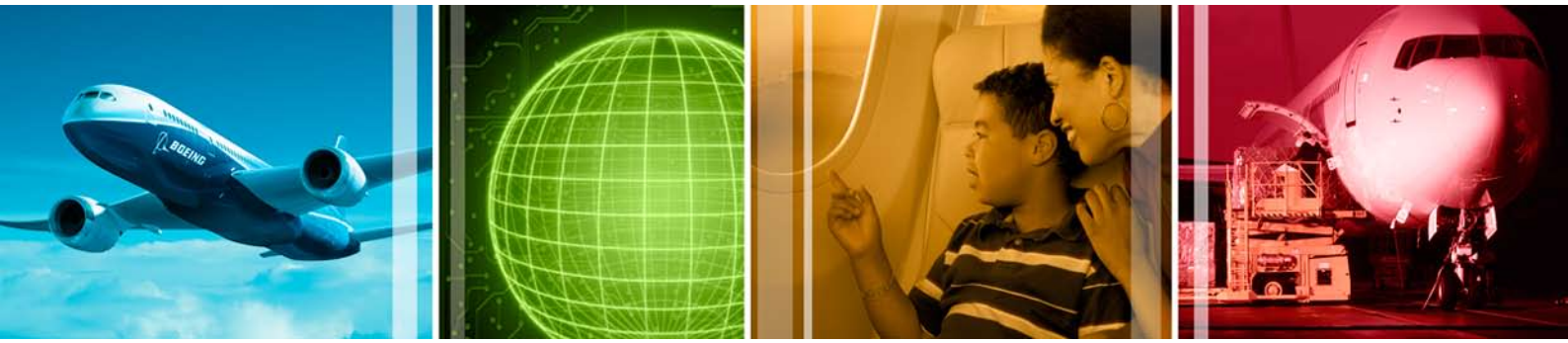
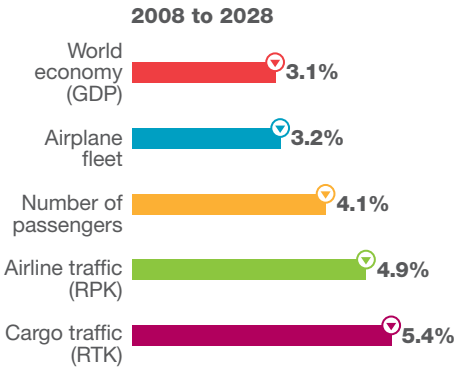
BOEING



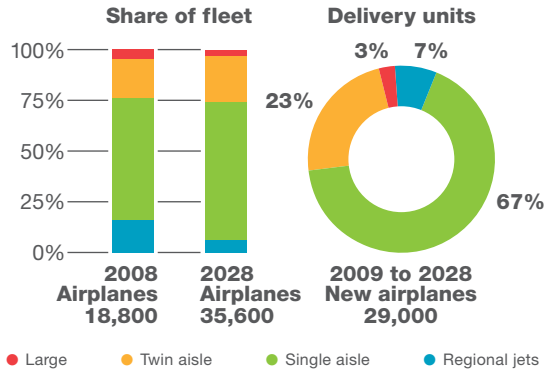
Current Market Outlook 2009–2028

Forecast on a page

World regions
Market growth rates



World regions
Market value: $3,220 billion



World regions
Key indicators and new airplane markets

Growth measures

Regions		Asia Pacific	North America	Europe	Middle East	Latin America	R&CA*	Africa	World
World economy	(GDP) %	4.4	2.4	1.9	3.8	3.8	3.7	4.9	3.1
Airline traffic	(RPK) %	6.5	3.2	4.1	6.6	6.5	5.1	5.8	4.9
Cargo traffic	(RTK %	6.2	4.6	4.8	6.3	6.3	5.3	5.4	5.4
Airplane fleet	%	5.4	1.8	3.0	4.1	4.1	1.3	2.8	3.2
Ratio	**RPK / GDP**	**1.5**	**1.3**	**2.2**	**1.7**	**1.7**	**1.4**	**1.2**	**1.6**
Market size									
Deliveries		8,960	7,690	7,330	1,710	1,640	1,050	620	29,000
Market value	($B)	1,130	680	800	300	150	90	70	3,220
Average value	($M)	130	90	110	180	90	90	110	110
New airplane deliveries									
Large		330	40	200	130	10	20	10	740
Twin aisle		2,590	1,130	1,480	850	290	170	190	6,700
Single aisle		5,600	5,630	5,310	680	1,260	610	370	19,460
Regional jets		440	890	340	50	80	250	50	2,100
Total		**8,960**	**7,690**	**7,330**	**1,710**	**1,640**	**1,050**	**620**	**29,000**
Market value (2008 $B, catalog prices)									
Large		100	12	60	40	1	4	2	220
Twin aisle		600	250	340	200	60	30	40	1,510
Single aisle		420	390	390	50	80	50	30	1,420
Regional jets		14	30	11	2	2	8	2	70
Total		**1,130**	**680**	**800**	**300**	**150**	**90**	**70**	**3,220**
2008 fleet									
Large		400	140	190	70	10	40	20	870
Twin aisle		1,010	1,010	660	360	130	200	140	3,510
Single aisle		2,330	3,780	2,970	370	880	620	410	11,360
Regional jets		170	1,850	510	40	50	350	90	3,060
Total		**3,910**	**6,780**	**4,330**	**840**	**1,070**	**1,210**	**660**	**18,800**
2028 fleet									
Large		500	120	230	150	10	40	20	1,070
Twin aisle		2,980	1,720	1,580	900	340	250	310	8,080
Single aisle		7,230	6,980	5,620	750	1,900	1,030	720	24,230
Regional jets		460	880	340	60	140	250	90	2,220
Total		**11,170**	**9,700**	**7,770**	**1,860**	**2,390**	**1,570**	**1,140**	**35,600**

