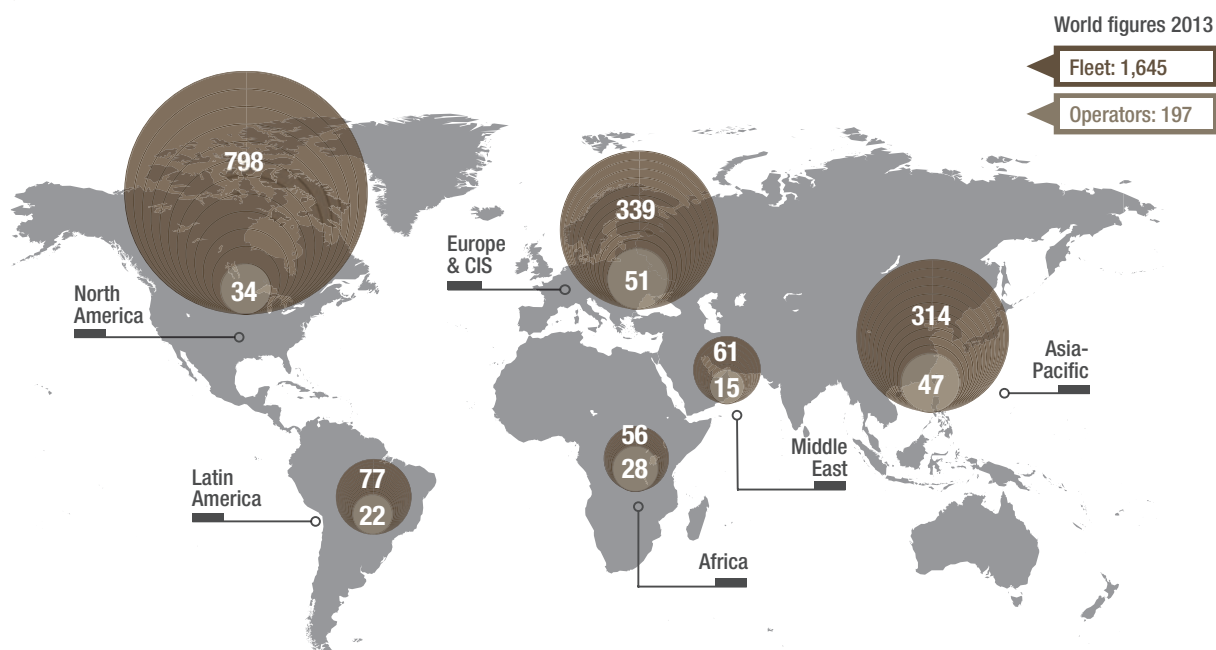
TRAFFIC FORECAST METHODOLOGY



Belly capacity and base year calibration

Once the traffic flow forecasts have been established. It is important to split 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 on 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 utilisation and load factors for the base year. Projections 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.



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 ten 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 nearly 200 different airlines.

When forecasting an airline's choice of new build or converted freighters, a detailed study of historical trends is used to identify the trend in activity per aircraft size category. On top of using historical trends, an analysis of current and future fuel prices is performed to simulate their effect on this decision making process.

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, who are all expected to become large consumers of express services over the next 20 years.

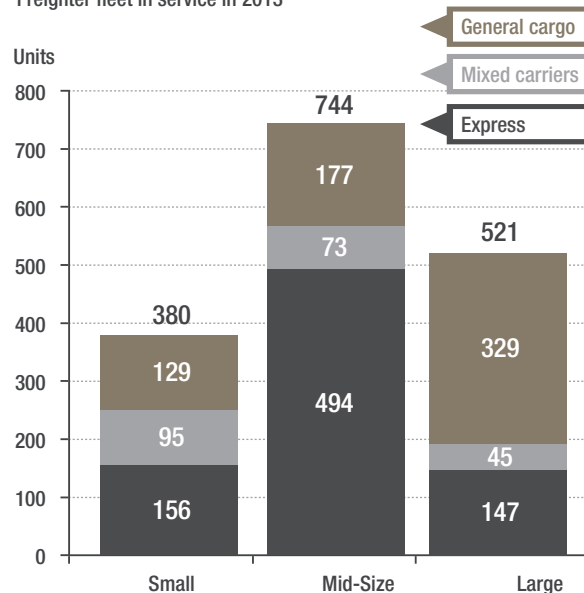
This model analyses a distinctive set of parameters to understand the customers' need for express services resulting from well-known or new behaviours, such as online purchasing, next-day delivery for business purposes, service reliability and traceability.

