BOEING

CURRENT MARKET OUTLOOK
2008–2027

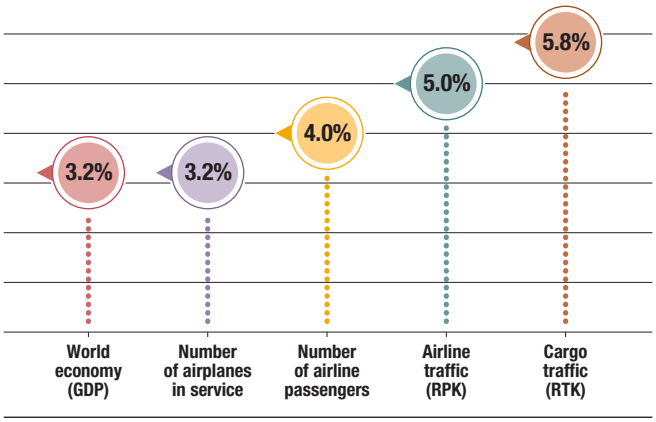
OUTLOOK AT A GLANCE

Current Market Outlook

Your complete reference guide to the future of air transport. And on the back, we welcome your feedback and questions on the outlook.

MARKET GROWTH RATES

2007–2027



NEW AIRPLANE DELIVERIES

By size category

747 and larger	**$290 billion**

- 980 new airplane deliveries
- 610 passenger airplanes
- 370 freighter airplanes
- 49 percent of demand going to Asia-Pacific

Twin aisle	**$1,470 billion**

- 6,750 new airplane deliveries
- Accounts for 23 percent of new airplanes
- 46 percent of market value
- 42 percent of demand going to Asia-Pacific
- 22 percent of demand going to Europe
- 18 percent of demand going to North America

Single aisle	**$1,360 billion**

- 19,160 new airplane deliveries
- Accounts for 65 percent of new airplanes
- 43 percent of market value
- Highest demand in North America (6,080 new airplanes)

Regional jets	**$80 billion**

- 2,510 new airplane deliveries
- Highest demand in North America (1,190 new airplanes)
- Rapidly shrinking market for small and medium-sized regional jets

NEW AIRPLANE DEMAND

By region

Asia-Pacific	**9,160 airplanes**	**$1,190 billion**	
Economic development and further liberalization contribute to strong traffic growth and airplane demand. Deliveries to Asia-Pacific airlines represent 37 percent of world value.		GDP RPKs RTKs Fleet	4.1% 6.7% 6.9% 5.6%
North America	**8,550 airplanes**	**$740 billion**	
Reallocation of capacity from domestic to international. Low-cost share of domestic grows to 35 percent. 60 percent of future deliveries for replacement.		GDP RPKs RTKs Fleet	2.5% 3.4% 4.9% 2.2%
Europe	**6,900 airplanes**	**$740 billion**	
Medium-range markets strong. Traffic growth slowing in second decade. Average route within Europe increasing from 995 km (620 miles) to 1,250 km (780 miles) by 2027.		GDP RPKs RTKs Fleet	2.1% 4.1% 4.7% 2.6%
Middle East	**1,580 airplanes**	**$260 billion**	
Strong local economies and connecting passengers between Europe, Africa, and Asia, leading to unprecedented expansion. Significant potential for low-cost regional service.		GDP RPKs RTKs Fleet	4.3% 6.1% 6.9% 3.6%
Latin America	**1,700 airplanes**	**$140 billion**	
Growth within Latin America traffic is among the highest in the world. Newer, more efficient airplanes; more comprehensive networks; and strong focus on customer service.		GDP RPKs RTKs Fleet	4.0% 6.5% 6.4% 4.0%
Russia and Central Asia	**950 airplanes**	**$70 billion**	
Abundant natural resources driving strong GDP growth of 4.4 percent. Single-aisle market segment to be 65 percent of fleet by 2027. Most traffic is on the regions' airlines.		GDP RPKs RTKs Fleet	4.4% 5.3% 5.5% 0.5%
Africa	**560 airplanes**	**$60 billion**	
Growth to Europe will remain strong. Market liberalization and fleet renewal will be key factors. 34 percent of deliveries will be twin-aisle airplanes.		GDP RPKs RTKs Fleet	5.1% 6.0% 5.6% 2.4%

OUTLOOK RESPONSE

We at Boeing value your opinion

Please take a moment to complete this feedback form and fax it back to us. You may attach your business card to provide contact details.

Thank you!

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YOUR PERSPECTIVE

- **What will be the main factors to affect the future air transport markets?**
- **What will be the likely impact of these factors?**

YOUR FEEDBACK

- **What areas would you like to see covered in more detail in the *Current Market Outlook*?**
- **What additional data would you like us to make available?**
- **What did you find most valuable?**
- **Was there anything you disliked?**

COMMENTS?

- **Are there any other questions or comments?**

The transformation of air transport

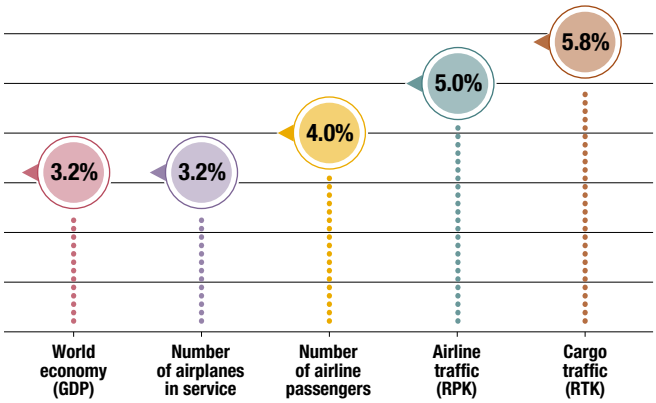
Each day, air transport is gradually being transformed. As new airplanes enter the fleet, they bring lower costs, more comfort, and improved environmental performance.

CURRENT MARKET OUTLOOK **2008–2027**

OUTLOOK **HIGHLIGHTS**

MARKET GROWTH RATES

2007–2027



Dynamic markets supporting long-term airplane demand

The *Boeing Current Market Outlook 2008–2027* is rooted in today's realities. It explains how air transport will be transformed over the next 20 years.

Resilience

Air transport is in a highly dynamic period. Current challenges include a slowing world economy, high oil prices, and in some markets, slowing traffic growth. Emerging regions and new business models are bringing a more balanced market.

DEMAND BY REGION

Future market value and airplane deliveries

Region	2007 $B	Passenger airplanes
Asia-Pacific	1,190	9,160
North America	740	8,550
Europe	740	6,900
Middle East	260	1,580
Latin America	140	1,700
Russia and Central Asia	70	950
Africa	60	560
World total	**$3.2T**	**29,400**

Over the past 20 years, air travel grew by an average of 4.8 percent each year, despite two major world recessions, terrorist acts, the Asian financial crisis of 1997, the severe acute respiratory syndrome (SARS) outbreak in 2003, and two Gulf wars. During 40 years of producing the *Current Market Outlook*, we have learned that the resilience of air transport growth comes from its intrinsic importance to the livelihood of people around the world.

The growth of air transport

On average over the next 20 years, passenger travel will grow at 5.0 percent and cargo at 5.8 percent. The fastest growing economies will lead the transformation into a more geographically balanced market. More productive, new airplanes will play a greater role, and further environmental progress will be relentlessly pursued.

TOTAL AIRPLANES IN SERVICE

Size	2007	2027
747 and larger*	910	1,340
Twin aisle	3,480	8,290
Single aisle	11,450	23,540
Regional jets	3,160	2,630
Total	**19,000**	**35,800**

AIRPLANE DEMAND

Size	2007 $B	Airplanes
747 and larger*	290	980
Twin aisle	1,470	6,750
Single aisle	1,360	19,160
Regional jets	80	2,510
Total	**$3.2T**	**29,400**

PASSENGER AIRPLANES IN SERVICE

Size	2007	2027
747 and larger*	560	620
Twin aisle	2,640	6,510
Single aisle	10,770	22,150
Regional jets	3,080	2,630
Total	**17,050**	**31,910**

PASSENGER AIRPLANE DEMAND

Size	2007 $B	Airplanes
747 and larger*	180	610
Twin aisle	1,370	6,270
Single aisle	1,360	19,150
Regional jets	80	2,510
Total	**$2.9T**	**28,540**

FREIGHTER AIRPLANES IN SERVICE

Size	2007	2027
Large*	500	1,340
Medium widebody	690	1,160
Standard body	760	1,390
Total	**1,950**	**3,890**

*Large passenger and large freighter categories differ.

FREIGHTER AIRPLANE DEMAND

Size	2007 $B	Freighters
Large*	170	640
Medium widebody	40	210
Standard body	<1	10
Total	**210**	**860**

*Large passenger and large freighter categories differ.

FUTURE AIR **TRANSPORT**

A new market outlook

The *Boeing Current Market Outlook 2008–2027* describes a transformation of the airplane market that is already well under way.

Transformation of the market

- Airline business priorities are being transformed as a result of high fuel costs.
- Competition between airlines is being transformed through the growing presence of low-cost airlines, and through continuing liberalization of domestic and international market regulations.
- Global airplane markets are being transformed toward a better geographical balance in demand.
- The fleet is being transformed to become more efficient, in terms of lower fuel use and higher unit productivity.
- Newer airplanes, the development of new fuels, and improved operating procedures are transforming environmental performance.

Reflected in the forecast

Future airplanes will be more productive than those in service today. By 2027, the average airplane in the fleet will be carrying 40 percent more traffic (RPKs) each year than the average airplane of today.

Geographic distribution of future deliveries is more evenly spread. Asia-Pacific is the largest market for new airplanes in terms of units required and market value. The forecast European market is as valuable as that of North America.

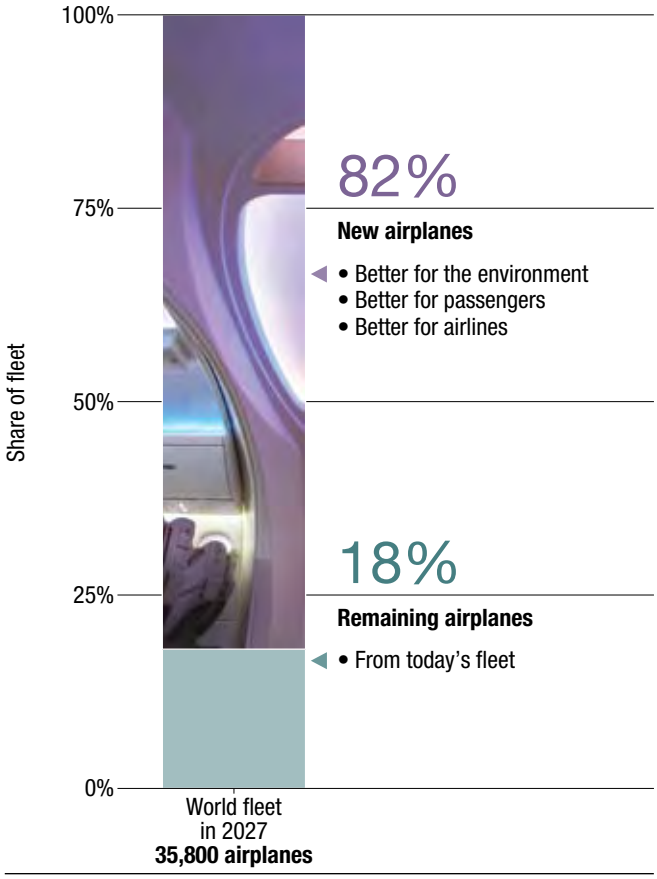
Replacement airplanes make up a larger proportion (43 percent) of future deliveries than in the previous forecast (36 percent).

In 20 years, 82 percent of the fleet will have been delivered new since the start of 2008. Just 18 percent will be airplanes that exist today, and most of these will be operating at low annual utilization—in roles such as having been converted to freighters.

There is a smaller fleet size at the end of the 20-year period (35,800 airplanes) than in our previous forecast (36,400 airplanes). This reflects accelerated withdrawal of the oldest and least efficient airplanes in the fleet today.

20 YEARS IN THE FUTURE

Airplanes in service



The changing face of air transport

As airlines around the world face individual challenges and opportunities, fundamental changes in the market are taking place.

Short term becomes long term

Markets evolve as near-term actions combine with underlying strategic shifts in the business environment, leading to long-term changes in the industry.

Airline business conditions are very different around the world. After a number of years of strong growth and improving financial results, the near-term business outlook is weakening in North America, Europe, and Japan. In contrast, the outlook in much of Asia, the Middle East, Russia, Africa, and Latin America is for continued near-term growth.

Fuel prices and airline finances

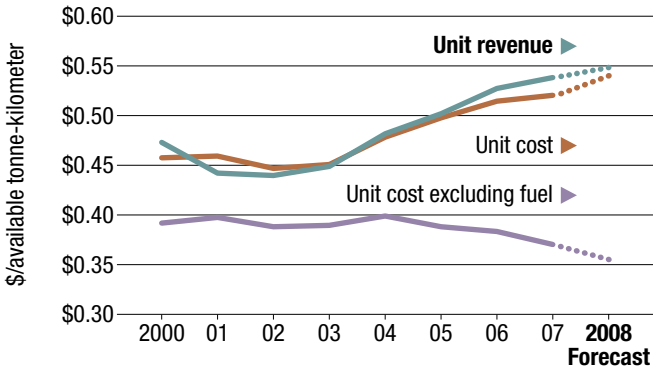
In pursuit of the best possible financial returns in difficult trading conditions, airlines around the world have consistently restructured their operations. Fleets have been renewed and simplified. Routes and networks have been realigned to focus on profitable markets, and airlines have pushed cost-reduction measures wherever possible.

As a result of these efforts, in 2007 airlines achieved their first year of global profitability on a net basis since 2000. This achievement occurred despite the doubling of oil prices between 2003 and 2007, increasing the industry's fuel expense by $90 billion. The surge in fuel prices through July 2008 means that on an operating basis, the world's airlines are expected to come close to breaking even or possibly make a small profit. On a net basis, airlines are now expected to lose money again in 2008.

U.S. airlines are generally considered to be facing the most severe challenges to profitability as both their fuel costs and their revenues are dollar-denominated. They do not fully benefit from currency exchange-rate protection from the impact of high fuel prices. Even in the United States, some airlines have been profitable by focusing on maintaining low costs of production, using fuel hedges, and adjusting capacity to local market conditions.

COST REDUCTIONS OTHER THAN FUEL

International Air Transport Association (IATA)



Source: IATA financial forecast, June 2008.

Underlying long-term demand

As has been the case over previous decades, long-term demand growth in air travel is expected to remain, regardless of current market pressures. Robust underlying demand reflects the intrinsic value of air transport to society.

Price sensitivity of air travel

In the recent period of generally strong economic conditions, airlines have been able to pass on a measure of their increased costs from higher fuel prices in the form of fare increases and fuel surcharges. Passenger demand sensitivity to the increased cost of air travel is relatively low when all airlines respond to the same cost pressures by increasing overall ticket prices.

Passengers become more sensitive to price when airlines compete in the same markets or there are other travel options available. In the increasing number of short- or medium-haul markets that are liberalized, airline business models that focus on value for money will be most competitive.

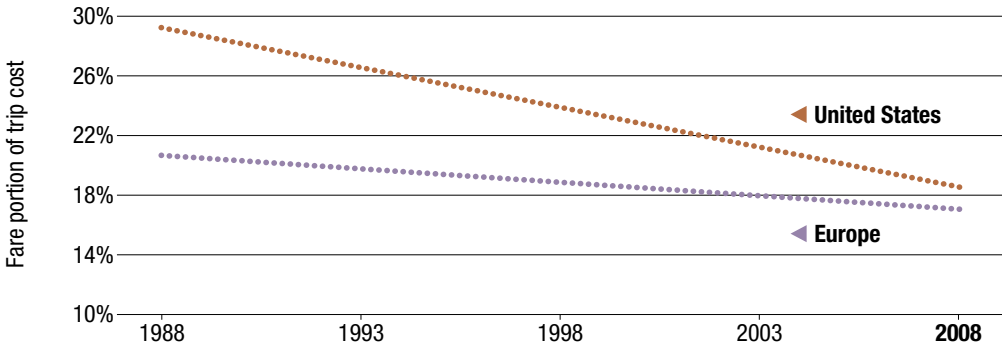
Passengers also have increasing latitude to adjust total trip expenditure by focusing on areas other than air fares. The chart shows how the proportion of passenger trip costs accounted for by air fares is decreasing over time in the United States and European Union.

Overall trends

As economic growth slows in the near term, airlines will tend toward lowering fares in competitive markets. They will concentrate capacity in their stronger markets. Airlines with the highest costs will restrict growth in short-haul markets and focus on longer routes and premium traffic. Low-cost specialists will continue to grow in local markets, with some taking advantage of international market liberalization by developing longer range, mainly leisure-oriented services.