*Russia and Central Asia. Market values above 20 have been rounded to the nearest 10.

Long-term market

Staying current

The Boeing Current Market Outlook describes our long-term forecast for air transport. Each year, we start with the latest economic and market conditions, then project ahead 20 years to forecast how airlines and markets will adjust to these volatile issues.

In September, we expanded the forecast to provide the latest detail on individual markets in the Asia Pacific region.

Staying current also means keeping up with the latest technology for presenting the forecast. This year we introduce an entirely Web-based CMO with interactive tools to make it easy to use the comprehensive forecast data. The full dataset is available in Excel format and a printable version of the whole site is available in PDF format using the links in the right-hand panel of each page.

Travel values

The incredible resilience of air transport is reflected in forecasts we have published over the past 45 years. Over the past 20 years, the industry experienced several economic downturns, yet grew by an average of around 5 percent per year. We expect that the continued dependence of people and businesses around the world on timely, reliable and efficient air transport will result in a similar growth trend over the next 20 years.

Demand diversity

Air transport throughout the world is constantly changing in response to market opportunities and challenges. The rise of new airline business models and rapid growth of air travel in the world's emerging economies are stabilizing worldwide demand for airplanes. Even during times of general slowing, some markets gain through regional economic growth and reduced market regulation.

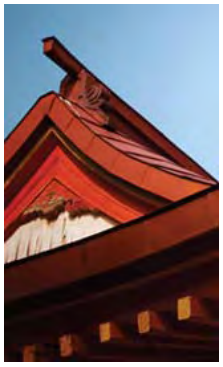
New airplanes

The significant advantage in efficiency and capability that new airplanes offer is keeping airplane demand strong. Starting from record highs, manufacturer backlogs are holding up well, despite recent market conditions. Fuel-efficient airplanes are a natural hedge against jet fuel price volatility, and their lower emissions help airlines meet their environmental performance goals.

Future freight

As the future freighter fleet shifts toward larger freighters and new, more efficient airplanes, air cargo transport will be kept affordable. Air cargo traffic will grow an average of 5.4 percent per year, driven by rising world GDP and the reliance of global industry on fast delivery and international production and delivery systems.

Market Update: Asia Pacific



NEW!

Explore the forecast for the Asia Pacific region in greater detail

Airplanes in service 2008 and 2028

Size	2008	2028
Large	870	1,070
Twin aisle	3,510	8,080
Single aisle	11,360	24,230
Regional jets	3,060	2,220
Total	**18,800**	**35,600**

Demand by size 2009 to 2028

Size	New airplanes	Value ($B)
Large	740	220
Twin aisle	6,700	1,510
Single aisle	19,460	1,420
Regional jets	2,100	70
Total	**29,000**	**3,220**

Key indicators 2008 to 2028

Growth measures	
World economy Gross domestic product (GDP)	**3.1%**
Airplane fleet	**3.2%**
Number of passengers	**4.1%**
Airline traffic Revenue passenger-kilometers (RPK)	**4.9%**
Cargo traffic Revenue tonne-kilometers (RTK)	**5.4%**

Demand by region 2009 to 2028

Region	New airplanes	Value ($B)
Asia Pacific	8,960	1,130
North America	7,690	680
Europe	7,330	800
Middle East	1,710	300
Latin America	1,640	150
R&CA*	1,050	90
Africa	620	70
Total	**29,000**	**3,220**

*Russia and Central Asia.

Travel values

Demonstrated resilience

The incredible resilience of air transport is reflected in the forecasts we have published over the past 45 years. During this time, the industry experienced several economic downturns. Even so, because of the intrinsic value of air transport to society, air travel grew by an average of around 5 percent per year over the past 20 years. During the next 20 years, there will be periods of recovery and again some setbacks along the way. However, we expect that the continued dependence of people and businesses around the world on timely, reliable and efficient air transport will result in a similar growth trend.

Market challenges

Boeing continually monitors traffic patterns around the world, and when we look back at this data, history shows periodic times of challenging traffic levels. We also monitor airline cost, revenue and operational strategies and data so that we have the fullest possible understanding of how markets are developing and how we can best support our airline customers to achieve their goals.