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

➤ EXPRESS AND GENERAL CARGO IN 2013

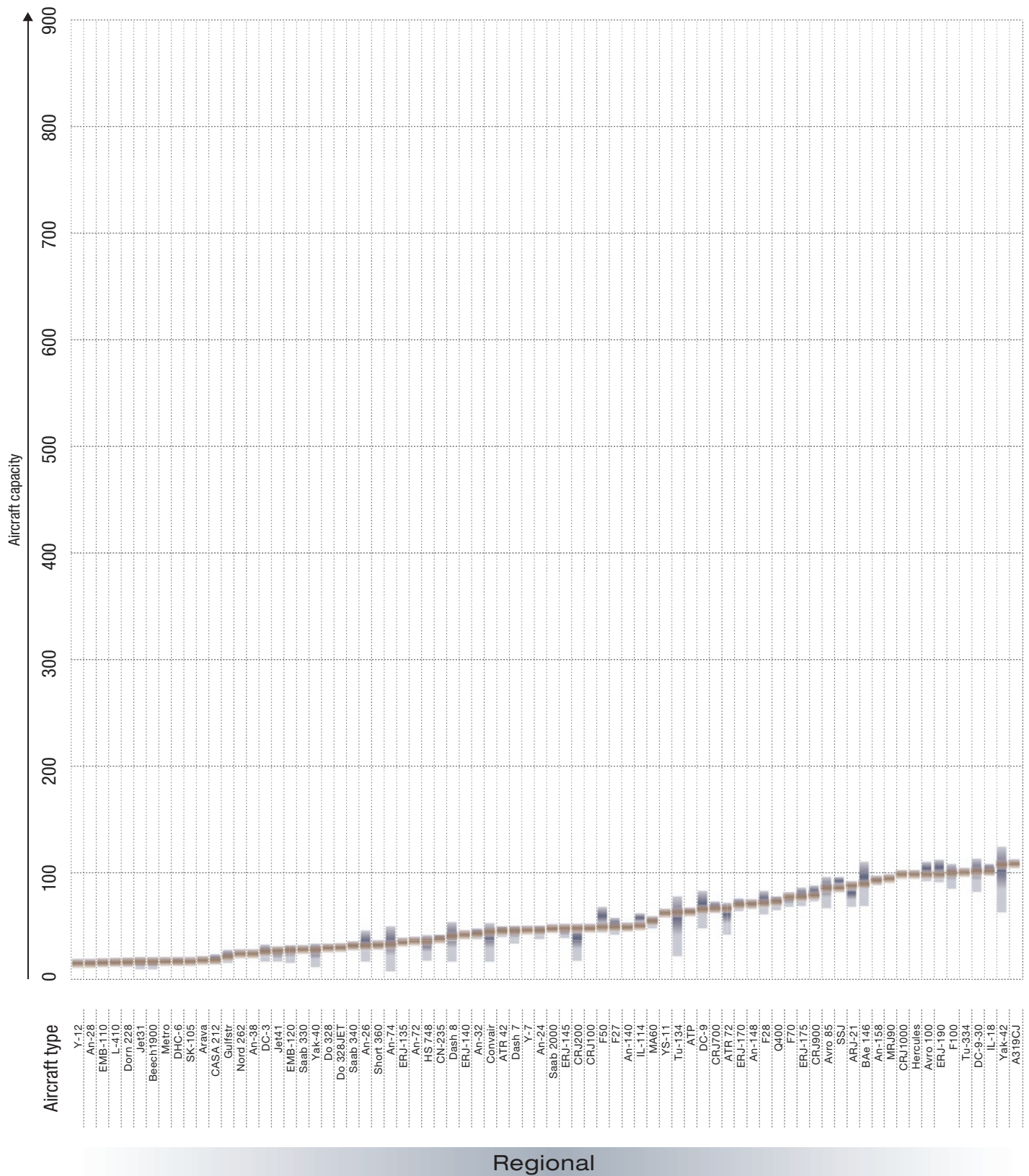
Source: ASCEND, Airbus

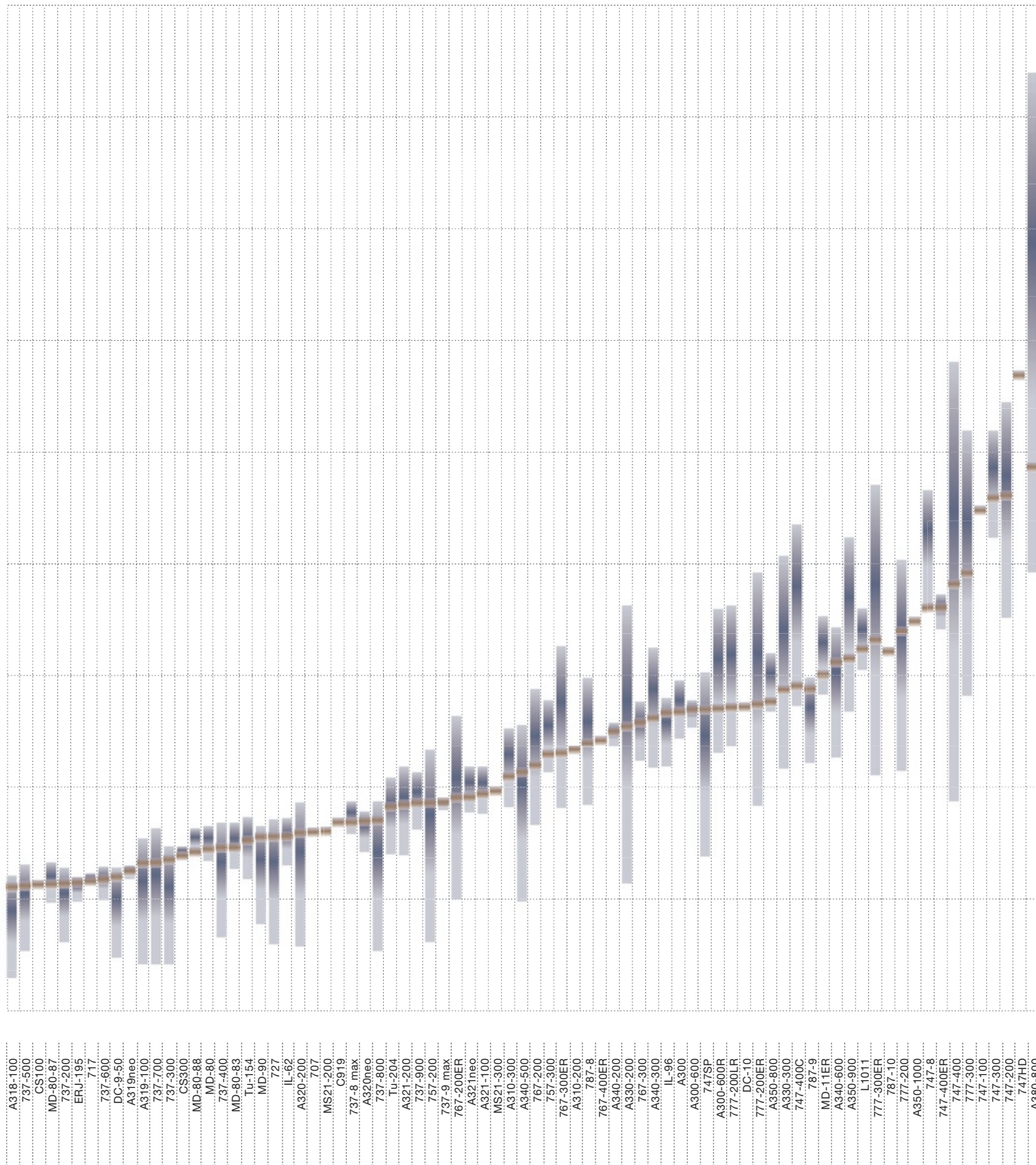
Freighter fleet in service in 2013





Capacities





Single-Aisle

Twin-Aisle & VLA

Safe Harbour Statement

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