AIR FARES TAKING SMALLER SHARE OF TRIP COSTS

Consistent declines in the United States and Europe



Source: World Travel and Tourism Council and Boeing research.

Strengthening revenues

Airlines employ a number of strategies to seek continuous improvement in revenues. These include developing higher value services in business and leisure markets. New premium services, from economy plus to improved business and first class products, can draw traffic from competing airlines or improve fare mix.

Airline alliance membership and partner network coordination make services available to a wider selection of customers and might strengthen brand appeal. Airlines are also actively switching capacity to higher yielding markets, which tend to be medium to long haul and international services.

Ancillary revenues: a source of additional income

In addition to raising ticket prices or applying fuel surcharges, airlines are generating income in many other ways. Charges such as booking fees, baggage fees, and income from the sale of food and goods on board the airplane are providing 5 to 7 percent additional income, with some airlines raising as much as 20 percent of their income through such ancillary revenues. Airlines such as Allegiant, Ryanair, and easyJet source more than 15 percent of their revenues from ancillary charges.

Taking a retail rather than travel-oriented approach to marketing, the millions of visitors to airline web sites represent a potential distribution channel for all kinds of goods and services. Although currently generating a small proportion of revenue, any income generated comes at little cost to the airline. Over time, a more significant shift in the direction of a retail-oriented approach to web sales is likely. For example, the Ryanair web site receives over 200 million visitors a year and provides access to services as unrelated to air travel as competitive quotes for domestic electricity and gas supplies.

Contribution to profit

A powerful example of ancillary revenue contribution to profit, Allegiant receives nearly $28 per passenger[1] over and above fares paid, accounting for over 20 percent of total revenues. Promotional activities generate ancillary revenue, such as advertising on board the airplane or activities such as Allegiant's agreement with Blue Man Group in Las Vegas, a key destination for the airline. One of its aircraft carries an image of Blue Man Group, who refer to Allegiant during their show. The airline sells tickets to the show on its web site and receives a fee for each booking.

On-board sales through IFE systems

As in-flight entertainment (IFE) systems become more sophisticated, additional revenues will be generated through an expanded range of on-board activities and sales of communication services (e.g., cell phone, text messaging, and Internet connections).

Revenue from cargo services

Cargo services, including carrying freight in the lower holds of passenger airplanes, continue to contribute positively to airline income, accounting for a typical 10 to 12 percent of airline revenues. Some airlines gain as much as 35 percent or more of total revenues from their cargo business. Cargo markets have expanded, and cargo yields have been reasonably strong.

Cargo markets will be examined in detail in the *Boeing 2008–2009 World Air Cargo Forecast*[2] to be published in November 2008. A summary of cargo airplane demand, which is included in *Current Market Outlook* totals, is on page 18.

The revenue-cost equation

Sustained improvement in financial results is a matter of simultaneously addressing revenues and costs, regardless of airline region or business model.

Airlines are implementing far-reaching cost management programs and generating revenue by raising fares and charging for services that formerly were free. Such additional charges can also bring cost benefits. For example, baggage fees encourage passengers to bring fewer bags, which reduces handling and fuel costs.

[1] Allegiant 2008 half-year financial results.
[2] World Air Cargo Forecast: www.boeing.com/commercial/cargo.

ANCILLARY REVENUES AS PORTION OF LCC REVENUES

2007–2008 Airline	Share of revenue
Allegiant Air	20.4%
Ryanair	18.0%
easyJet	15.8%
Vueling	14.4%
Spirit	13.5%
Sterling	11.5%
Jetstar	10.0%
AirAsia	9.0%
Viva Macau	8.0%
SpiceJet	8.0%
SkyEurope	8.0%
JetBlue	7.3%
AirAsia X	7.0%
Air Deccan	6.5%
Norwegian	5.9%
Air Berlin	5.3%
Mandala	5.0%
WestJet	4.8%
AirTran	4.7%
IndiGo	4.4%
Southwest	3.0%

Source: Centre for Asia Pacific Aviation and airline reports.

Tackling costs

Over the last 3 years, fuel costs rose from around 15 percent to 30 to 40 percent of operating costs and as much as 60 percent for some airlines. Cost management is of vital importance.

Fuel hedging has been a key instrument for some airlines in managing volatile fuel prices. Although hedging levels and strategies vary, many airlines have successfully hedged to allow certainty in planning for specific business periods, while also taking some of the risk out of changing fuel costs.

Capacity discipline has been important in bringing down unit costs. While traffic has grown, airlines have taken capacity out of slow-growing domestic or short-haul markets and parked those airplanes or flown them in stronger, international markets instead.

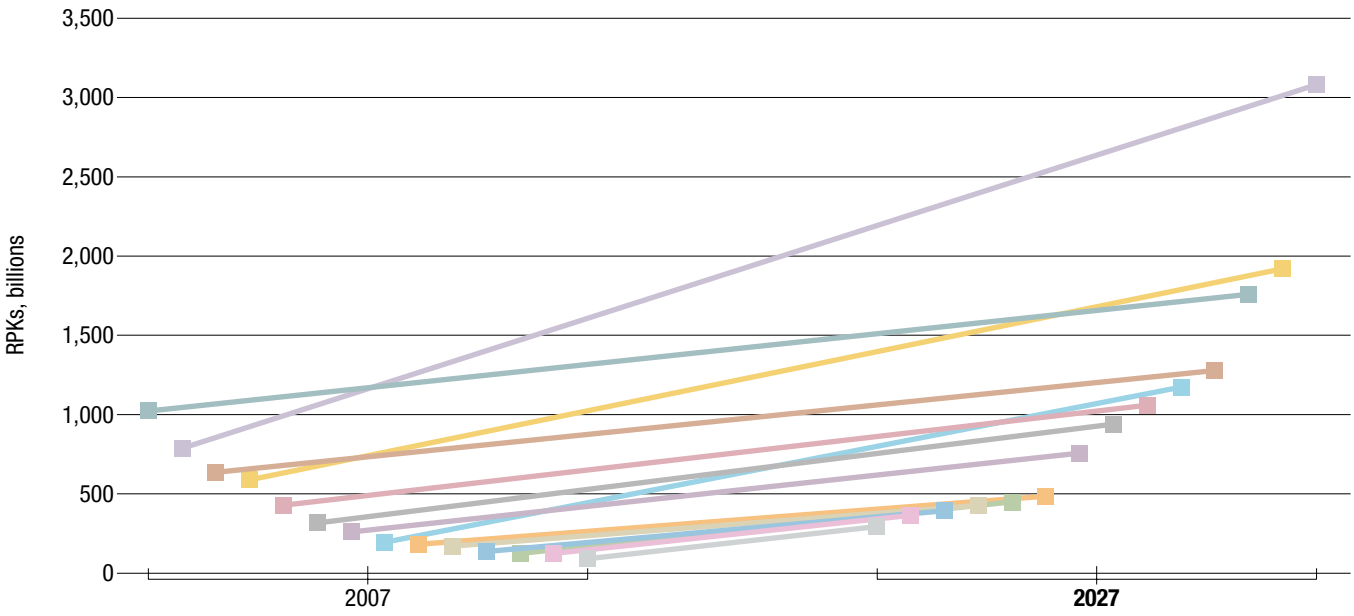
New airplanes are part of the answer

Under past difficult business conditions, airlines refrained from ordering new airplanes until their finances improved. Their existing fleets, being to some degree written down, held lower capital costs than new airplanes. Delivery of new airplanes might have been delayed or these airplanes were temporarily parked to avoid adding unwanted capacity.

Under current conditions, new airplanes are an important component of recovery strategies because they hold the key to lowering airline costs. New airplanes are more fuel efficient than older airplanes in the fleet, and their higher productivity enables airlines to maximize utilization of their assets, which leads to lower production costs.

PASSENGER TRAFFIC DEVELOPMENT

2007–2027



Forecast trends

Airline strategies to address the revenue-cost equation have led to five specific trends that are reflected in our forecast:

- Many of the oldest passenger airplanes are being parked and are unlikely to return to service.
- Meaningful quantities of 15- to 20-year-old airplanes will be available for conversion to freighters. FedEx, for example, cites fuel savings of up to 36 percent and increased capacity of 20 percent by using its newly converted 757-200Fs in place of its existing 727-200Fs.
- Demand for new airplanes is holding steady; new airplanes offer better fuel efficiency and better productivity than airplanes in the current fleet.
- Regional airlines are maintaining profitability by moving to larger regional jets. The overall requirement for smaller regional jets is significantly lower than was expected in a lower fuel-price environment.

ANNUAL TRAFFIC GROWTH

2007–2027 (RPKs)

Regions	Growth
Asia-Pacific, including within China	**7.0%**
Asia-Pacific, excluding within China	**6.2%**
Within North America	**2.8%**
Within Europe	**3.5%**
Within China	**8.9%**
North Atlantic	**4.7%**
Europe to Asia-Pacific	**5.7%**
Transpacific	**5.6%**
North America to Latin America	**4.8%**
Within Latin America	**6.7%**
Europe to Latin America	**4.7%**
Within and to Russia and Central Asia	**5.3%**
Africa to Europe	**5.4%**
Middle East to Asia-Pacific	**5.7%**

- Many single-aisle airplanes and small twin-aisle airplanes will be replaced with airplanes slightly larger than those in the existing fleet.

Growth opportunities

After cost management, one of the most important elements of the revenue-cost equation is appropriate matching of capacity to demand. With costs actively managed, airlines focus on best meeting the needs of specific market segments. Passenger requirements vary between regions and between short- or long-haul services. Different types of service or airline business models will be successful in different markets.

The charts show where traffic growth is expected to be strongest over the next 20 years. The specific requirements of passengers on short-haul routes means that low-cost airline growth will be rapid and that the growth of network airlines will generally be focused on longer haul or international markets.

MARKET FOCUS

Airplane deliveries

To address high fuel prices and better environmental performance, airlines are focusing more than ever before on matching airplanes to market requirements.

Geographic diversity of deliveries

The increasing geographic diversity of airplane markets will help mitigate the effect of cyclical demand. In 1970, airlines in Asia operated only 2 percent of the world commercial airplane fleet, and the industry relied on European and North American markets, where nearly 90 percent of the fleet was in service.

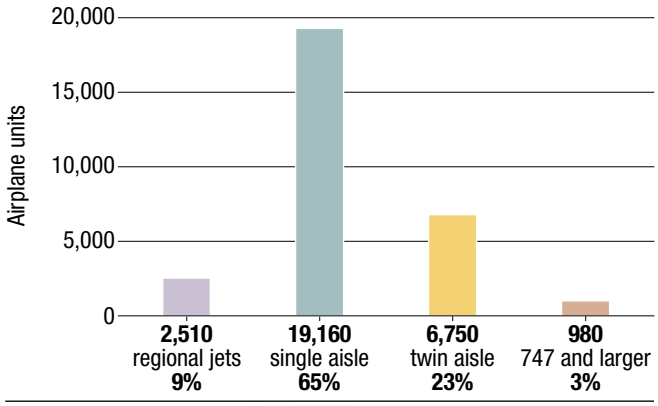
Economic growth and air travel expansion in Asia-Pacific is leading to more of a geographic balance in airplane markets. Other strong growth markets are the Middle East, Latin America, and Africa. Ninety percent of airplanes already on order are for delivery outside the United States. Airlines in the United States are mostly placing orders for replacement of their older airplanes.

Single-aisle airplanes: 65 percent of future deliveries

Single-aisle airplanes primarily serve markets within regions (see detailed discussion of short-haul market trends on page 20). The sheer size of these markets means that the single-aisle category accounts for the largest share of future deliveries.

AIRPLANE DELIVERIES: 29,400

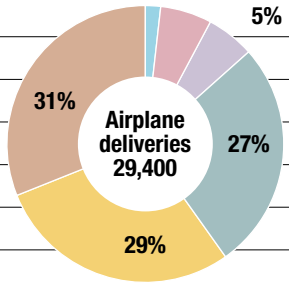
2008–2027



AIRPLANE DELIVERIES BY REGION

2008–2027

Region	Airplanes
Asia-Pacific	9,160
North America	8,550
Europe and Central Asia*	7,850
Middle East	1,580
Latin America	1,700
Africa	560
World total	**29,400**



Market value: **$3.2T**

*Includes Russia.

Large single-aisle airplanes

Strong domestic growth in China, India, and other emerging Asian nations is contributing to high demand for single-aisle airplanes in Asia-Pacific. Approximately 60 percent of new airplanes needed in Asia will be in the single-aisle category.

Regional jets currently account for 17 percent of the worldwide fleet, but this will reduce to 7 percent by 2027. Airline requirements for economic and environmental efficiency are pushing toward larger aircraft, and congestion at major airports is driving demand away from the smallest airplanes.

Asia-Pacific driving the demand for twin-aisle aircraft

As market liberalization stimulates opening of new international routes and aircraft capabilities improve, twin-aisle airplanes will be the fastest growing market segment. Asia-Pacific, Middle East, and European markets will drive this demand. Over 40 percent of twin aisles will be delivered to airlines in Asia-Pacific.

Six hundred and ten large airplanes (400 seats and above) will be required by airlines that are increasing their capacity in long-haul markets with the highest demand and scheduling restrictions between airline alliance hubs, in particular.

Implications

The air transport system is already highly efficient, but further improvements to air traffic control and airport capacity are planned to allow continued growth.

The growing fleet will require more trained personnel; expanded maintenance, repair, and overhaul (MR&O) facilities; and other infrastructure support. New facilities will be established in emerging regions with a combination of growth in local markets and relatively low labor costs.

DELIVERIES BY AIRPLANE SIZE

Region	Regional jets	Single aisle	Twin aisle	747 and larger	Total deliveries
Asia-Pacific	430	5,440	2,810	480	9,160
North America	1,190	6,080	1,190	90	8,550
Europe	320	4,880	1,490	210	6,900
Middle East	60	660	690	170	1,580
Latin America	110	1,340	250	–	1,700
Russia and Central Asia	340	460	130	20	950
Africa	60	300	190	10	560
World total	**2,510**	**19,160**	**6,750**	**980**	**29,400**

Airline market value

Nearly half the forecast $3.2 trillion new airplane assets will be used by airlines in Asia-Pacific and the Middle East.

$110 million average airplane value

The average new airplane will be worth about $110 million, in terms of catalog prices in 2007 dollars. A higher proportion of twin-aisle airplanes in the Middle East will give those assets the highest average value at $165 million. The smaller average airplanes needed in North America, Russia and Central Asia, and Latin America will produce average values below $90 million. Airplane assets in Asia-Pacific will be valued at nearly $130 million, with Europe and Africa near the world average at $110 million.

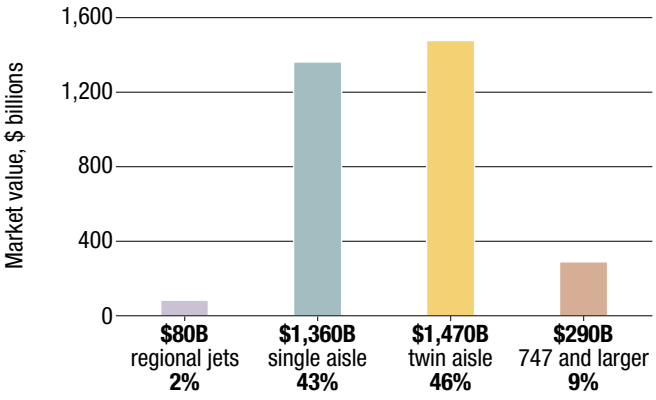
Geographic and business model diversification

Airplane demand will increasingly shift to developing markets in Asia-Pacific, Latin America, and the Middle East. Increased diversification of the worldwide fleet will help to mitigate financial risk to the capital markets that fund these fungible airplane assets.

Capital markets will evolve to support the changing customer base while the fleet is redistributed among regions and different airline business models. The lowest possible financing and ownership costs will be sought by significant numbers of newer airlines (with limited financial resources) that enter and expand in the more liberalized market of the future. The global funding infrastructure is generally expected to adapt to this new demand distribution and facilitate acquisition of new airplanes by the world's airlines.

MARKET VALUE: $3.2 TRILLION

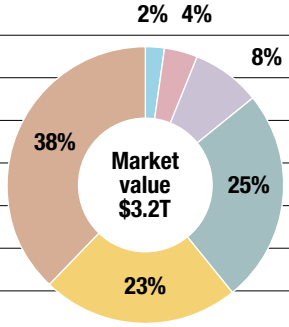
2008–2027



MARKET VALUE BY REGION

2008–2027

Region	$B
Asia-Pacific	1,190
North America	740
Europe and Central Asia*	810
Middle East	260
Latin America	140
Africa	60
World total	**$3.2T**



New airplane deliveries: **29,400**

*Includes Russia.