Following each downturn, we have repeatedly seen airline growth rates rise above average for a period, leading to peak traffic levels above those suggested by the long-term trend. The future airline fleet needs to be numerous enough to accommodate these peaks in demand, and flexible enough for airlines to adjust or relocate capacity to meet changing demand conditions.

Service improvements

As airlines grow, they mostly do so in ways that respond to their customers' preference for more choice, lower fares and direct access to a wider range of destinations. New, more capable and more economical airplane types enable access to a wider range of routes. A small proportion of growth is through the use of larger airplanes on existing services.

Demand is also stimulated as regulations governing market access are lifted. This phenomenon is well established in many regions and continues to spread into the fast-growing regions of Latin America, Russia, Africa and Asia Pacific. As international travel regulations allow more direct flights, demand on the most densely traveled routes tends to dissipate into services that reach the travelers' true local destination, thereby reducing the need for the very largest airplanes.

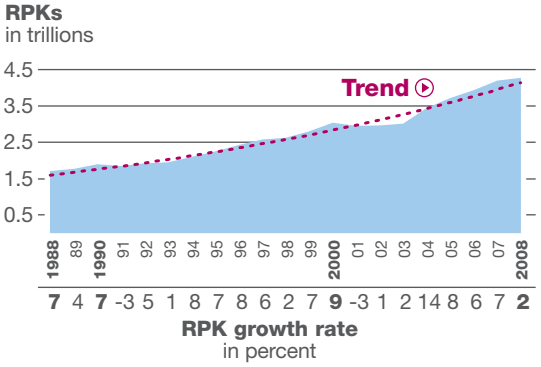
Travel values
Market growth rates

2008 to 2028

World economy (GDP)	3.1%
Airplane fleet	3.2%
Number of passengers	4.1%
Airline traffic (RPK)	4.9%
Cargo traffic (RTK)	5.4%

Travel values
World air travel since 1988

Source: ICAO, Scheduled Traffic



Travel values
Airline traffic growth rates

2008 to 2028

	Africa	Latin America	Middle East	Europe	North America	Asia Pacific
Asia Pacific	9.2%	9.1%	6.3%	5.5%	4.9%	**6.9%**
North America	7.4%	4.7%	6.9%	4.6%	**2.5%**	
Europe	5.4%	4.3%	5.5%	**3.4%**		
Middle East	6.1%	–	**6.2%**			
Latin America	5.5%	**6.4%**				
Africa	**6.4%**					

Demand diversity

Diversity leads to balance

Air transport throughout the world is constantly changing in response to market opportunities and challenges. The rise of new airline business models and rapid growth of air travel in the world's emerging economies are stabilizing worldwide demand for airplanes. Even during times of general slowing, some markets gain through regional economic growth and reduced market regulation. At the same time, airlines use new innovative business strategies to create opportunities and stimulate passenger demand.

Geographic shifts

Some regions already have large traffic volumes and are growing relatively slowly — although their airline participants are continually evolving, introducing new markets and new passenger service concepts. Other regions are smaller but growing more rapidly with higher airplane growth opportunities but lower airplane replacement opportunities.

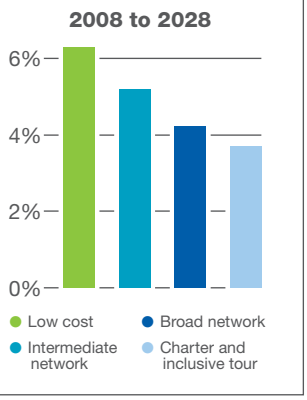
Travel volumes in Asia Pacific overall are large and growing rapidly. Asia Pacific will account for 41 percent of travel in 20 years' time, up from around 32 percent today. European travel features a little more prominently than in our previous forecast, especially as the European Union continues to actively pursue international market liberalization. Airlines in North America are expected to be among the most profitable in 2009, having carefully matched capacity to demand, and will continue to focus on updating their current fleet with many new airplanes.

Global vs. local strategy

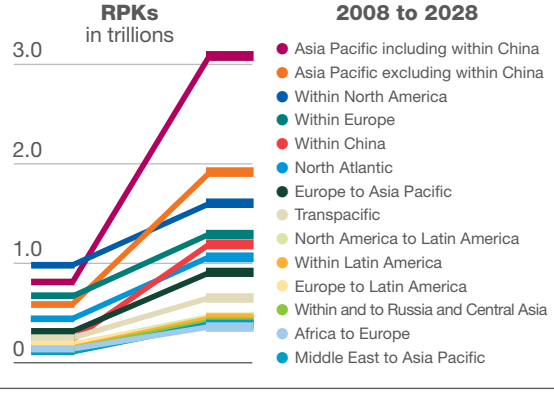
Airlines employ a variety of business strategies to match the demands of the different markets they serve. An airline operating in global markets may have different aircraft configurations for specific markets — higher density for leisure-oriented markets and more premium seats in business travel markets. Their local market services both maintain a presence on densely traveled routes and connect their long-haul network to local sources of demand.

Local market service is becoming increasingly characterized by low base fares with additional fees for optional services (ancillary revenues). Both network airlines and low-cost airlines have substantial market presence in local markets, with the share taken by each varying considerably around the world. Over time we expect continued growth of low-cost airlines in local markets as well as some growing penetration into long-haul markets.

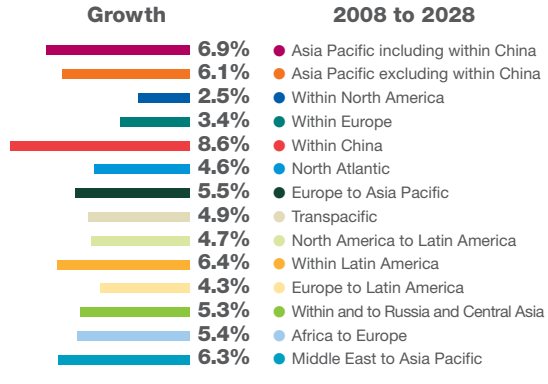
Demand diversity
Market growth rates by airline type



Demand diversity
Passenger traffic development



Demand diversity
Annual traffic growth



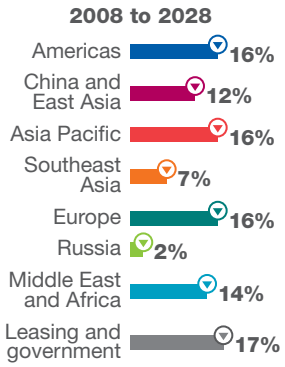
New airplanes

High order backlogs remain

Airlines have powerful incentives to continue introducing new airplanes, and manufacturers' order backlogs are holding up well to the dual challenges of recession and short-term financing needs. New airplanes bring benefits on many levels. Their efficiency is a natural hedge against volatile jet fuel prices. Their advanced passenger amenities bring competitive advantage. And their lower fuel consumption contributes toward continually improving airplane environmental performance.

The world's overall airplane order backlog remains near historic highs in part due to its diversity in terms of geographic distribution and types of airlines represented. In addition, forthcoming deliveries of revolutionary new airplane types such as the 787 will bring much needed step-change benefits compared to the types they replace.

New airplanes
Boeing order backlog: $270B



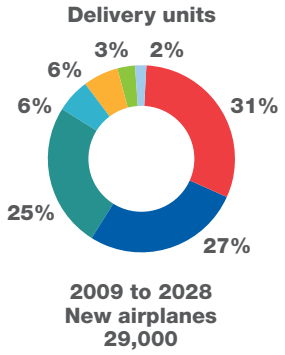
Saving airplanes

New airplanes bring a further strong benefit: improved productivity. The average passenger airplane of the future fleet will carry nearly 40 percent more traffic than the average airplane today. This improved productivity comes from airplanes with better operational efficiency, reduced maintenance requirements, shorter turnaround times and better payload-range performance.

Better productivity brings an important environmental benefit: it saves airplanes. Without such improvement, around 12,000 additional passenger airplanes would be needed to carry expected levels of traffic. And introducing the world's new fleet of airplanes means that improvement is continual. In fact, in 20 years' time, 83 percent of the fleet in service will be airplanes that have been delivered new since 2008.

New airplanes
Deliveries by region

Region	New airplanes
Asia Pacific	8,960
North America	7,690
Europe	7,330
Middle East	1,710
Latin America	1,640
Russia and Central Asia	1,050
Africa	620
Total	**29,000**



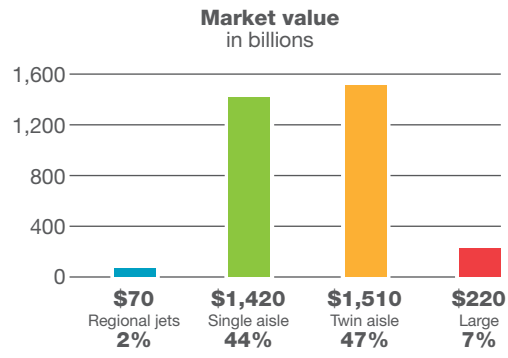
Airplane size trends

Regional jet markets have been strongly affected by fuel price volatility, labor costs and traffic increases. Airlines are moving to use larger regional jets and transition service into 90+ seat airplanes, which are included in our forecast for single-aisle airplanes.

Boeing's business is largely focused on the two most numerous airplane market sectors: single-aisle and twin-aisle airplanes. These are the two most robust market sectors because of passenger preference for frequent, direct services at the most affordable fares.

Large airplanes are well suited to very high volume, stable trunk routes, which constitute an important but not expanding proportion of the market. Demand for the largest airplanes is mostly replacement demand. Our forecast for large airplanes maintains previously expected levels of demand for airplanes currently offered.

New airplanes
Market value: $3.2 trillion



Future freight

Freight values

Difficult market conditions that began in May 2008 led to a contraction in cargo traffic of about 6 percent for the year, in comparison to 2007 levels. Further declines were recorded in early 2009. Combined with slowing world industrial production and international trade, this has had a slight impact on our long-term view of the freight market, leading to a 5.4 percent cargo traffic growth rate, measured in revenue tonne-kilometers (RTK), in this year's forecast.