Cape Town Treaty benefits

The availability of global financing will be greatly aided by the recently ratified Cape Town Treaty, a legal framework that protects the rights of airplane asset owners. This treaty, combined with other improvements in airplane finance, will help to ensure that adequate capital is in place to support world fleet growth.

Fleet renewal results in a significant used market

Nearly 5,000 airplanes will be retired from North American fleets, by far the largest contributor to the 13,700-strong used-airplane market. Many of these airplanes will still have years of useful life remaining and will be in high demand in other regions. Most airplanes that remain economically viable will be acquired by developing airlines or converted to freighters.

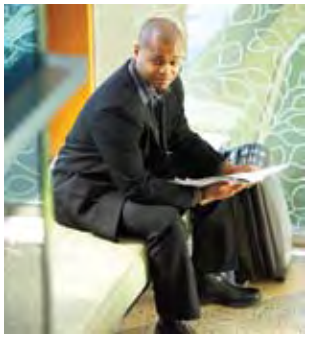
Structural shifts in the airline industry

The structure of the airline industry is fundamentally changing, and becoming more financially viable, as airlines focus more closely on specific business strategies.

Geographic and business-model balance

Low-cost airlines are growing in domestic and short-haul markets. Network airlines are enhancing their networks by dropping service in markets where they no longer hold an inherent advantage and concentrating on longer distance or international flights.

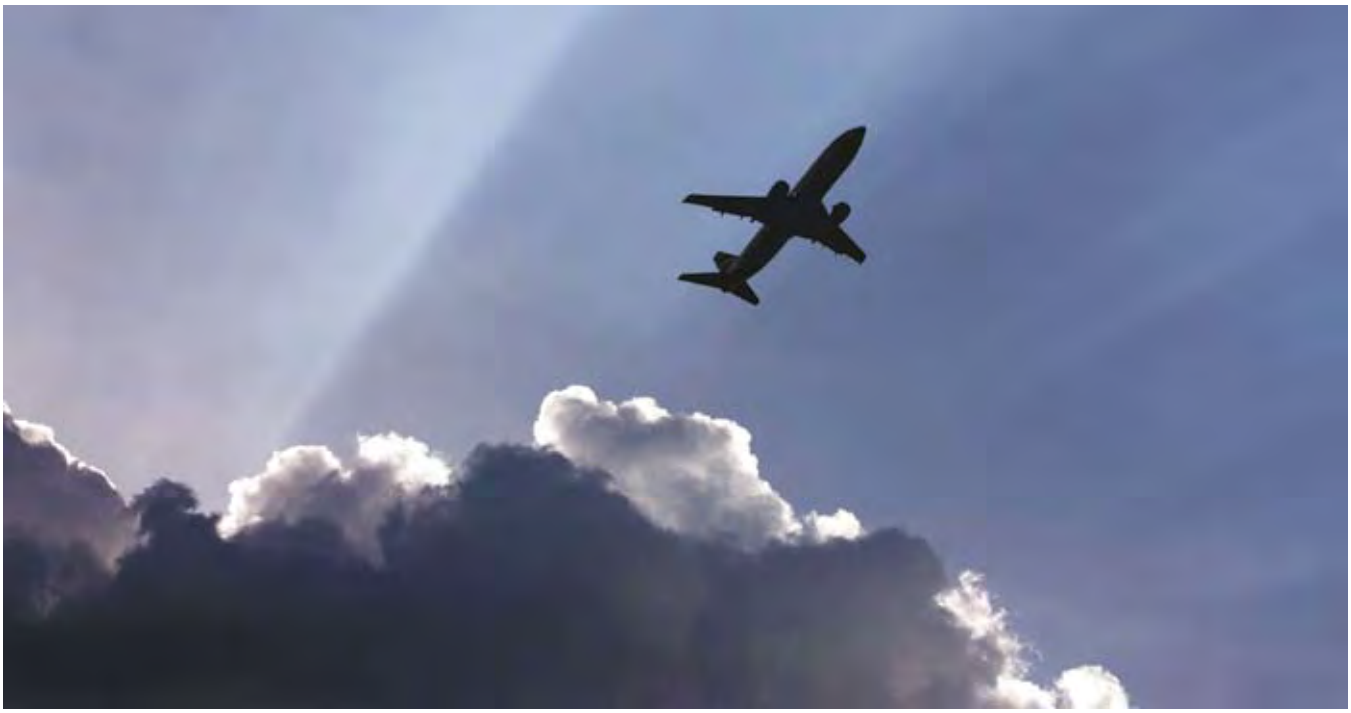
These shifts in airline strategy will lead to a more robust industry. The earning potential for each airline is closely related to its success at executing its chosen business strategy.



MARKET VALUE BY AIRPLANE SIZE

Region	Regional jets	Single aisle	Twin aisle	747 and larger	Total market value
Asia-Pacific	13	400	630	150	1,190
North America	40	420	250	30	740
Europe	10	350	320	60	740
Middle East	2	50	160	50	260
Latin America	3	90	50	1	140
Russia and Central Asia	10	30	20	4	70
Africa	2	20	40	1	60
World total	**80**	**1,360**	**1,470**	**290**	**3,200**

Values above 20 have been rounded to the nearest 10.



Airlines in emerging regions are gaining a larger market presence by increasing their domestic markets and launching widespread international service. While remaining large and important markets, North America and Europe will become less dominant.

Consolidation and the prospect of global airlines

Some airlines are consolidating; however, new airlines continually start up. Many new airlines do not become established for the long term, but some become significant businesses. For example, we have seen airlines such as WestJet (Canada), Ryanair (Ireland), Gol (Brazil), and Jet Airways (India) recently emerge.

Consolidation of larger airlines will lead in time to global airline corporations. Recent successful mergers include Air France with KLM and Lufthansa with Swiss. The merger of Delta with Northwest is being formulated, and British Airways and Iberia announced their intention to merge. Once again, British Airways and Iberia, along with Finnair and Royal Jordanian, will seek anti-trust immunity with American Airlines.

In time, international market regulations might allow more extensive combinations. It is expected that eventually single corporate airline entities will be able to operate in markets around the world, as is commonplace in other industries.

Successful cross-border structures, including franchise operations, already include LAN Airlines (Latin America), AirAsia, Jetstar, Lion Air, Tiger Airways (Asia/Australia), and Virgin (United Kingdom, Nigeria, Australasia, United States).

Cargo markets

A full presentation of the cargo forecast included within *Current Market Outlook* totals will be published in November 2008.[1]

Global economy depends on air freight

A shift toward larger freighters and new, more efficient airplanes will help keep air cargo transport affordable. Air cargo traffic (RTKs) is expected to grow at an average of 5.8 percent over the next 20 years.

The global economy demands rapid and reliable business-to-business exchange. Air cargo transport makes such exchange possible. Manufacturers depend on air freight for efficient inventory management and to source components and assemblies from world markets. Air transport sustains vital exports and allows transportation of even basic commodities in many areas of the world where ground infrastructure is lacking.

Fleet growing by 3.5 percent each year

The dependence on air transport for everyday commerce, and introduction of new freighter airplanes with expanded capabilities, means that air cargo will grow more rapidly than passenger travel. The air cargo fleet will grow at 3.5 percent, increasing from 1,950 airplanes in 2007 to 3,890 in 2027. 2,500 airplanes will be converted from passenger roles, and 860 airplanes with a value of $210 billion will be delivered new.

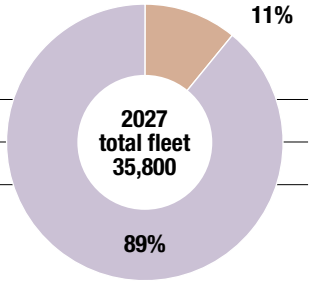
Most standard-body airplanes will be from conversions

The average cargo payload generates only half as much revenue by weight as a passenger payload. The share of cost attributed to acquisition costs is higher in smaller airplanes; they carry lower payloads.

2027 AIRPLANES IN SERVICE

11 percent will be freighters

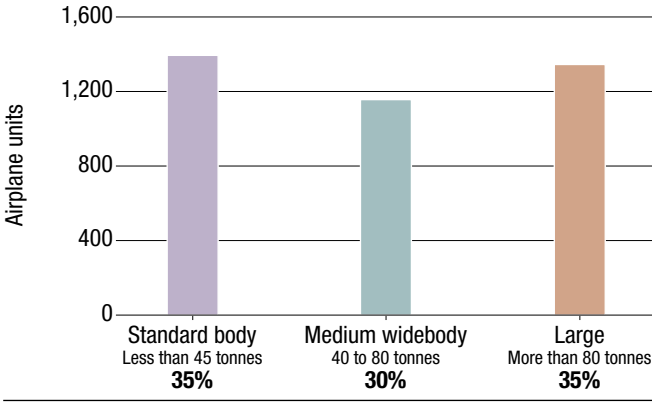
Fleet	Airplanes
▶ Freighter	3,890
▶ Passenger	31,910
Total	35,800



Freighter airplanes: **3,890**

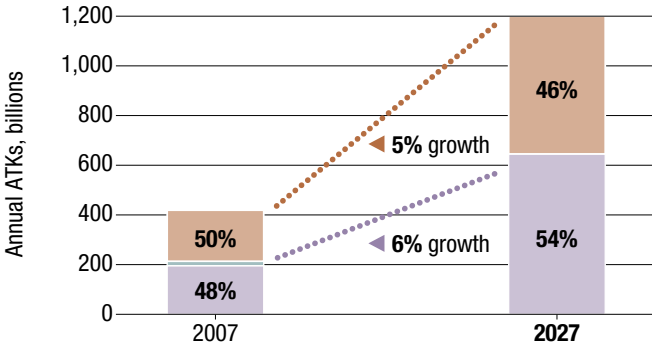
2027 FREIGHTERS IN SERVICE: 3,890

Shift toward larger airplanes



FREIGHTER CAPACITY GROWS 6.0 PERCENT

Freighter airplanes will carry a larger share of air cargo



▶ Belly ▶ Combi: **2.1%** ▶ Freighter

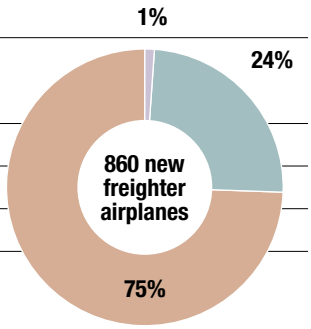
Airplanes converted from passenger to cargo have low capital costs and tend to be most attractive for standard-body freight operations. New widebody freighters offer advantages over converted airplanes in terms of fuel economy and better payload-range. Most converted airplanes will be standard-body freighters, and almost all new airplanes will be medium and large widebody freighters. Replacement airplanes will generally be larger, increasing the fleet share of large freighters from 26 percent to 35 percent by 2027.

[1]World Air Cargo Forecast: www.boeing.com/commercial/cargo.

NEW FREIGHTER AIRPLANES: 860

Most new freighters will be large

Size	New freighters
Standard body	10
Medium widebody	210
Large	640
Total	**860**



Large category differs from large passenger category

Less than 45 tonnes | 40 to 80 tonnes | More than 80 tonnes

Markets within regions

Airlines provide nearly 90 percent of their flights and carry over half their passenger traffic within regions.

Encompassing the largest domestic markets

Short-haul services are for ease of reference to our published data defined as being within regions. Flights within regions encompass the largest domestic markets of North America, Europe, China, India, Russia, and Brazil and are mostly well under 5,000 km (3,000 miles) or up to 6½ hours of flying time. Approximately half the market by traffic (RPKs) and by far the majority of flights performed by airlines worldwide are within regions.

Passengers on these shorter flights have very different requirements from passengers on long-haul flights. Their focus is on securing the lowest air fare and being able to select the best schedule from a wide choice of services between departure and arrival airports close to their final destination. This lends the market to low-cost airlines that specialize in providing these types of services. Pricing amenities on a menu basis rather than including them in the base fare is seen by many customers as an advantage. They do not want to pay for things they do not use.

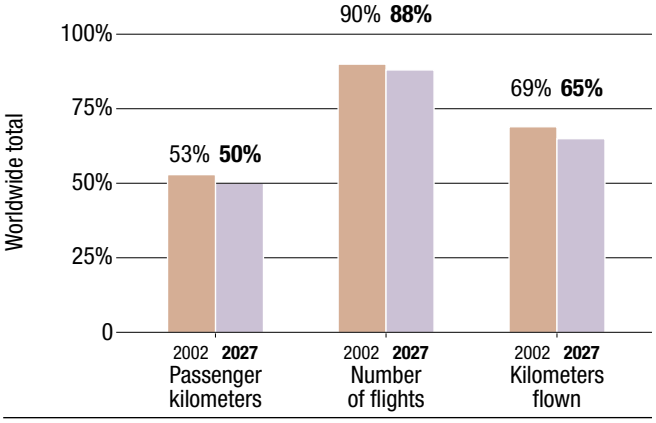
Similar trends around the world

Low-cost carriers have proved that the basic formula works in markets around the world and lower fares universally stimulate air travel growth. Airlines such as Southwest (United States), WestJet (Canada), Ryanair (Europe), Gol (Brazil), AirAsia (Malaysia and region), Jetstar (Australia and Asia), and Lion Air (Indonesia and region) use large fleets of single-aisle airplanes, largely connecting less congested and lower cost secondary airports. Many more new carriers will enter these large markets over time.

Network carriers are reworking their approach to shorter flights by focusing on markets in which there is a high proportion of business travel or premium leisure markets. Their networks increasingly focus on services that provide good connections to long-haul and international flights.

MARKET SHARE FOR FLIGHTS

Within all world regions



Airplane size trends

Average airplane size on routes within regions continues to increase worldwide. The lower per-seat costs of larger single-aisle airplanes allow lower fares, which stimulate market growth and generate the passenger traffic needed to maintain high load factors. Today about 72 percent of jet flights within regions are on single-aisle airplanes, increasing to about 82 percent over the next 20 years.

Regional jet share of these flights will decline from 22 percent to 11 percent. Higher fuel costs, environmental concern, and congestion at key hub airports will present a strong case for moving from regional jets to more efficient single-aisle types.

Small and medium-sized twin aisles will increase their share of regional services, owing in large part to high growth within Asian markets. Large twin aisles will represent a small portion of short-haul services; these types are optimized for much longer stage lengths.

Longer flights

Twenty years ago, nearly three quarters of all flights were less than 800 km (500 miles) in length, linking many hub airports. Today only about half of all flights are less than 800 km. Over time, airline networks developed to connect fewer, larger hubs that were farther apart. Improvements in regional airplane capabilities allowed points to be connected farther from each hub. As markets grew, the number of direct connections between cities increased, with larger aircraft flying longer distances.

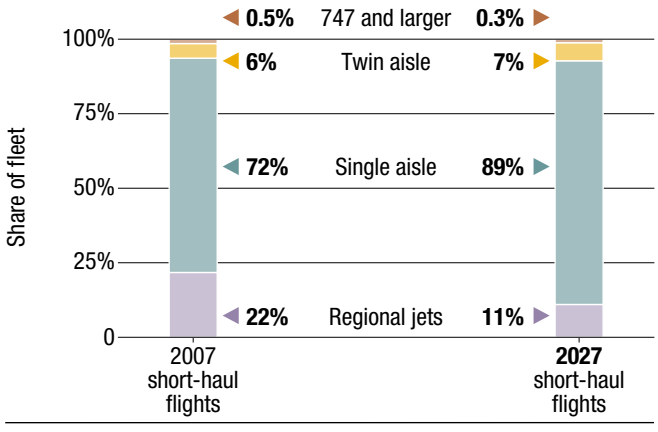
Because many close-in markets are already well served, passenger interest in new services is increasingly pointed toward connecting more distant locations. Very-short-haul flying will continue to decline.

Future products

Over the next 20 years 19,160 new single-aisle airplanes will be needed. This market sector is central to the future of the airline and airplane manufacturing industries. Introduction of the next generation of airplanes must be timed to bring sufficient improvement in economics and environmental performance to justify multi-billion-dollar investments in airline fleet renewal.

SHORT-HAUL FLIGHT DISTRIBUTION

By airplane size



Source: Boeing research.

Jet services under 5,000 km (3,000 miles).

The environment

New airplanes are 70 percent more fuel efficient than 40 years ago, now consuming around 3.5 liters of fuel for each 100 passenger-kilometers flown.

Improving on an already impressive record

Environmental progress in aviation is a continuous theme and one that is receiving more attention than ever before. At Boeing, more than 75 percent of our research and development efforts concentrate on advancing environmentally progressive innovations, from pioneering sustainable biofuels and other renewable energy sources to designing new noise-reducing technologies and optimizing air traffic system efficiency.