Larger freighters

A shift toward larger freighters and new, more efficient airplanes will help keep air cargo transport affordable. Sustained growth of world trade reflected in global GDP along with continued sound industry fundamentals (imperative for speed, consumer product innovation and global industrial interdependence) will drive a 5.4 percent average annual growth in air cargo traffic. New air trade routes will expand service coverage.

Rapid and reliable freight

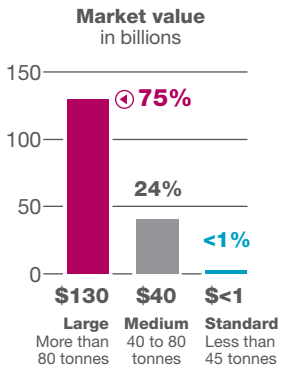
The global economy demands rapid and reliable business-to-business exchange. Air cargo transport makes it possible. Manufacturers depend on air freight services for efficient just-in-time inventory management. Freighter aircraft enable the most economical sourcing of components and assemblies while minimizing expensive inventory holding costs. In many areas of the world, ground infrastructure is lacking. Here, air transport sustains vital export markets and allows transportation of even basic commodities.

The tonne-kilometer cost and range advantages of large freighters will enable air carriers to meet demand on high-growth trade lanes, particularly links to Asia. As world air cargo nearly triples over the next 20 years, the number of freighters in the world fleet will grow by more than two-thirds. Replacement airplanes will generally be larger, increasing the fleet share of large freighters from 26 to 33 percent by 2028.

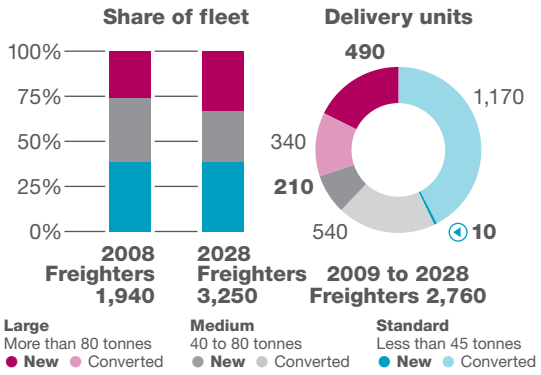
Sustaining economies

Air transport sustains many developing world economies by making it possible to ship perishable products such as fresh flowers, fruit and live animals to distant markets. Reliable, regularly scheduled freighter flights make pharmaceuticals, life-saving blood and tissue products as well as emergency equipment available and affordable. Prompt delivery actually adds to the value and competitiveness of a variety of products, including fashion items and leading-edge consumer electronics.

Future freight
Market value: $170 billion

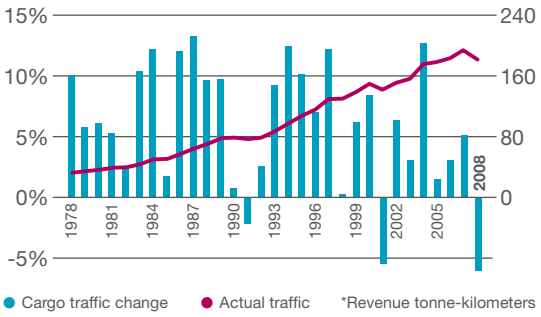


Future freight
710 new and 2,050 converted



Future freight
Annual growth: 5.8% since 1978

2008 estimate: by Boeing



World regions

World regions
New airplane market by region

Explore new Web site features

New this year is a feature that provides details on each region's air transport needs. Just click the region you would like to explore in the map above. You will also find a detailed database of forecast data that allows you to select just the data or regions you are interested in, and then download a full dataset for those regions. Use the links in the right panel of each page to access these features.

Regional distinctions

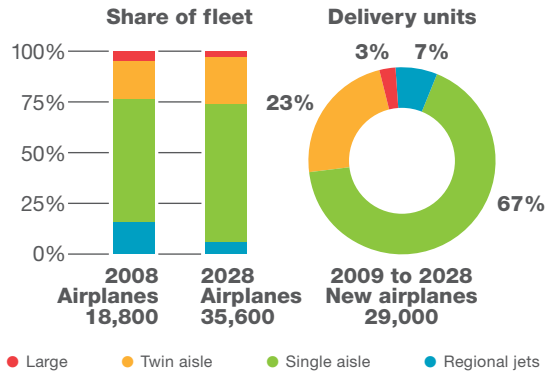
Every world region has its unique drivers and characteristics. Even the most developed air transport markets — which many call "mature" because they have settled into stable growth rates that are lower than the world average — are intensely dynamic as competition drives continual innovation and change.

The drivers of airplane demand in each region vary with airline market characteristics. For example, in North America and Europe, demand is more for replacement than for growth and is concentrated on single-aisle airplanes. In Asia Pacific and the Middle East on the other hand, airlines require a higher proportion of twin-aisle airplanes than do airlines in other regions.

Global improvements

At a global level, the number of airplanes in the world fleet grows at an average 3.2 percent each year. At the same time, passenger traffic, measured in revenue passenger-kilometers, grows 4.9 percent per year and cargo traffic, measured in revenue tonne-kilometers, grows 5.4 percent a year. The implication is clear — the air transport system is constantly becoming more productive.

World regions
Market value: $3,220 billion



World regions
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**3.1%**
Traffic (RPK)	**4.9%**
Cargo (RTK)	**5.4%**
Airplane fleet	**3.2%**

Ratio	
RPK / GDP	**1.6**

Market size	
Deliveries	**29,000**
Market value	**$3,220B**
Average value	**$110M**

	New airplanes	Share by size
Large	740	**3%**
Twin aisle	6,700	**23%**
Single aisle	19,460	**67%**
Regional jets	2,100	**7%**
Total	**29,000**	

	2008 Fleet	2028 Fleet
Large	870	1,070
Twin aisle	3,510	8,080
Single aisle	11,360	24,230
Regional jets	3,060	2,220
Total	**18,800**	**35,600**

Asia Pacific

Market update

The slow-down in world trade has depressed both passenger travel and air cargo traffic. As the world economy recovers, the region's airlines will return to their long-term growth trend.

We have added more detailed data on five geographic markets within the Asia Pacific region. Use the quick links in the right-hand column to explore forecast details for—

- China
- Southwest Asia
- Northeast Asia
- Southeast Asia
- Oceania (Australasia)

Modern, efficient fleets

Economic growth will average 4.4 percent per year during the next 20 years, expanding the region's share of world GDP to 33 percent, from 25 percent today. Continued economic growth will drive demand for air transport, creating a requirement for more than 8,900 new airplanes, valued at $1.1 trillion. Delivery of these new, efficient airplanes ensures that the region's fleets will remain among the youngest in the world.

Thriving air commerce

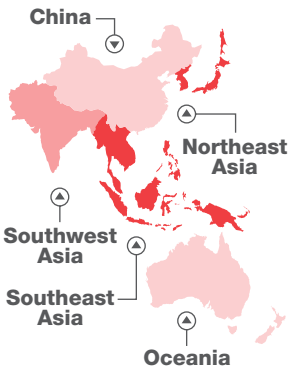
Asia Pacific covers a broad geographic expanse, which presents unique challenges and opportunities for airlines. The region is served by a variety of airline types, including established network carriers, emerging low-cost airlines, and airlines that specialize in short-haul networks. Some of the largest and most efficient cargo operators in the world also serve the region, capitalizing on the significant trade among Asia Pacific nations and trade with other regions.

Conditions for growth

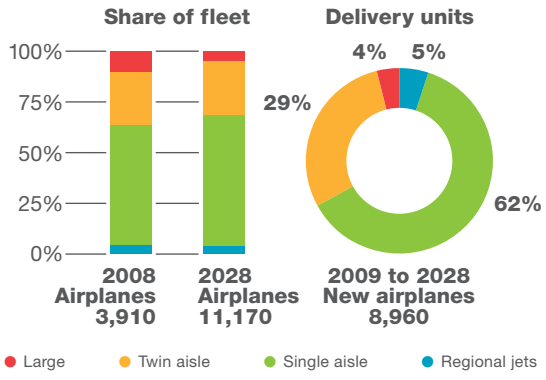
Airports in the region are expanding to match growing demand for aviation services from its many large population centers. Rising wages and broadening distribution of wealth in rapidly developing countries such as China and India will make it possible for a larger percentage of the population to travel by air. Relaxation of regulatory restrictions and infrastructure improvements will further stimulate air travel within the region.

Travel volumes in Asia Pacific overall are large and growing rapidly. Asia Pacific will account for 41 percent of travel in 20 years' time, up from around 32 percent today. In fact, in less than 10 years, Asia Pacific will easily be the largest air travel market in the world. Overall, air travel for the Asia Pacific region is expected to grow at an average annual rate of 6.5 percent over the next 20 years. The Asia Pacific fleet will grow from 3,910 to 11,170 airplanes.

Asia Pacific
New airplanes: 8,960



Asia Pacific
Market value: $1,130 billion



Asia Pacific
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**4.4%**
Traffic (RPK)	**6.5%**
Cargo (RTK)	**6.2%**
Airplane fleet	**5.4%**
Ratio	
RPK / GDP	**1.5**
Market size	
Deliveries	**8,960**
Market value	**$1,130B**
Average value	**$130M**

	New airplanes	Share by size
Large	330	**4%**
Twin aisle	2,590	**29%**
Single aisle	5,600	**62%**
Regional jets	440	**5%**
Total	**8,960**	

	2008 Fleet	2028 Fleet
Large	400	500
Twin aisle	1,010	2,980
Single aisle	2,330	7,230
Regional jets	170	460
Total	**3,910**	**11,170**

China

Resilient domestic market

While many airlines around the world struggle with falling demand, China's domestic traffic resumed its boom after a short slowdown in 2008, thanks largely to the government's timely stimulus action. According to CAAC data, mainland China RPKs grew by 13 percent in the first half of 2009. Domestic traffic, which has seen passenger enplanements increase by almost 20 percent to 100 million for the first six months, has driven this growth. International traffic, on the other hand, is down by about 17 percent to 7 million passengers for the first half of 2009.