Boeing is continuously working to make commercial air transport cleaner, quieter, and more efficient. According to the Intergovernmental Panel on Climate Change (IPCC), the contribution of air transport is just about 2 percent of human-produced CO_2 emissions, although this could reach 3 percent by 2050. As such, the industry is working toward carbon-neutral growth (no increase in carbon emissions in spite of traffic growth) as a first step toward a carbon-free future.

Fuels from sustainable resources

The development of sustainable biofuels from promising feedstocks such as algae and jatropha is being actively pursued. In addition to absorbing CO_2 from the atmosphere, sustainable biofuels do not compete with food sources (such as corn and soybeans); require minimal land, water, and energy to produce; and provide economic value to the communities in which they are grown. These attributes help offset their consumption and move us closer to carbon neutrality.

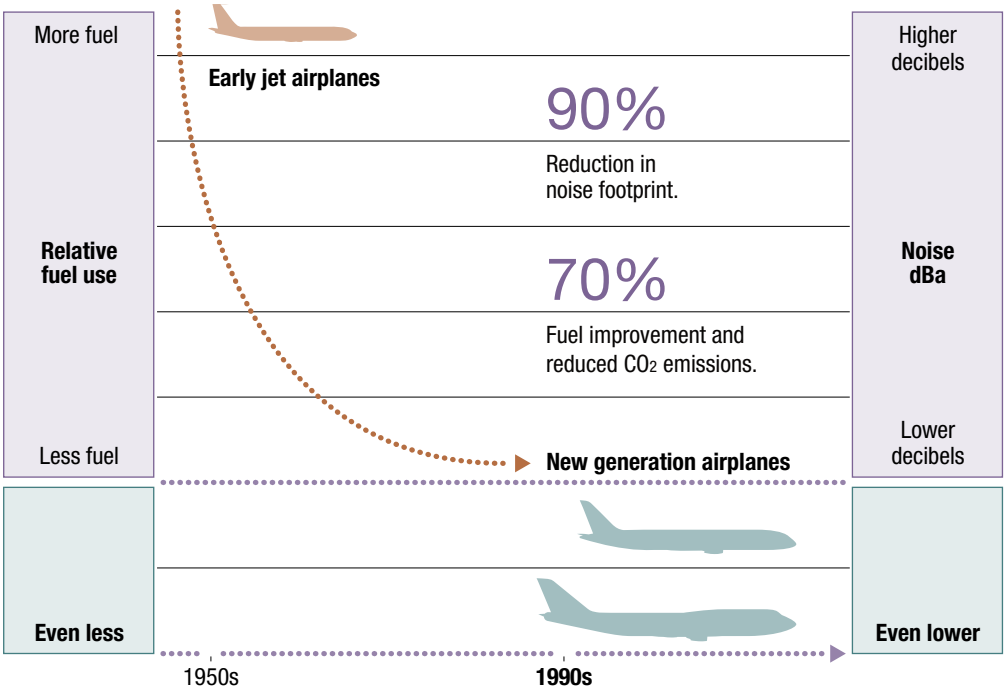
THE BOEING PLAN AND COMMITMENTS

Pioneering improvements through innovation

Deliver progressive new products and services	Improve performance of worldwide fleet operations	Pioneer use of new technology, including new fuel sources	Relentlessly pursue manufacturing and life cycle improvements
			
15%	25%	75%	100%
• At least 15 percent improvement in CO_2 and fuel efficiency.	• Focus on 25 percent efficiency improvements in worldwide fleet fuel use and CO_2 emissions by 2020.	• More than 75 percent of research and development will benefit environment performance.	• ISO 14001 certification plan for 100 percent of Boeing manufacturing sites. • Maximize Lean and recycling.

BUILDING ON A STRONG TRACK RECORD

New airplanes have consistently lower noise and emissions



Noise footprint based on 85 dBa.

Every generation of airplane quieter and quieter

Boeing continually pursues noise-reducing innovations, making each new airplane quieter than its predecessor. Advances include saw-tooth-shaped chevrons at the end of the engine nacelle that reduce noise and shape memory alloys—or "smart" alloys—that automatically respond to changes in temperature, minimizing noise during takeoff and reducing the need for heavy hydraulics.

Boeing is helping to resolve complex airspace system problems by actively working with governments and industry partners. The aim is to develop solutions that optimize the three key system areas: ground infrastructure, airplane capabilities, and air traffic management (ATM) procedures and regulations.

Rethinking energy use on airplanes

Advanced technologies for generating and harnessing energy are reducing the need to produce electricity from nonrenewable resources. Boeing is developing applications in key energy-harvesting technologies, including electrodynamics (converting finger pressure into wireless electrical signals), thermoelectrics (converting temperature gradients into electrical power), piezoelectrics (harnessing vibration energy), and solar cells. Concerning fuel cells, Boeing recently launched the first manned mission during which straight and level flight was powered solely by a hydrogen fuel cell.

OUTLOOK **BY REGION**

New influences

Air transport markets are dynamic: they are always changing. The largest markets will remain, and emerging regions will bring new influences.

Shifting emphasis

Asia is expected to need the most new airplanes and will represent the largest market by value of deliveries. For the first time, the value of the European airplane market will be equivalent to that in North America. As the airplane market expands, welcome competition is anticipated from manufacturers around the world.

New trade routes and global sourcing will stimulate air cargo markets, for example, with strong growth in Southwest Asia.

Airlines in the Middle East have a highly expansive vision of the market for connections between any two major world centers with only one stop. Investment in Middle Eastern infrastructure and airplanes is on a scale to match.

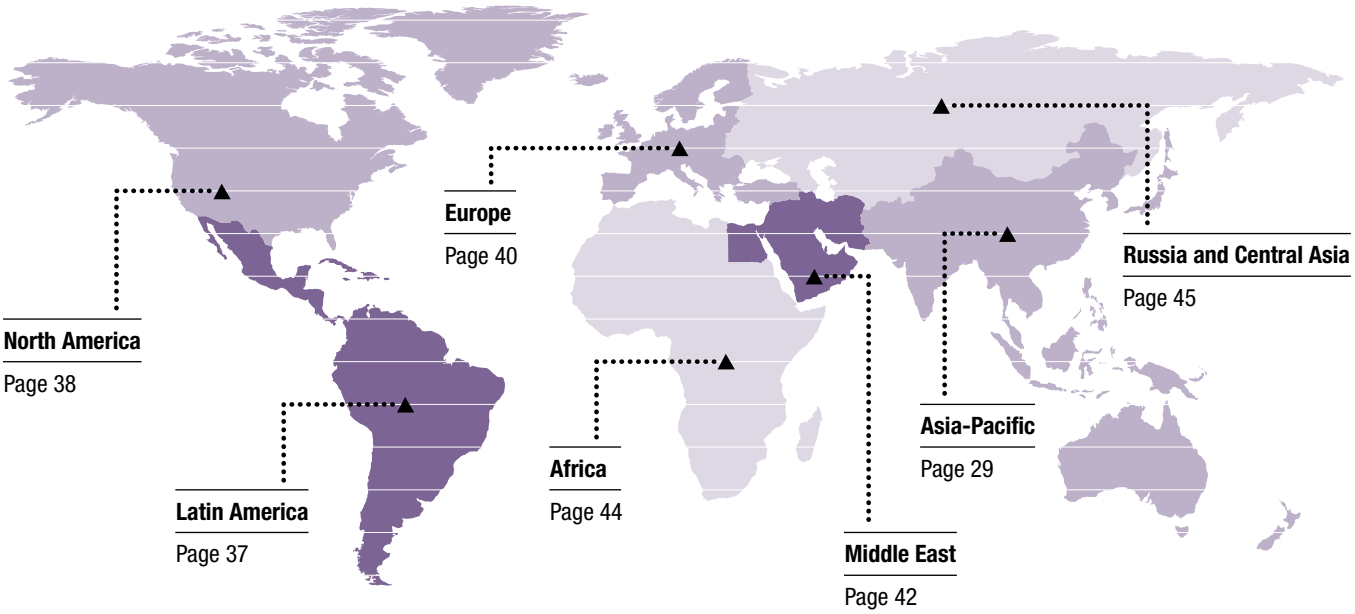
Network airlines in the United States are already seeing contraction in domestic operations as they shift emphasis toward more rewarding international routes. Stronger growth in North American markets will return in time. Meanwhile, the current fast pace of growth in Europe is expected to moderate a little.

A better balance

Dynamic markets combine to create a more balanced future. In 2027, Asia-Pacific and North America will each have approximately 30 percent of the fleet in service, with another 25 percent in Europe, Russia, and Central Asia. More balance will exist between different types of airlines and between replacement and growth demand for airplanes.

NEW AIRPLANE MARKET BY REGION

Market value: $3,200 billion



Reshaping the fleet

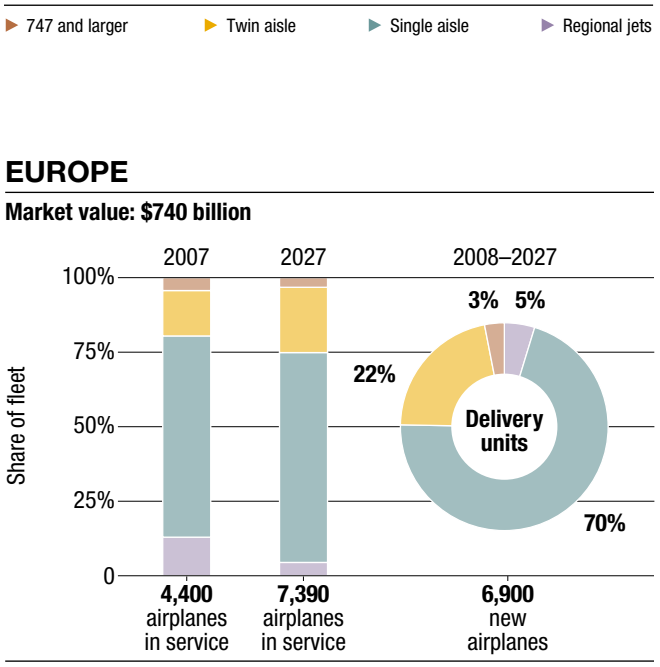
Record numbers of aircraft on order bring unprecedented visibility into the shape of future airplane requirements.

Clear direction

A record 7,900 airplanes, or 31 percent of our forecast for deliveries of new airplanes with 100 seats or more, are already on firm order. Because the distribution of near-term deliveries is already largely certain, we have a good indication of what airplane sizes will be needed and where they will be delivered.

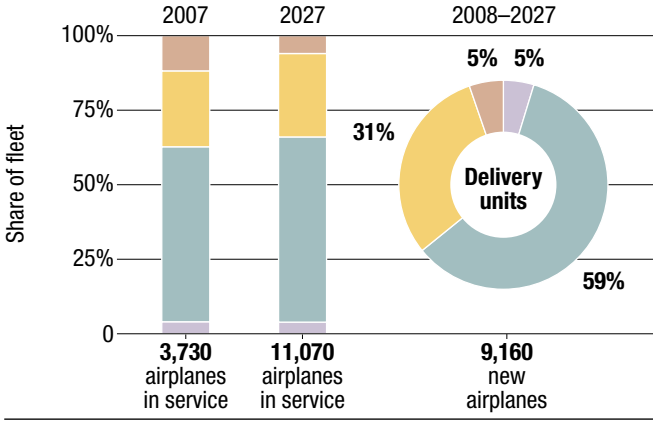
Each region has unique requirements shaping the market

Airlines of each region and business model have unique requirements for their future fleet. An immediate need at many airlines is to replace large numbers of older airplanes. Elsewhere, growth into opportunities generated by market liberalization is the priority. In every region except the Middle East, fleet changes will lead to a reduced share in the largest and smallest airplane categories.



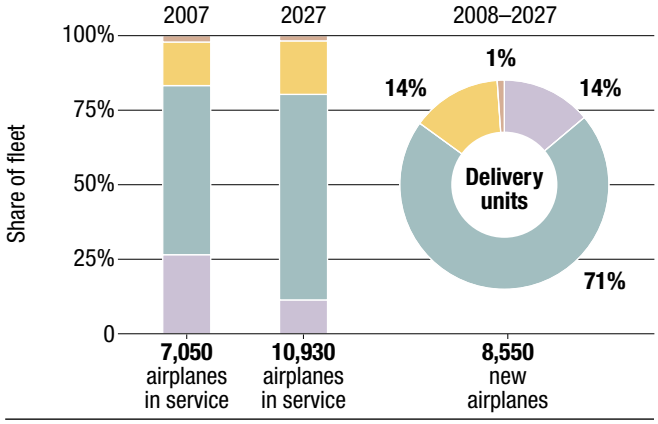
ASIA-PACIFIC

Market value: $1,190 billion



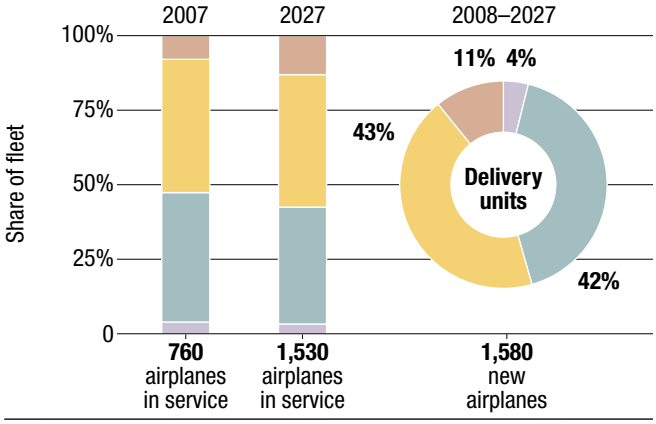
NORTH AMERICA

Market value: $740 billion



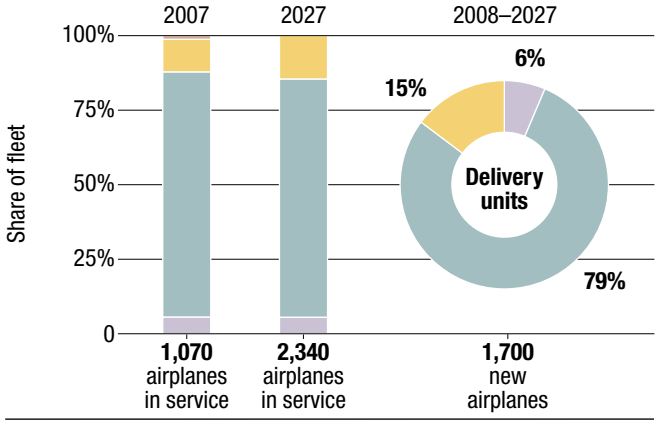
MIDDLE EAST

Market value: $260 billion



LATIN AMERICA

Market value: $140 billion



WORLD SUMMARY

New airplanes: 29,400

Annual growth	
GDP	3.2%
RPKs	5.0%
RTKs	5.8%
Airplane fleet	3.2%

Deliveries	
747 and larger	980
Twin aisle	6,750
Single aisle	19,160
Regional jets	2,510

Market value	
Total, $ billions	3,200
Average, $ millions	110

Airplane fleet	
2007	19,000
2027	35,800

World summary

Aviation links the world's regions—creating markets, stimulating production, and fostering the competition that drives progress.

Benefiting people worldwide

The number of people who can afford to travel by air is growing every day. In the world's most populous nations and fastest growing economies, people are joining the middle classes at an unprecedented rate, gaining the income, leisure time, and desire to travel.

The large, rapidly growing economies of China and India will demand a larger share of the world's air transport and of the global aircraft fleet. Although North America and Europe will account for about half the market, demand will stabilize across the global market as emerging regions follow their own economic cycles.

Affordable long-range air services are key to spanning the vast distances that separate markets such as Oceania, Russia, and Central Asia, where ground transport infrastructure is lacking.

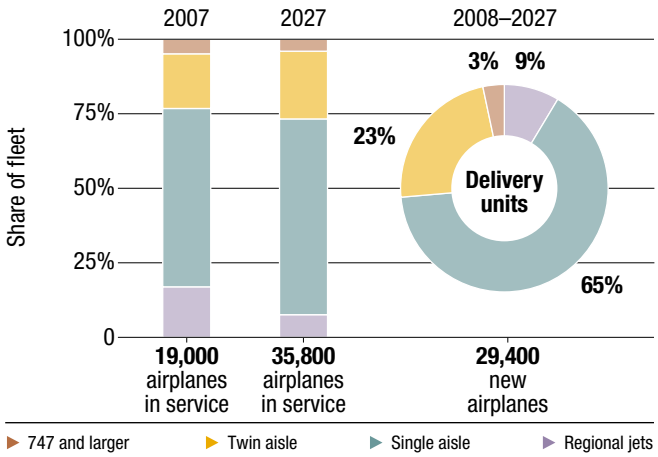
The Middle East is transforming itself into a global crossroads for air transport. Air traffic in prosperous Northeast Asia will continue to match the average global growth rate, spurred on by the success of low-cost carriers and growing demand for affordable long-distance service.