Largest Asia Pacific market

China is forecast to be the fastest growing economy in the world, with GDP growth averaging 7.2 percent per year over the next 20 years. Within the next decade, China will surpass Japan to become the second largest economy in the world. By 2028, China will account for 42 percent of Asia Pacific's total economic activity, a giant leap from 24 percent in 2008.

To accommodate the phenomenal growth in demand for air travel, China will need to more than triple the size of its fleet to 4,610 airplanes by 2028. China will take delivery of 3,770 new airplanes, which is 42 percent of the entire Asia Pacific market and valued at $400 billion dollars. Single-aisle airplanes serving the domestic market will account for 70 percent of the new deliveries.

Crossing the Taiwan Strait

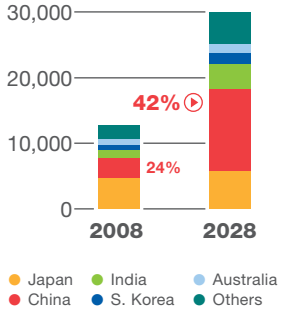
Air services between China and Taiwan achieved a major milestone on August 31, 2009, with the initiation of scheduled nonstop flights across the Taiwan Strait, the first scheduled service since 1949. The number of flights and city pairs has grown remarkably with liberalized air services agreements. Continued liberalization of air services will further stimulate demand for air travel.

Infrastructure and aviation services

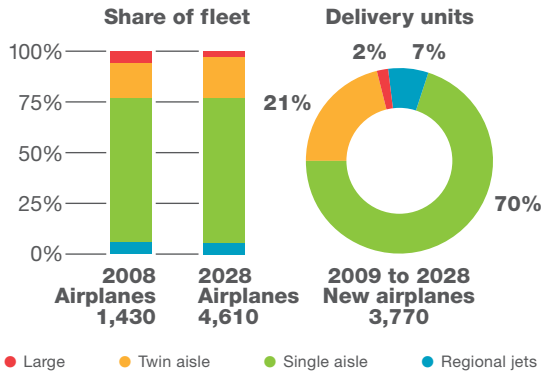
China's ambitious economic growth warrants investment in as many infrastructure projects as possible. This includes a modern and integrated ground and air transportation system. Any air traffic diverted to upgraded ground transportation, including high-speed rails and highways, will likely be more than offset by the resulting boost in personal income associated with these infrastructure improvements.

China
Growth in the Asian economy

Source: IHS Global Insight November 2008



China
Market value: $400 billion



China
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**7.2%**
Traffic (RPK)	**7.8%**
Cargo (RTK)	**6.6%**
Airplane fleet	**6.0%**

Ratio	
RPK / GDP	**1.1**

Market size	
Deliveries	**3,770**
Market value	**$400B**
Average value	**$110M**

	New airplanes	Share by size
Large	70	**2%**
Twin aisle	780	**21%**
Single aisle	2,670	**70%**
Regional jets	250	**7%**
Total	**3,770**	

	2008 Fleet	2028 Fleet
Large	80	120
Twin aisle	250	940
Single aisle	1,010	3,300
Regional jets	90	250
Total	**1,430**	**4,610**

Southwest Asia

Strong growth in short-haul market

The combination of a high level of economic development and market liberalization is driving remarkable growth in air travel demand in Southwest Asia. Air traffic within Southwest Asia is expected to grow at an astonishing 8.7 percent annually over the next 20 years—-a higher rate of internal growth than in any other region, including China. A crucial need for intercity travel within the region will drive robust demand for modern, efficient short- and medium-haul airplanes. More than 900 deliveries of a new single-aisle airplane are projected over 20 years.

Travel and tourism contribute to the economy

Economic development spurs demand for air travel. Travel and tourism, in turn, directly contribute to economic output within the region. A recent study by the World Travel & Tourism Council projects that by 2019 about 6 percent of India's total GDP will come from travel and tourism. This equates to nearly US $100 billion in economic value (in year 2000 dollars). Travel and tourism will account for more than 7 percent of total employment in India by 2019, equating to about 40 million jobs. The numerous economic benefits of air travel are manifest, both in terms of the life-enriching experience of travelers and the financial benefits for those employed by the travel industry.

Young, expanding middle class drives growth

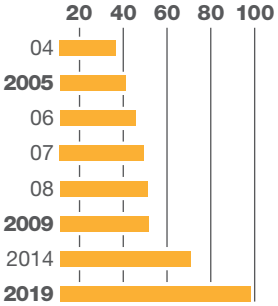
India's vibrant middle class is expected to grow, not only in numbers but in spending power over the coming years. McKinsey Global Institute estimates that India's middle class will be 600 million strong by 2025, with a four-fold increase in spending power. With half of India's population currently under the age of 25, there will be an abundant supply of new customers for airlines to tap over the next 20 years. Strong price competition among the region's airlines will serve to stimulate new demand, drawing millions of passengers away from the extensive rail network to much faster air services.