Key to regional growth and development

Air transport is the prime mover in Southeast Asian economies. Bringing tourist revenues and fostering business opportunities among the region's commercial centers, air transport is recognized by the Association of Southeast Asian Nations (ASEAN) as key to the region's development and integration into the global economy.

WORLD

Market value: $3,200 billion



ASIA-PACIFIC

New airplanes: 9,160

Annual growth	
GDP	4.1%
RPKs	6.7%
RTKs	6.9%
Airplane fleet	5.6%

Deliveries	
747 and larger	480
Twin aisle	2,810
Single aisle	5,440
Regional jets	430

Market value	
Total, $ billions	1,190
Average, $ millions	130

Airplane fleet	
2007	3,730
2027	11,070

Asia-Pacific

As a whole, Asia-Pacific will be the largest air transport market by 2027, with 45 percent of travel being to, from, or within the region.

Detailed breakdown by region

Asia-Pacific market forecasts are presented on the pages that follow in five separate markets, according to the map. China represents the largest of these markets and will need 41 percent of Asia's new airplanes over the next 20 years.

Markets by airplane size

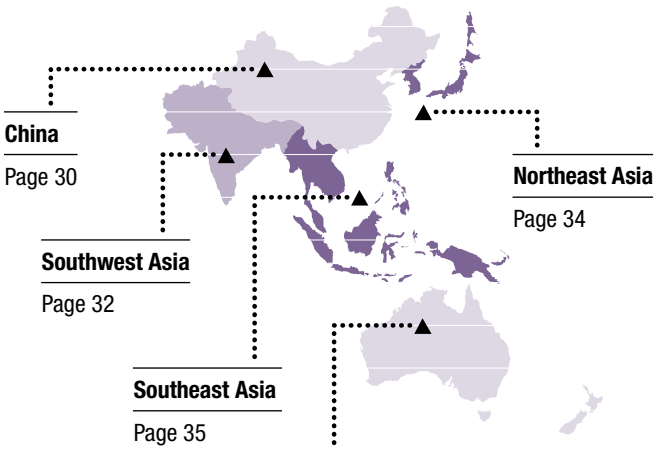
Single-aisle airplanes will be most needed in China (2,600), Southeast Asia (1,170), and Southwest Asia, including India (830). Twin-aisle airplane demand will focus on Southeast Asia (870), China (780), and Northeast Asia (700), with Southwest Asia and Oceania both needing about 230 new airplanes of this size.

Southeast Asia will require more (220) of the largest airplanes than any other world region. Over half the region's need for 430 regional jets will come from China (230).

Asia-Pacific markets will benefit strongly from market liberalization. This will lead to fleet growth of 5.6 percent each year, at a faster rate than economic growth of 4.1 percent. The fleet will grow from 3,370 to 11,070 airplanes.

FIVE REGIONS

Asia-Pacific



China
Page 30

Southwest Asia
Page 32

Southeast Asia
Page 35

Northeast Asia
Page 34

Oceania (Australasia)
Page 36

CHINA

Rank: 3

New airplanes: 3,710

Annual growth		Rank
GDP	7.1%	1
RPKs	7.9%	2
RTKs	7.1%	2
Airplane fleet	6.4%	1

Deliveries		Rank
747 and larger	100	4
Twin aisle	780	4
Single aisle	2,600	3
Regional jets	230	4

Market value		Rank
Total, $ billions	390	3
Average, $ millions	110	7

Airplane fleet		Rank
2007	1,300	4
2027	4,560	3

China

Plans are in place to expand China's aviation infrastructure, which will be a continual challenge as the region continues to grow strongly.

The second largest aviation market

China is the world's second largest commercial aviation market, after the United States. Since 2000, the number of air passengers has more than doubled, with an average annual growth rate of 13.5 percent. Over the next 20 years, the demand for air travel will grow at an annual rate of 7.9 percent. After a period of rapid expansion, the passenger market is expected to moderate to a period of sustained long-term growth. Domestic traffic alone will grow at an average annual rate of 8.9 percent due to rising income levels and improved services offered by the airlines.

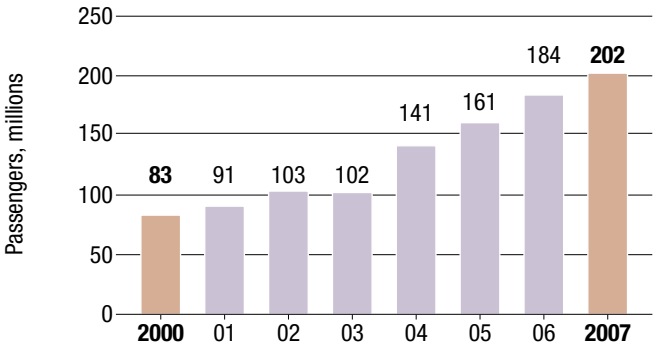
Air traffic was adversely affected following an 8.0 magnitude earthquake that hit China's Sichuan Province on May 12, 2008. It was one of the nation's worst natural disasters in modern history. An estimated 70,000 people lost their lives and thousands more were injured or missing. Commercial air transportation played an important role in bringing medical supplies and other emergency cargo to the region.

Rapid increase in air cargo volumes

The number of freight operators in China has rapidly increased. The volume of cargo transported by air is steadily rising. Over the next two decades, cargo traffic carried by Chinese airlines will grow at an annual rate of 7.1 percent—well above the world average. Trade growth is being strengthened by a relaxation of regulations on ownership of air cargo operations and their market penetration.

CHINESE PASSENGER MARKET DOUBLED

Market expansion will continue



Source: International Civil Aviation Organization. Includes Hong Kong and Macau.

International trade has increased dramatically, because most of the country's manufactured goods are exported. Air cargo exports include apparel and computing and telecommunication equipment. Key trading partners are located in Asia, Europe, and North America.

Most of China's domestic air cargo activity is centered in the southern provinces, where much of the nation's population is located. As incomes increase, domestic demand for higher priced goods also increases.

Airplane fleet to triple over two decades

The airline fleet in China has grown 2.4 times since the year 2000. Over the next 20 years, growth in the fleet will average 6.4 percent each year. The fleet will more than triple to 4,560 airplanes by 2027—about as many airplanes as are in Europe today.

Single-aisle airplanes will account for 70 percent of the new purchases, driven by the fast-growing domestic market. Additional small and intermediate twin-aisle airplanes will be needed to expand international and domestic services. Demand for new airplanes will include a limited number of large airplanes to connect China with other major world hubs.

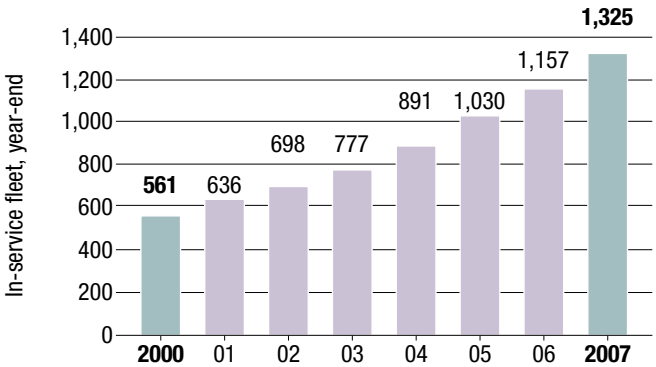
Grappling with the challenges of growth

China is grappling with modernization and growth. Current difficulties involve infrastructure constraints and a shortage of commercial aviation professionals, including pilots, mechanics, and air traffic controllers. Through 2020, the nation will invest 450 billion yuan ($66 billion) to build nearly 100 new airports and improve existing facilities. Nearly half this investment in new airports will have been spent by 2010. There is also a heavy investment in MRO joint ventures and training schools.

Liberalization is continuing to stimulate the demand for air travel. Examples include further agreements between China and the nations of Singapore, Japan, and South Korea, as well as between mainland China and Hong Kong. Liberalization is also taking place between Hong Kong and India. In June 2008, in advance of the Beijing Olympic Games, tourism restrictions were eased between China and the United States with the granting of Approved Destination Status for United States tourist markets. In July, direct charter flights were approved between mainland China and Taiwan.

CHINESE JET FLEET DOUBLED

Future growth of 4–6 percent



Source: Ascend CASE.

Includes Hong Kong and Macau.

SOUTHWEST ASIA

Rank: 8

New airplanes: 1,150

Annual growth		Rank
GDP	6.4%	2
RPKs	8.0%	1
RTKs	8.9%	1
Airplane fleet	6.3%	2

Deliveries		Rank
747 and larger	20	9
Twin aisle	230	9
Single aisle	830	6
Regional jets	70	7

Market value		Rank
Total, $ billions	120	8
Average, $ millions	100	8

Airplane fleet		Rank
2007	430	10
2027	1,450	9

Southwest Asia (including India)

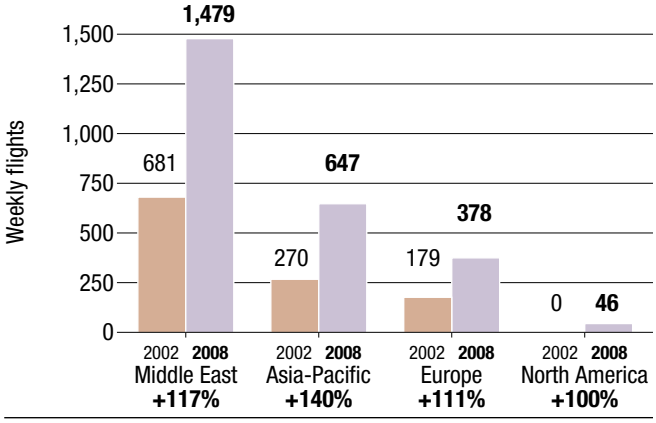
Despite major challenges, the region's air transportation system is poised for dramatic growth.

High-growth markets

Air transport demand is being fueled by robust economic growth, combined with expanded air service agreements. Intense economic development in Southwest Asia is driving a need for imported goods and materials, while exports of textiles and equipment continue to escalate. Annually, international air cargo moving into, within, and out of Southwest Asia now exceeds 1.4 million tonnes.

INTERNATIONAL SERVICE GROWTH

Flights more than doubled over 6 years



Source: Official Airline Guide, August 2002 and 2008.

India's airports handled close to 120 million domestic and international passengers for the 1-year period ending March 2007, representing a 21 percent increase over the previous year. This is the fastest rate of expansion of any market in the world. Looking ahead, the region's air traffic is expected to grow at an annual rate of 8 percent.

Investment in airports

To keep pace with this growth, public and private interests are investing $9 billion in India's airports over 3 years. Critical improvements to India's 10 largest airports will include new passenger terminals, cargo facilities, and runways. New airports are also being built to meet demand. In addition, more than $1 billion is being invested at 35 nonmetropolitan airports in less developed parts of India.

Young population spurs growth

With a population of approximately 1.1 billion people, half of all Indians are under the age of 25. This vibrant group represents an increasingly prosperous segment from which airlines can attract new customers. They are finding air travel to be a cost-competitive alternative to the once dominant railways.

According to a report from McKinsey Global Institute (MGI), India's middle class will grow to nearly 600 million people by 2025. MGI estimates consumer consumption within this segment of the population will increase nearly fourfold, reaching $1.5 trillion (U.S.) over the next 20 years.

A recent CLSA Asia-Pacific Markets survey found that 41 percent of Indian households had not taken a vacation over a 12-month period. With only 0.02 annual air trips per capita in India, there is a clear opportunity to attract travelers away from railroads onto airlines. Of those who had taken a vacation, an overwhelming majority chose to take ground transportation, with a similar situation in Bangladesh and Pakistan.

The influx of new capacity in India has stimulated new demand due to price competition. The combination of competitive air fares and rising consumer spending power could result in the Southwest Asia domestic market sustaining an 8.5 percent annual air traffic growth rate over the next 20 years.

Liberalization strengthens markets

Rapid growth has been stimulated by new airlines, driving down fares, improving efficiency, and increasing the frequency of service on many routes.

Liberalization is an important factor. A recently improved bilateral agreement between China and India is just one example of work under way to open new opportunities in high-growth markets.

Air service has rapidly expanded between Southwest Asia and other major regions. Traffic to and from the Middle East, for example, has increased by nearly 70 percent over the past 5 years. India's open skies agreement with the United States, which effectively removes all restrictions on new nonstop service, will lead to further traffic growth.

Fleet sizes will grow

Continued liberalization of international air services will drive the need for new long-haul, twin-aisle airplanes. The air cargo fleet will grow from just 16 airplanes in 2007 to around 100 by 2027. Overall, the region's fleet will triple in number to 1,450 over the next 20 years, with 75 percent of the new deliveries supporting growth rather than the replacement of older aircraft. Most new airlines will be single aisles.

IMPROVEMENT PROJECTS AT INDIA'S TOP 10 AIRPORTS

Location	2008 daily departures	Major upgrades	New airport	Completion
Mumbai	322	Yes	Yes	2010 (airport upgrade), 2012 (new airport)
Delhi	308	Yes	Planned	2010 (new terminal)
Chennai	168	Yes	Yes	2010 (airport upgrade), 2015 (new airport)
Bangalore	161	–	Yes	2008 (opened in May)
Hyderabad	130	–	Yes	2008 (opened in March)
Kolkata	120	Yes	–	2011 (phase 1, new terminal)
Kochi	57	Yes	–	2012
Ahmedabad	46	Yes	Planned	2008 (airport upgrade)
Trivandrum	36	Yes	Planned	2007 (airport upgrade)
Goa	29	–	Yes	2014

Source: Centre for Asia Pacific Aviation.

NORTHEAST ASIA

Rank: 7

New airplanes: 1,400

Annual growth		Rank
GDP	1.3%	11
RPKs	4.9%	9
RTKs	7.0%	3
Airplane fleet	4.5%	4

Deliveries		Rank
747 and larger	100	5
Twin aisle	700	5
Single aisle	520	8
Regional jets	80	6

Market value		Rank
Total, $ billions	230	6
Average, $ millions	160	2

Airplane fleet		Rank
2007	670	8
2027	1,620	6

Northeast Asia

Airport expansion and further liberalization in Japan and Korea will stimulate air travel and contribute to economic growth.

Airport expansion and liberalization

Overall, air travel growth in Northeast Asia is expected to match the world average. Regional traffic between Northeast Asia and other Asia-Pacific regions is projected to grow more rapidly, at 6.2 percent. Orders for twin-aisle jets have increased as demand for economic long-haul service continues to grow.

Capacity at both Tokyo's Haneda and Narita airports will expand in 2010. The opening of the international terminal and fourth runway at Haneda airport will provide a 40 percent increase in capacity for both domestic and international flights. The extended second runway at Tokyo Narita airport will also enable growth in international services. Traffic will increase substantially, with both airports looking at extended hours of operation. Korea's Incheon airport (Seoul) is also expanding with additional gates and a third runway.

Air cargo service in Northeast Asia remains strong, with growth forecast at 7 percent. In the intra-Asia cargo market, the top 10 country pairs include China to Japan and Korea, and Japan to Korea, Taiwan, Singapore, and Malaysia.

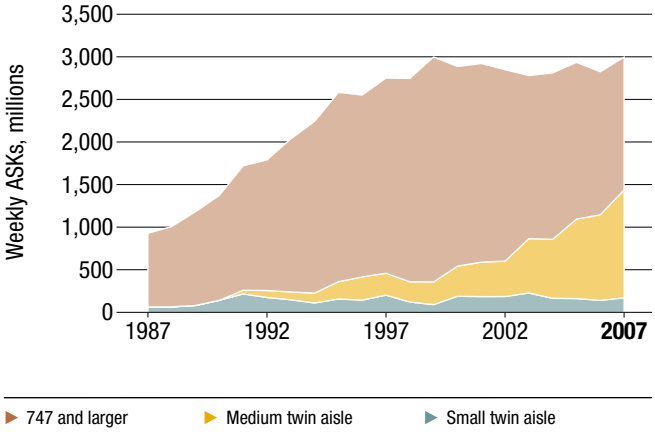
Low-cost carrier opportunities

Operating restrictions are gradually easing between countries in the region and to other nations in Asia-Pacific, including China.

Low-cost carriers—both domestic airlines and LCCs from outside the region—are showing a strong interest in serving this market as regulations ease and airport capacity expands. This is stimulating a demand for single-aisle airplanes.

MORE MEDIUM TWIN-AISLE AIRPLANES

Northeast Asian airline routes of more than 5,000 km



SOUTHEAST ASIA

Rank: 4

New airplanes: 2,300

Annual growth		Rank
GDP	4.4%	4
RPKs	6.8%	3
RTKs	6.5%	6
Airplane fleet	5.6%	3

Deliveries		Rank
747 and larger	220	1
Twin aisle	870	3
Single aisle	1,170	5
Regional jets	40	10

Market value		Rank
Total, $ billions	360	4
Average, $ millions	160	3

Airplane fleet		Rank
2007	940	6
2027	2,770	4

Southeast Asia

Substantial orders for new airplanes, including twin-aisle jetliners, reflect confidence in continued economic growth.

Aviation key to economic success

Commercial aviation plays an essential role in the economic development of Southeast Asia. Low-cost carriers allow tourists to visit multiple locations in the region, driving the development of hotels and other guest facilities. Air transportation also supports business activity in major cities and centers of commerce.

The region has experienced strong economic growth above world average, which is expected to continue for the next 20 years. Air passenger traffic is projected to flourish at 6.8 percent, and air cargo will also be strong. The growing strength of the passenger market is due, in part, to liberalization.

ASEAN members liberalize air services

The region's 10 countries have worked through ASEAN to strengthen their economic community and encourage collaboration. In November 2007, ASEAN members signed an agreement to achieve liberalization of scheduled passenger routes between capital cities and full liberalization of air freight services by December 2008. ASEAN envisions establishing a single aviation market by 2015.

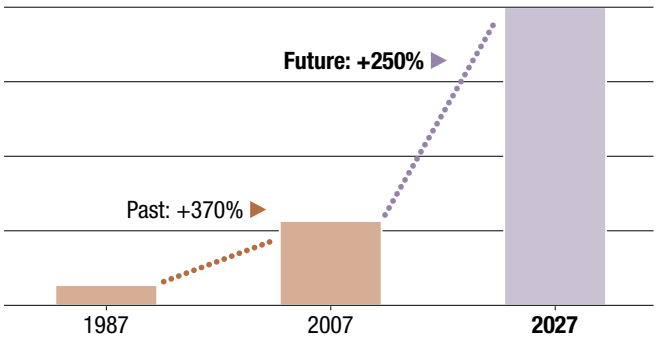
The Southeast Asia market is favorable for low-cost carrier expansion, which helps stimulate air travel growth. AirAsia, Jetstar Asia, Lion Air, and Tiger Airways have increased services to more countries.

International tourist destinations

The top 10 sources of visitors to Southeast Asia are ASEAN countries, Europe, China, Japan, Korea, the United States, Australia, India, Taiwan, and Hong Kong.

STRONG CAPACITY GROWTH (ASKs)

ASEAN liberalization stimulates markets



Source: Official Airline Guide and Boeing research.

OCEANIA

Rank: 10

New airplanes: 600

Annual growth		Rank
GDP	3.1%	8
RPKs	5.2%	8
RTKs	7.0%	3
Airplane fleet	3.2%	7

Deliveries		Rank
747 and larger	40	7
Twin aisle	230	8
Single aisle	320	10
Regional jets	10	11

Market value		Rank
Total, $ billions	90	9
Average, $ millions	150	4

Airplane fleet		Rank
2007	360	11
2027	670	11

Oceania (Australasia)

Australia and New Zealand are gearing up for growth while taking on cost challenges with sophisticated strategies.

Strategies set stage for future growth

Commercial airlines in Australia and New Zealand are facing tough competition, along with high fuel prices and rising operating costs. Despite these challenges, the industry is looking ahead to a period of significant growth in both passenger and cargo traffic. New aircraft are on order to meet the anticipated demand. Sophisticated business strategies are being implemented to stay competitive and set the stage for future growth. This includes the rapid expansion of low-cost operations.

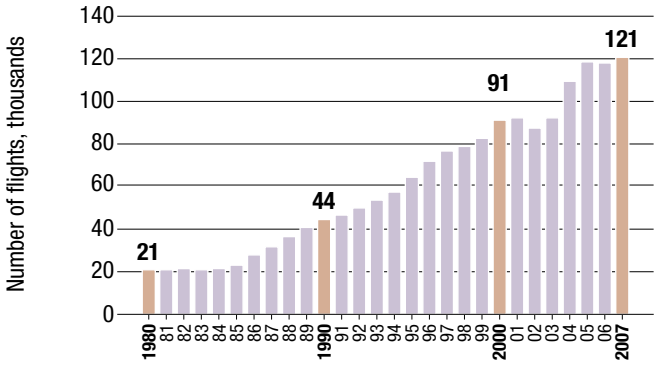
In March 2008, Australia and the United States officially signed an open skies agreement, which allows designated carriers unlimited operations between the two countries. Virgin Blue's new long-haul carrier, V-Australia, is planning to take immediate advantage of the agreement by launching service between Sydney and Los Angeles. The agreement also provides opportunities for cooperative marketing arrangements, including code sharing, between Australian and U.S. carriers. Potential new routes could include such destinations as Chicago, Houston, Dallas, Seattle, and Las Vegas.

Competition driven by tourism

Tourism is an important industry in Australia; domestic and international airlines compete to serve this market. A variety of international franchise LCCs have seized opportunities to carry travelers to and from Australia through both short-haul and long-haul routes. Freight traffic through Oceania is projected to grow at a substantial rate of 7 percent. Australia has the highest volume of air cargo traffic in the region.

AUSTRALIA'S INTERNATIONAL FLIGHTS

Overseas markets opening up



Source: Australian Government.

LATIN AMERICA

Rank: 5

New airplanes: 1,700

Annual growth		Rank
GDP	4.0%	7
RPKs	6.5%	4
RTKs	6.4%	7
Airplane fleet	4.0%	5

Deliveries		Rank
747 and larger	–	–
Twin aisle	250	7
Single aisle	1,340	4
Regional jets	110	5

Market value		Rank
Total, $ billions	140	7
Average, $ millions	80	10

Airplane fleet		Rank
2007	1,070	5
2027	2,340	5

Latin America

Growth of Latin American airlines will be among the strongest in the world, featuring newer, more efficient airplane fleets and more comprehensive airline networks.

Strong focus on customer service

An increasingly strong focus on customer service is providing Latin American carriers the ability to stimulate traffic domestically and compete internationally.

Traffic growth within Latin America is among the highest in the world

Annual traffic growth within Latin America will be 6.7 percent, making it the highest growth region outside Asia-Pacific. Economic growth, increased stability, and liberalization in trade and air transport are contributing to above-average traffic growth rates projected for the region.

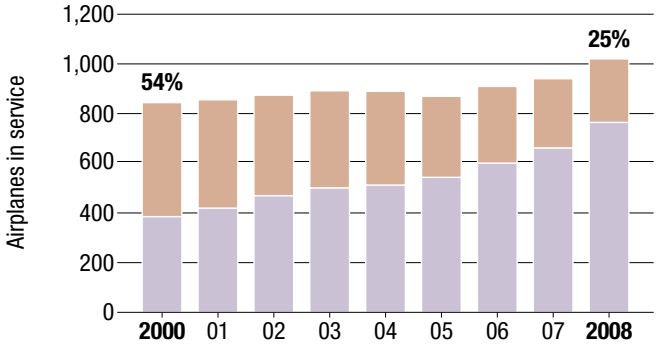
Air transport liberalization has driven down fares by providing an environment for emergence of low-cost carriers in the region, particularly in Mexico and Brazil. Low-cost flights have stimulated demand by increasing tourist traffic and attracting first-time fliers, who might otherwise have traveled by alternative means such as bus—or not traveled at all. The strong business focus of the LCCs has enhanced service and offered passengers a wider and more cost-competitive variety of choices.

Robust growth in long-range traffic

Network carriers have opened up new long-range routes such as Mexico City to Shanghai (Aeroméxico) and Santiago to Toronto (LAN). Success in expanding point-to-point service and improved access to capital have led to growth in demand for long-range airplanes. Continued investment in infrastructure will facilitate the high growth rates expected in Latin America.

FLEET CONTINUES TO GET YOUNGER

Excludes regional jets



Source: Ascend CASE.

▶ Older generation ▶ Newer generation

NORTH AMERICA

Rank: 1

New airplanes: 8,550

Annual growth		Rank
GDP	2.5%	9
RPKs	3.4%	11
RTKs	4.9%	10
Airplane fleet	2.2%	10

Deliveries		Rank
747 and larger	90	6
Twin aisle	1,190	2
Single aisle	6,080	1
Regional jets	1,190	1

Market value		Rank
Total, $ billions	740	1
Average, $ millions	90	9

Airplane fleet		Rank
2007	7,050	1
2027	10,930	1

North America

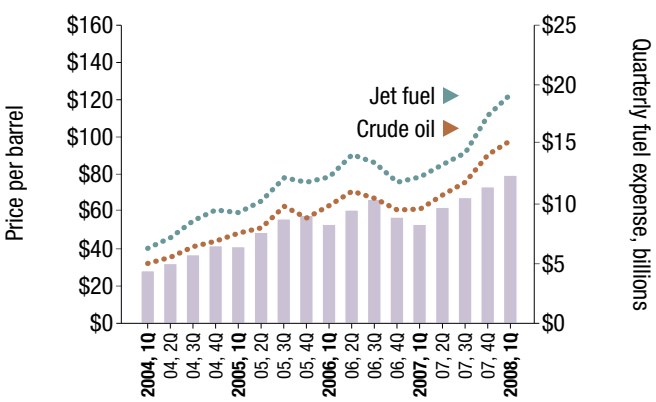
Improvements offered by newer generation airplanes, including greater fuel efficiency, make a compelling case for fleet renewal.

Higher performance fleets

U.S. airlines are looking to transform their fleets to more efficient, higher performance airplanes that carry more passengers. Financial challenges in recent years have slowed fleet turnover below historical levels. Improvements offered by newer generation airplanes, including significantly greater fuel efficiency, make a compelling case for fleet renewal. There is also demand for the most environmentally progressive airplanes.

OIL PRICE AND U.S. FUEL EXPENSE

Rising fuel costs drive fleet replacement



Source: Brent Crude, Rotterdam Jet Fuel, Form 41.

The difficult road to profitability

After several years of multi-billion-dollar losses, the North American airline industry returned to profitability in 2007. Network airline restructuring focused on restoring financial health, largely through continual cost reduction. Resurgence of U.S. and Canadian airline profitability has been short-lived, however, due to record high fuel costs. Fuel expense now accounts for over 40 percent of airline operating expenses, up from a quarter of all expenses just a few years ago.

The move to more fuel-efficient airplanes will play an important role in sustained financial viability. At the same time, it will make older airplanes available for conversion to meet a growing global need for more fuel-efficient freighters.

Domestic and international markets

Low-cost carriers have gained 10 points of domestic market share since 2000, resulting in a significant shift in the North American competitive market. The LCCs, many of which are new domestic airlines, have a business model focused on high utilization, discount pricing, and efficient business practices.

LCC domestic market share will climb over the next 10 years as network carriers focus on international services. Higher LCC growth rates will push network carrier domestic share down to 65 percent over the coming decade.

Despite the domestic service reductions by network airlines, these carriers have not given up on plans for overall expansion. They have realized the profitability of services to increasingly liberalized, higher yield and perhaps less competitive international operations. Intercontinental flights now account for more than 40 percent of U.S. network carrier mainline flying, with all indications pointing to continuing expansion.

Flights between the United States and Canada have increased significantly. Both countries are expanding business ties under the North American Free Trade Agreement and further liberalization of the Canada-U.S. Air Transport Agreement. Over the last 10 years more than 1,400 new weekly transborder flights have been added, with an additional 41 new airport pairs receiving nonstop flights.

Airline consolidation and cooperation

News headlines of proposed mergers and joint ventures have led many industry observers to conclude that a major round of industry consolidation may be under way.

The successful completion of one or more of these transactions would have a dramatic effect on the competitive landscape of the U.S. airline market. Advantages would include eliminating duplicate services and combining complementary route networks. Consolidation creates long-term challenges, including the integration of disparate fleets, corporate cultures, information technology systems, and labor contracts.

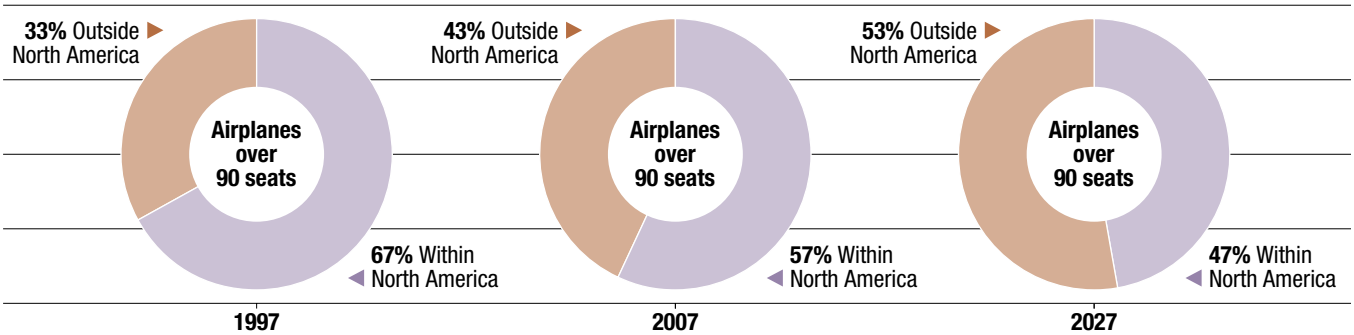
Domestic market drives strong single-aisle sales

North American lifestyles in large part depend on rapid coast-to-coast and interregional transportation, with a broad choice of frequencies across many city pairings. Seventy-one percent of new deliveries will be single-aisle airplanes, driven by the need to provide the most comprehensive and economic market coverage.

Twin-aisle fleets will evolve as airlines continue to expand their international services to a continually wider range of airport pairs and frequencies. Small- and mid-sized twin-aisle airplanes will represent 16 percent of the North American fleet in 2027, with large airplanes representing 4 percent. Over the next two decades, the total fleet size in North America is expected to grow approximately 50 percent to nearly 11,000 airplanes.

NETWORK AIRLINE CAPACITY CHANGES

Major North American airlines



Source: Official Airline Guide and Boeing research.

EUROPE

Rank: 2

New airplanes: 6,900

Annual growth		Rank
GDP	2.1%	10
RPKs	4.1%	10
RTKs	4.7%	11
Airplane fleet	2.6%	8

Deliveries		Rank
747 and larger	210	2
Twin aisle	1,490	1
Single aisle	4,880	2
Regional jets	320	3

Market value		Rank
Total, $ billions	740	1
Average, $ millions	110	6

Airplane fleet		Rank
2007	4,400	2
2027	7,390	2

Europe

Airlines in Europe will continue to benefit from large domestic markets, global vision, and new opportunities through international market liberalization.

Strategies developing with the market

The European airline market is constantly changing. Long-term traffic growth is expected to slow over the next 20 years from recent rates of 6 to 7 percent each year, to an average of 4.1 percent. Airlines are adjusting their strategies in line with the changing competitive environment on routes within Europe and to make the most of emerging opportunities to countries outside Europe.

The European Union is working to bring about its vision of an extended area of open market regulation encompassing its neighbors (the European Common Aviation Area). With an aim of including 35 countries and 500 million people by 2010, this area could eventually extend to 58 countries and 1 billion people. Expansion of the free market will continue to stimulate air travel demand on short- to medium-range routes.

Long-range markets to the Middle East and North America recently have opened up. Open skies agreements with countries in these regions have perhaps brought more new competition than opportunities for European airlines in the near term.

However, in the long term European airlines should benefit from greater global market access and the freedom to invest in overseas airlines and markets. As such, they will be pivotal in shaping future global airline groupings and perhaps in establishing single airline entities that operate throughout the largest domestic and international markets.

Shifting domestic markets

Many of the short European city pairs are already well served by air service or are the future target of expanded high-speed train networks. The average length of scheduled routes flown using airplanes with 100 seats or more within Europe increased from 850 km (530 miles) in 2000 to 995 in 2007. Eighty-four percent of routes added over these 7 years were longer than 800 km (500 miles). We expect that by 2027 the average flight length within Europe will be 1,255 km (780 miles).

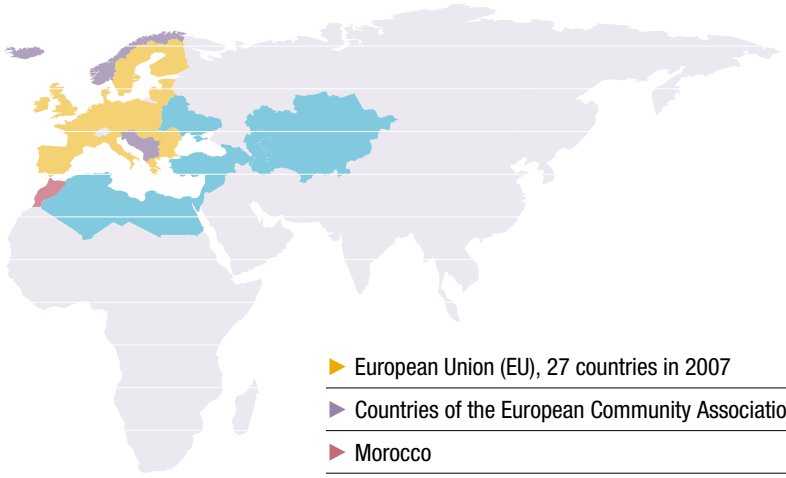
As low-cost airlines succeeded in profitably satisfying local demand for flights on these short-range routes, network airlines shifted capacity to key business-oriented markets. They concentrated their own short-range capacity on routes where they can generate higher yields—such as routes with a business or premium leisure orientation.

The Single European Sky

A European Commission initiative by which the design, management, and regulation of airspace will be harmonized throughout the European Union.

COMMON AVIATION AREA IN THE EUROPE OF TOMORROW

Potential of 58 states and approximately 1 billion inhabitants



- European Union (EU), 27 countries in 2007
- Countries of the European Community Association Agreement (ECAA)
- Morocco
- Other neighboring countries

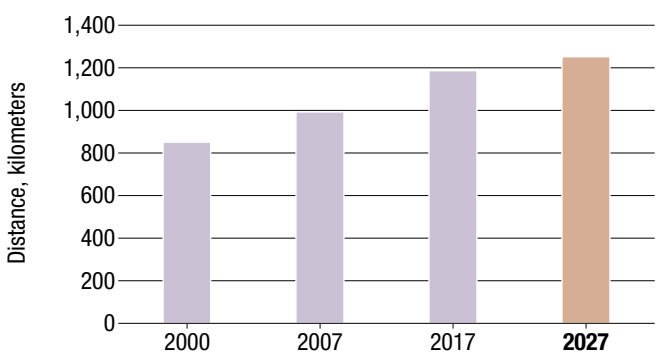
Source: European Commission.

Network airlines typically divested themselves of short-haul capacity (e.g., the sale by British Airways of its regional operation to Flybe) or established distinct lower cost operations.

Markets to Eastern Europe and Central Asia are expanding a little more rapidly than those in Western Europe, but considerable opportunities remain in western markets where low-cost penetration is relatively low, such as the French and Italian domestic markets.

AVERAGE FLIGHT DISTANCE

Growth within Europe



Source: Official Airline Guide and Boeing research.

Environmental focus

European policymakers plan to introduce market pricing schemes governing emissions, including EU airlines and those from other countries operating in European markets, although ICAO has jurisdiction in this area. Airlines share concern over escalation in these relatively uncontrollable costs and possible caps on future growth. In the meantime, they are minimizing fuel use through fleet strategy and operational procedures, simultaneously minimizing their environmental impact and improving their financial performance.

In 20 years' time, 93 percent of the European fleet will be new, having been delivered from 2008 onward. The airplanes from today's fleet remaining in service at that time will mostly be used as freighters where their utilization and contribution to emissions are considerably lower.

Freight markets make an important contribution to European airline finances, and European airlines are pioneers in air freight developments, including launch customers for the 747-8F (Cargolux) and 777F (Air France).

MIDDLE EAST

Rank: 6

New airplanes: 1,580

Annual growth		Rank
GDP	4.3%	6
RPKs	6.1%	5
RTKs	6.9%	5
Airplane fleet	3.6%	6

Deliveries		Rank
747 and larger	170	3
Twin aisle	690	6
Single aisle	660	7
Regional jets	60	8

Market value		Rank
Total, $ billions	260	5
Average, $ millions	160	1

Airplane fleet		Rank
2007	760	7
2027	1,530	7

Middle East

Dynamic economic development and ambitious growth plans continue to sustain an unprecedented rate of expansion.

Airlines enable transformation

The Middle East vision is to fully exploit its potential as a travel destination and an international hub for commercial aviation. Major investments are being made in both transportation and visitor facilities. Oil revenue and international business operations are drawing a significant number of business travelers to the area just as new hotels and visitor attractions are drawing tourists.

Sustained investment in commercial aviation infrastructure continues, including $36.8 billion being spent on expanding capacity at 10 airports by 2012.

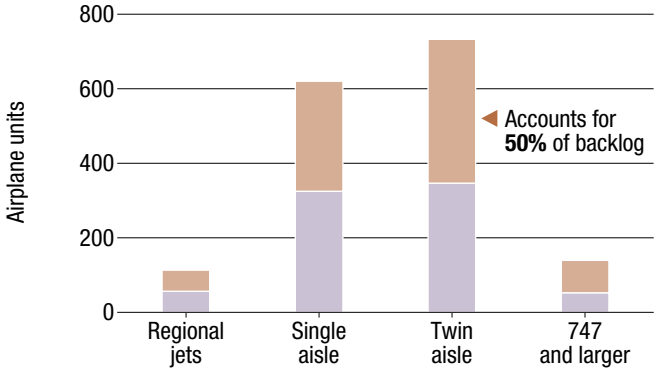
Location is a strategic advantage

Its central world location means that the Middle East is an ideal connecting point for one-stop airline service between virtually any two cities of the world. Carriers in the region have been taking advantage of this, carrying passengers between Europe, Africa, and Asia through the Gulf. Approximately one third of all traffic carried by Middle Eastern airlines goes to Europe.

Air traffic growth for Middle Eastern carriers has significantly outpaced worldwide averages. In 2007, air traffic grew at a rate of 16.9 percent. At a time of high fuel prices, Middle Eastern airlines are in a strong competitive position with large cash balances and investment in highly efficient new airplanes. Most of the more than 800 airplanes on order are for long-haul service. The new Al Maktoum International Airport in Dubai (JXB) promises to be one of the largest in the world.

MIDDLE EAST BACKLOG: 800

Airplanes in service: 760



Source: Ascend CASE.

Young residents are potential fliers

The Middle East has a young population with rising incomes. The average annual median age is less than 25 years, compared with 41 years in Western Europe and 36 years in North America. Even the youth-dominated population of China has a median age of 33 years. This young population in the Middle East is likely to bring a strong increase in air travel in the years ahead.

Around 85 percent of the 4.4 million UAE residents are not citizens, with India and Pakistan representing the largest expatriate groups. The large population of migrant workers uses air transportation to travel to and from their home countries. This is particularly prevalent throughout the Gulf nations of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the UAE, where the guest worker population is above 36 million.

Region serves as a cargo traffic hub

The region serves as an important cargo traffic hub. Much of the air cargo traveling through Middle Eastern airports is en route from one neighboring region to another. The Middle East is also a significant sea-air market. For example, goods from south Asia arrive in the Middle East on ships and continue on to Europe by air.

The Dubai Flower Centre is helping to open new markets for flowers grown in East Africa.

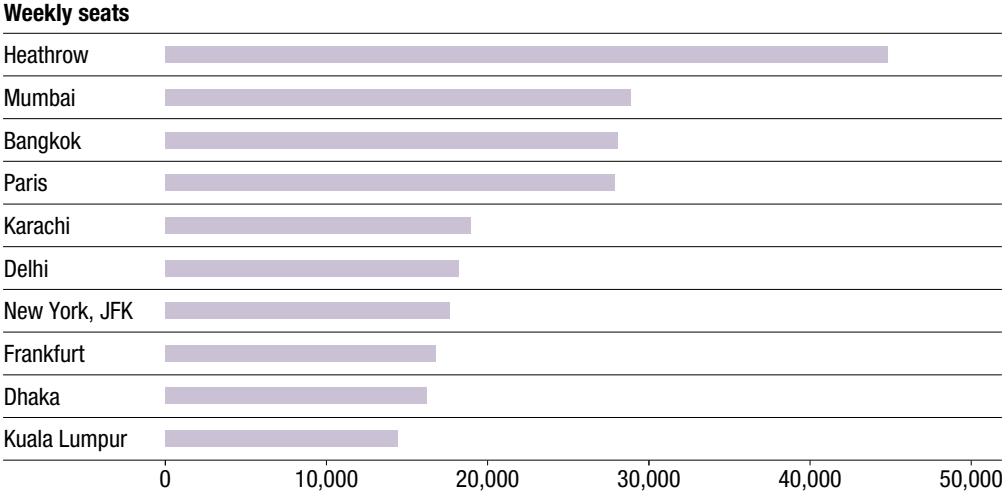
Europe is the largest air cargo partner to the Middle East. The continued high price of oil, along with economic diversification, will have a significant positive effect on personal incomes and increase the region's demand for products imported from Europe.

Open skies policies key to growth

With relatively small domestic markets, securing agreement for liberal market access (or open skies agreements) with as many countries around the world as possible is central to executing the region's airline growth plans.

Many major carriers in the Middle East are planning regional expansion and studying low-cost subsidiaries. Growth of independent low-cost airlines has also been strong to date. FlyDubai is among other future startup airlines, beginning service in 2009 and having on order 54 737NGs. Other LCCs will follow, to create a growing demand for single-aisle airplanes.

TOP INTERNATIONAL DESTINATIONS



Source: Official Airline Guide and Boeing research.

AFRICA

Rank: 11

New airplanes: 560

Annual growth		Rank
GDP	5.1%	3
RPKs	6.0%	6
RTKs	5.6%	8
Airplane fleet	2.4%	9

Deliveries		Rank
747 and larger	10	10
Twin aisle	190	10
Single aisle	300	11
Regional jets	60	9

Market value		Rank
Total, $ billions	60	11
Average, $ millions	110	5

Airplane fleet		Rank
2007	650	9
2027	1,040	10

Africa

Some of the world's most profitable airlines are in Africa. Future challenges include modernization and competition from abroad.

Renewal, infrastructure needed

Four of the world's top 20 oil-producing countries are in Africa. Economic growth is forecast at 5.1 percent. Even so, the continent's limited transportation system is slowing the spread of economic vitality.

Air transportation is a highly effective alternative to ground transportation over difficult terrain. Access to landlocked areas of Africa is limited by a lack of roads and railways. The spread of air transportation will require expansion and modernization of the continent's airports.

Market liberalization

Liberalization in markets across Africa is needed in the form of regional intergovernmental agreements, because bilateral aviation agreements are predominant. The Yamoussoukro Declaration, an attempt to spread liberalization throughout the region, has not been widely adopted.

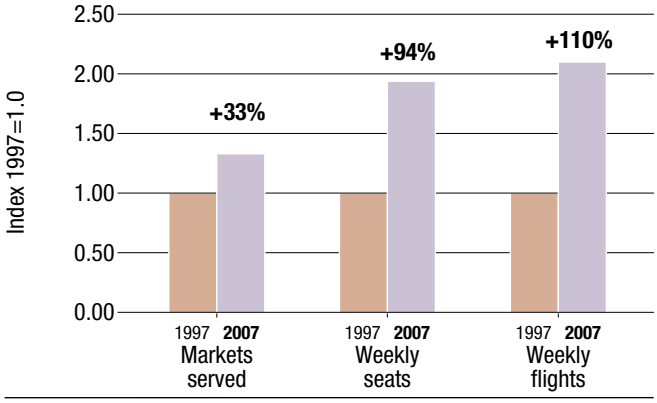
Europe is Africa's most active trading partner. Principal exports from Africa by air to Europe include perishables and apparel. Imports flown in include machinery, telecommunication equipment, pharmaceuticals, and manufactured products.

Drive toward fleet renewal

Africa has the second oldest fleet, behind those of Russia and Central Asia, and it is in need of renewal. Three quarters of the fleet consists of single-aisle airplanes, which serve markets within the region and on many routes between northern Africa and Europe, Africa's largest intercontinental passenger market. Fleet renewal would help satisfy environmental regulations at European airports.

FLIGHTS BETWEEN AFRICA AND EUROPE

Scheduled services have more than doubled



Source: Official Airline Guide.

RUSSIA AND CENTRAL ASIA

Rank: 9

New airplanes: 950

Annual growth		Rank
GDP	4.4%	4
RPKs	5.3%	7
RTKs	5.5%	9
Airplane fleet	0.6%	11

Deliveries		Rank
747 and larger	20	8
Twin aisle	130	11
Single aisle	460	9
Regional jets	340	2

Market value		Rank
Total, $ billions	70	10
Average, $ millions	70	11

Airplane fleet		Rank
2007	1,340	3
2027	1,500	8

Russia and Central Asia

Airline consolidations and alliances are contributing to more efficient operations. Fleet renewal is gathering pace.

Domestic air travel

The ICAO[1] reports that air travel in the region increased by 20 percent in the last year alone.

Airlines are responding to this surge in traffic by renewing their fleets. Russian and Central Asian airlines have more than 300 airplanes on order. By the year 2027, 63 percent of the fleet will be replaced. Nearly 50 percent of all new deliveries will be single-aisle airplanes, and 36 percent will be regional jets with up to 90 seats.

Over a 10-year period, the number of city pairs served by air has increased by more than 70 percent, from 880 to more than 1,500. Strong potential for transfer from rail services exists because more than 80 percent of all domestic travel in Russia is carried by Russian Railways.

Foreign airlines growing

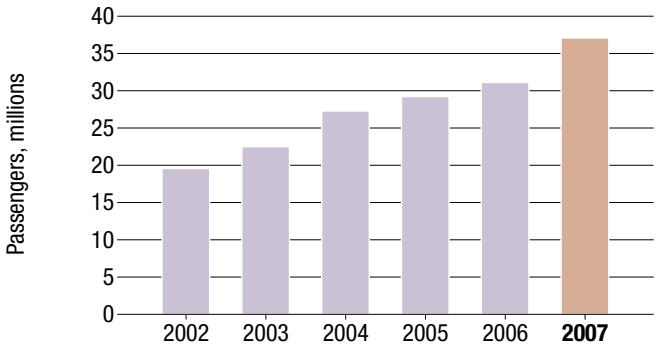
The majority of flying to, from, and within Russia and Central Asia is on the regions' airlines. Foreign carriers operating in the region jumped from 50 in 1997 to 67 in 2007. New entrants with scheduled service include Air Berlin, bmi, Niki, Hainan Airlines, Meridiana, Travel Servis, Carpatair, Clickair, and Montenegro Airlines.

Strong economic growth emanates largely from a wealth of natural resources. Air cargo in markets to or from Asia and Europe is particularly strong, especially shipments originating in China, Japan, Korea, and Thailand. Imports include consumer electronics, apparel, pharmaceutical and medical goods, industrial machinery, and oil and gas extraction equipment.

[1] International Civil Aviation Organization: increase from 2006 to 2007.

AIRLINE PASSENGERS CARRIED

Average increase of 13 percent a year



Source: International Civil Aviation Organization (ICAO).

USEFUL DATA

Passenger traffic

World passenger traffic will have grown from 4.5 trillion RPKs in 2007 to 12 trillion in 2027.

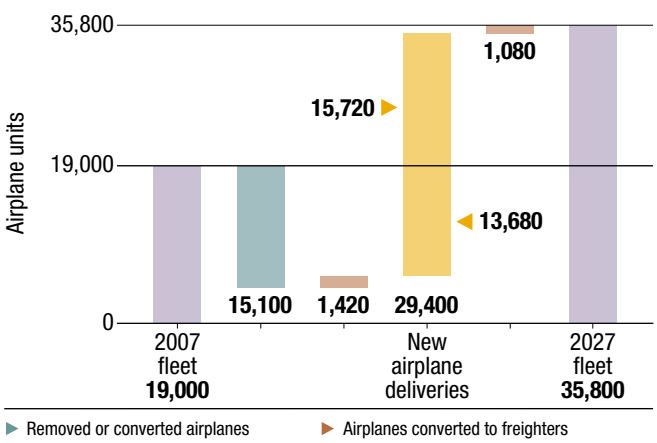
Emerging regions taking a greater share

Rapid growth means that in 20 years Asia-Pacific will account for nearly 45 percent of passenger traffic. Passenger traffic in Chinese domestic markets is currently lower than each of the transpacific, Europe–to–Asia-Pacific, and North Atlantic markets. By 2027, Chinese domestic traffic will be higher than that of all three of these markets. Approximately 35 percent of traffic will touch North America with the same share touching Europe.

Airplanes in 2027 will be more productive than they are today. Fewer airplanes will be needed to carry the same amount of traffic. The fleet needs to grow by only 3.2 percent each year to accommodate passenger and freight traffic that will grow by over 5.0 percent each year.

HOW THE FLEET GROWS

2007–2027



GROWTH BY REGIONAL FLOW

Regions	2007 RPKs, billions	2027 RPKs, billions	2007–2027 Per year
Africa–Africa	33.8	100.5	5.6%
Africa–Europe	121.7	349.8	5.4%
Africa–Middle East	19.8	64.0	6.1%
Africa–North America	8.2	23.6	5.4%
Africa–Southeast Asia	5.6	23.3	7.3%
Central America–Central America	26.8	98.0	6.7%
Central America–Europe	85.0	174.2	3.7%
Central America–North America	115.9	249.3	3.9%
Central America–South America	14.8	44.0	5.6%
China–China	209.5	1,156.0	8.9%
China–Europe	77.0	236.3	5.8%
China–North America	56.1	182.3	6.1%
China–Northeast Asia	35.5	97.4	5.2%
China–Oceania	20.3	48.4	4.5%
China–Southeast Asia	51.8	161.4	5.8%
CIS Region–CIS Region	57.4	178.2	5.8%
CIS Region–International	74.2	192.0	4.9%
Europe–Europe	630.6	1,258.8	3.5%
Europe–Middle East	104.6	274.6	4.9%
Europe–North America	418.2	1,039.6	4.7%
Europe–Northeast Asia	67.9	179.0	5.0%
Europe–South America	78.2	237.2	5.7%
Europe–Southeast Asia	107.7	332.9	5.8%
Europe–Southwest Asia	54.0	173.3	6.0%
Middle East–Middle East	39.3	119.4	5.7%
Middle East–North America	29.9	94.2	5.9%
Middle East–Southeast Asia	44.8	127.2	5.4%
Middle East–Southwest Asia	48.5	155.2	6.0%
North America–North America	1,016.6	1,749.5	2.8%
North America–Northeast Asia	123.4	268.3	4.0%
North America–Oceania	29.4	116.8	7.1%
North America–South America	66.3	219.3	6.2%
North America–Southeast Asia	42.5	182.4	7.6%
Northeast Asia–Northeast Asia	81.6	180.9	4.1%
Northeast Asia–Oceania	23.1	83.9	6.7%
Northeast Asia–Southeast Asia	78.6	279.0	6.5%
Oceania–Oceania	72.2	168.9	4.3%
Oceania–Southeast Asia	55.4	167.5	5.7%
South America–South America	78.4	298.8	6.9%
Southeast Asia–Southeast Asia	96.2	433.6	7.8%
Southeast Asia–Southwest Asia	19.9	82.1	7.3%
Southwest Asia–Southwest Asia	38.9	198.8	8.5%
Rest of the world	53.6	195.7	6.7%
World total	**4,513**	**11,995**	**5.0%**

Delivery of 29,400 new airplanes

The forecast includes new and existing types in passenger and freight markets.

SINGLE-AISLE PASSENGER AIRPLANES

More than 175 seats	90 to 175 seats	Regional jets
Boeing 707, 757	Boeing 717-200, 727	Dornier 328 Jet
Boeing 737-900ER	Boeing 737-100 through -500	Fokker 70, F28
Airbus A321	**Boeing 737-600, -700, -800**	BAe 146-100, -200
Boeing/MDC DC-8	**Airbus A318, A319, A320**	Avro RJ70, RJ85
Tupolev TU-204, TU-214	Boeing/MDC DC-9, MD-80, -90	**Bombardier CRJ**
	Fokker 100	**Embraer 170, 175**
	BAe 146-300, Avro RJ100	**ERJ-135, -140, -145**
	Embraer 190, 195	**Sukhoi Superjet 100**
	Bombardier CRJ-1000	**Antonov An-148**
	Yakovlev Yak-42	Tupolev TU-134
	Tupolev TU-154	Yakovlev Yak-40
	Ilyushin Il-6	**AVIC ARJ-700**
	AVIC ARJ-900	**Mitsubishi MRJ**
	Bombardier CSeries 110, 130	

TWIN-AISLE PASSENGER AIRPLANES

Large Three class: more than 400 seats	**Medium** Two class: 310 to 400 seats Three class: 250 to 370 seats	**Small** Two class: 230 to 310 seats Three class: 180 to 250 seats
Boeing 747	**Boeing 777**	**Boeing 767, 787**
Airbus A380	**Airbus A330-300, A340**	Airbus A300, A310, **A330-200**
	Airbus A350-900, -1000	**Airbus A350-800**
	Boeing/MDC MD-11	Boeing/MDC DC-10
	Ilyushin Il-86	Lockheed L-1011
		Ilyushin Il-96

Bold: Airplanes in production or launched.

MARKET BY AIRPLANE SIZE

Size category	Market value 2007 $B	Market share value	New airplane deliveries	Market share units
Large*	290	9%	980	3%
Medium	860	27%	3,390	12%
Small	610	19%	3,360	11%
Total twin aisle	**1,760**	**55%**	**7,730**	**26%**
More than 175 seats	280	9%	2,880	10%
90 to 175 seats	1,080	34%	16,280	55%
Total single aisle	**1,360**	**43%**	**19,160**	**65%**
Total regional jets	**80**	**2%**	**2,510**	**9%**
Total fleet	**3,200**	**100%**	**29,400**	**100%**

PASSENGER FLEET DEVELOPMENT

Size category	End of year 2007	Removed from service	Converted to freighter	New deliveries 2008 to 2027	End of year 2027
Large*	560	550	–	610	620
Medium	1,310	1,190	–	3,120	3,240
Small	1,330	1,210	–	3,150	3,270
Total twin aisle	**3,200**	**2,950**	**1,170**	**6,880**	**7,130**
More than 175 seats	1,350	1,060	–	2,870	3,160
90 to 175 seats	9,420	6,710	–	16,280	18,990
Total single aisle	**10,770**	**7,770**	**1,330**	**19,150**	**22,150**
Total regional jets	**3,080**	**2,960**	**–**	**2,510**	**2,630**
Total passenger fleet	**17,050**	**13,680**	**1,330**	**28,540**	**31,910**

FREIGHTER FLEET DEVELOPMENT

Size category	End of year 2007	Removed from service	Converted to freighter	New deliveries 2008 to 2027	End of year 2027
Large*	500	260	460	640	1,340
Medium widebody	690	450	710	210	1,160
Standard body	760	710	1,330	10	1,390
Total freighter fleet	**1,950**	**1,420**	**2,500**	**860**	**3,890**

TOTAL FLEET

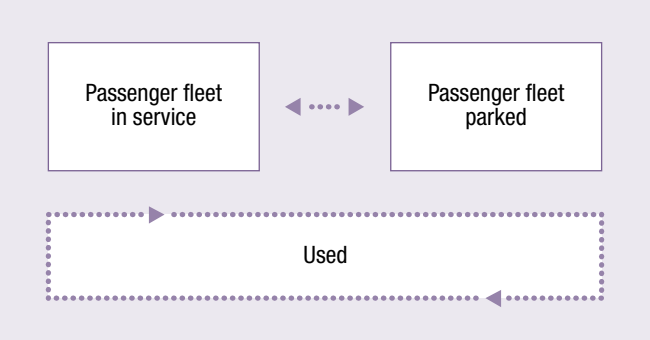
Size category	End of year 2007	Removed from service	Converted to freighter	New deliveries 2008 to 2027	End of year 2027
Passenger fleet	17,050	13,680	1,330	28,540	31,910
Freighter fleet	1,950	1,420	2,500	860	3,890
Total fleet	**19,000**	**15,100**	**2,500**	**29,400**	**35,800**

*Large passenger and large freighter categories differ.

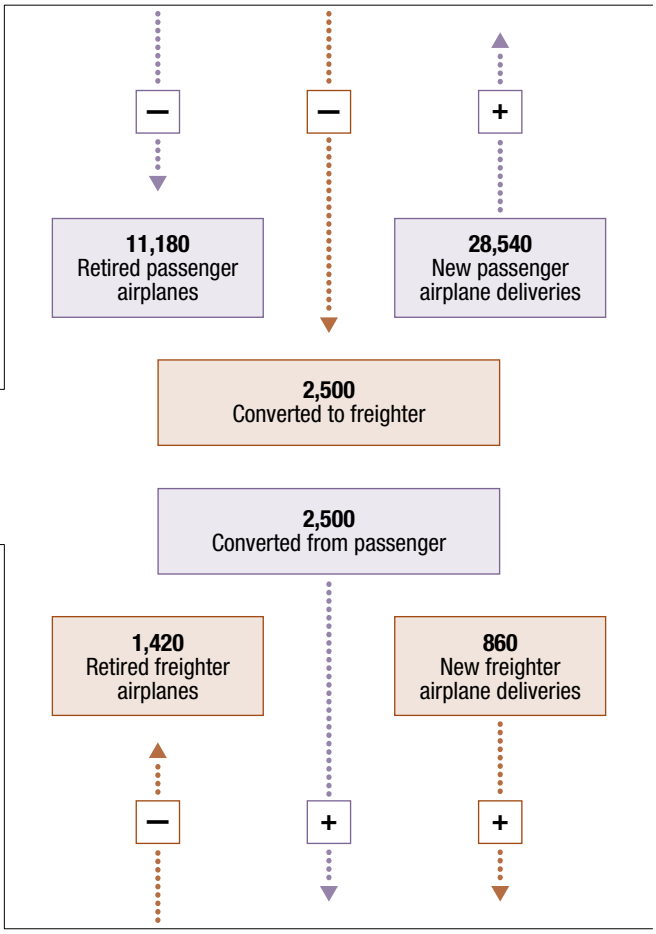
Fleet grows to 35,800 airplanes

Many airplanes will be traded between airlines, and 2,500 will be converted to freighters.

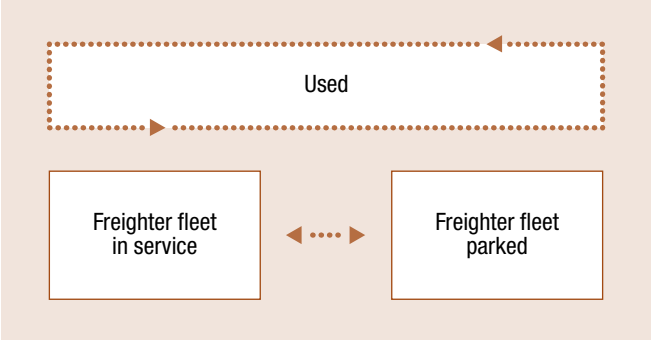
2007 PASSENGER FLEET: 17,050



2027 PASSENGER FLEET: 31,910



2027 FREIGHTER FLEET: 3,890



2007 FREIGHTER FLEET: 1,950

FLEET BY AIRPLANE SIZE

Size category	Airplanes in service 2007	Fleet share 2007	Airplanes in service 2027	Fleet share 2027
Large*	910	5%	1,340	4%
Medium	1,470	8%	3,910	11%
Small	2,010	10%	4,380	12%
Total twin aisle	**4,390**	**23%**	**9,630**	**27%**
More than 175 seats	1,600	8%	3,740	10%
90 to 175 seats	9,850	52%	19,800	56%
Total single aisle	**11,450**	**60%**	**23,540**	**66%**
Total regional jets	**3,160**	**17%**	**2,630**	**7%**
Total fleet	**19,000**	**100%**	**35,800**	**100%**

FLEET BY REGION IN 2007

Region	Regional jets	Single aisle	Twin aisle	747 and larger	Total fleet
Asia-Pacific	150	2,190	950	440	3,730
North America	1,870	4,000	1,030	150	7,050
Europe	570	2,970	670	190	4,400
Middle East	30	330	340	60	760
Latin America	60	880	120	10	1,070
Russia and Central Asia	400	670	230	40	1,340
Africa	80	410	140	20	650
World total	**3,160**	**11,450**	**3,480**	**910**	**19,000**

FLEET BY REGION IN 2027

Region	Regional jets	Single aisle	Twin aisle	747 and larger	Total fleet
Asia-Pacific	430	6,880	3,100	660	11,070
North America	1,240	7,540	1,960	190	10,930
Europe	330	5,200	1,620	240	7,390
Middle East	50	600	680	200	1,530
Latin America	130	1,870	340	–	2,340
Russia and Central Asia	360	830	270	40	1,500
Africa	90	620	320	10	1,040
World total	**2,630**	**23,540**	**8,290**	**1,340**	**35,800**

*Large passenger and large freighter categories differ.

Airline traffic flows

Relatively slow growth in the largest markets can generate more traffic than rapid growth in many of the smaller markets.

AIRLINE PASSENGER GROWTH RATES IN 2007–2027

RPKs

Region	Africa	Latin America	Middle East	Europe	North America	Asia-Pacific
Asia-Pacific	7.3%	9.4%	5.7%	5.7%	5.6%	**7.0%**
North America	5.4%	4.8%	5.9%	4.7%	**2.8%**	
Europe	5.4%	4.7%	4.9%	**3.5%**		
Middle East	6.1%	–	**5.7%**			
Latin America	5.6%	**6.7%**				
Africa	**5.6%**					

AIRLINE PASSENGER TRAFFIC IN 2007

RPKs in billions

Region	Africa	Latin America	Middle East	Europe	North America	Asia-Pacific
Asia-Pacific	6	5	90	310	250	**780**
North America	8	180	30	420	**1,020**	
Europe	120	160	160	**630**		
Middle East	20	–	**40**			
Latin America	3	**120**				
Africa	**30**					

AIRLINE PASSENGER TRAFFIC IN 2027

RPKs in billions

Region	Africa	Latin America	Middle East	Europe	North America	Asia-Pacific
Asia-Pacific	20	11	280	920	750	**3,060**
North America	20	470	90	1,040	**1,750**	
Europe	350	410	270	**1,260**		
Middle East	60	–	**120**			
Latin America	6	**440**				
Africa	**100**					

Bold: Share within region.

AIRLINE TRAFFIC DISTRIBUTION IN 2007

RPKs Region	Asia-Pacific	North America	Europe	Middle East	Latin America	Africa
Asia-Pacific	**54%**	13%	18%	32%	1%	3%
North America	17%	**53%**	24%	11%	38%	4%
Europe	22%	22%	**36%**	36%	34%	64%
Middle East	6%	2%	6%	**14%**	–	11%
Latin America	<1%	9%	9%	–	**26%**	1%
Africa	<1%	<1%	7%	7%	<1%	**16%**
World total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

AIRLINE TRAFFIC DISTRIBUTION IN 2027

RPKs Region	Asia-Pacific	North America	Europe	Middle East	Latin America	Africa
Asia-Pacific	**61%**	18%	22%	34%	1%	4%
North America	15%	**42%**	24%	11%	35%	4%
Europe	18%	25%	**30%**	33%	31%	63%
Middle East	6%	2%	6%	**15%**	–	11%
Latin America	<1%	11%	10%	–	**33%**	1%
Africa	<1%	<1%	8%	7%	–	**18%**
World total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Bold: Share within region. Sum data down the table only. Excludes other small flows that are not included in the summary table (less than 1% of each region).

How to read the tables

Read down the selected column;
for example:

- In 2007, traffic within North America accounted for 53 percent of the total traffic to, from, and within North America.
- In 2027, traffic from the Middle East to Europe will account for 33 percent of the total traffic to, from, and within the Middle East.
- Traffic to Asia-Pacific will rise from 18 percent of the total traffic to, from, and within Europe in 2007 to 22 percent by 2027.
- Traffic within Asia-Pacific will rise from 54 percent of the total traffic to, from, and within Asia-Pacific in 2007 to 61 percent by 2027.

Glossary

ASK
Available seat-kilometers. The number of seats on an airplane multiplied by the number of kilometers flown by that airplane (i.e., airline capacity).

GDP
Gross domestic product. The total output of goods and services produced within a country.

Liberalization
The removal or reduction in government-imposed regulation of the market for air services. Also known as deregulation.

Load factor
The measure of how full flights are. The number of fare-paying passengers divided by the total number of seats on that flight.

RPK
Revenue passenger-kilometers. The number of fare-paying passengers multiplied by the number of kilometers they fly (i.e., airline traffic).

Yield
Revenues divided by revenue passenger-kilometers (i.e., the money received by an airline for each kilometer flown by each passenger).

Example

Capacity
If an airplane with 100 seats flies 1000 kilometers, a capacity of 100 x 1000 = 100,000 available seat-kilometers (ASK) is generated by that flight.

Load factor
If 76 fare-paying passengers are on the 100-seat airplane, 76 percent of the seats available will be occupied, which represents the load factor of the flight.

Traffic
The traffic generated by the 76 passengers on the 1000-kilometer flight will be 76 x 1,000 = 76,000 RPKs.

Yield
If the average net fare received from each of the 76 passengers is $200, the yield is $200/1,000 = $0.20 per passenger-kilometer.

Data sources

- ACAS
- Air Transport Association
- Ascend
- Association of Asia Pacific Airlines (AAPA)
- Association of European Airlines (AEA)
- Centre for Asia Pacific Aviation (CAPA)
- European Regions Airline Association (ERA)
- Global Insight
- International Air Transport Association
- International Civil Aviation Organization (ICAO)
- Jet Information Services
- Official Airline Guide (OAG)
- Regional Airlines Association (RAA)
- ROM Associates
- U.S. Department of Transportation (Form 41)

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