Infrastructure investment critical

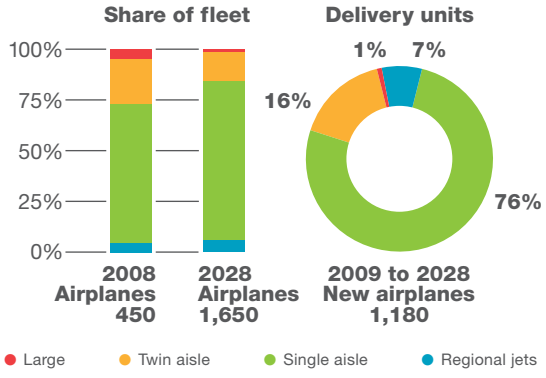
Wide-scale investment in airport and airspace infrastructure is imperative to Southwest Asia's projected air travel market growth. Fortunately both governmental and private entities have recognized the need for modernization and have begun a massive infrastructure overhaul. Key projects include the recently completed airports at Hyderabad and Bangalore, with critical future airports in Mumbai and 35 other "greenfield" sites in the early planning stages.

Southwest Asia
India travel and tourism GDP

Source: World Travel & Tourism Council 2009



Southwest Asia
Market value: $120 billion



Southwest Asia
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**6.1%**
Traffic (RPK)	**7.5%**
Cargo (RTK)	**7.1%**
Airplane fleet	**6.7%**

Ratio	
RPK / GDP	**1.2**

Market size	
Deliveries	**1,180**
Market value	**$120B**
Average value	**$100M**

	New airplanes	Share by size
Large	10	**1%**
Twin aisle	190	**16%**
Single aisle	900	**76%**
Regional jets	80	**7%**
Total	**1,180**	

	2008 Fleet	2028 Fleet
Large	20	10
Twin aisle	100	250
Single aisle	310	1,290
Regional jets	20	100
Total	**450**	**1,650**

Northeast Asia

Growth will resume

The recent financial crisis and global recession have dampened economic growth throughout Northeast Asia, particularly in Japan where economic activity is closely tied to exports and world trade. As the world economy recovers, the region's GDP will improve to average 1.3 percent annual growth over the next 20 years. Korea's developing economy will grow at a faster rate as its industrial base broadens.

Airport capacity improvement

Airport expansion and further liberalization in Japan and South Korea will stimulate air travel and contribute to economic revitalization. Overall, air travel is expected to grow at 4.3 percent per year, while regional traffic between Northeast and other Asia Pacific regions is projected to grow faster at 5.8 percent.

Tokyo's Haneda and Narita airports will both benefit from expansion projects in 2010. The international terminal and fourth runway at Haneda Airport will increase capacity for both domestic and international flights by 40 percent. The extended second runway at Tokyo Narita International Airport will also enable growth in international services. Incheon International Airport near Seoul, South Korea, is also expanding with a new concourse, additional gates and a third runway.

Liberalization and competition

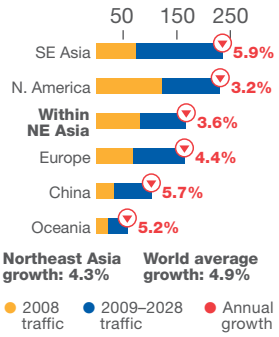
Operating restrictions between countries in the region are gradually easing. Market regulations between Northeast Asian countries and other nations in the Asia Pacific region, including China, are also being liberalized. This will encourage expansion of services into new markets.

Domestic low-cost carriers and LCCs from outside the region are showing a strong interest in this market as regulations ease and airport capacity expands. Large network carriers have also expressed interest in starting low-cost operations. Expanding low-cost service is stimulating the demand for single-aisle airplanes for intra-Asia markets. Airlines in Northeast Asia also provide significant capacity in intercontinental markets to North America and Europe. Long-haul carriers are investing in efficient twin-aisle jets to strengthen existing service and to open new markets.

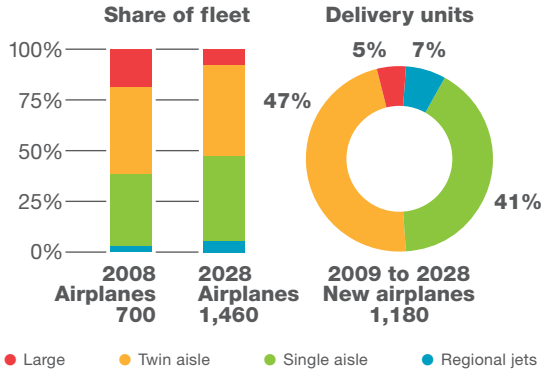
Air cargo growth

The economic downturn has also affected the air cargo market in Northeast Asia. However, trade growth is projected to be particularly strong between Northeast Asia and the other markets within the Asia Pacific region. This increased trade will help drive Northeast Asia air cargo traffic to grow 6.4 percent per year, on average, over the next 20 years.

Northeast Asia
Passenger traffic growth within Asia Pacific



Northeast Asia
Market value: $190 billion



Northeast Asia
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**1.3%**
Traffic (RPK)	**4.3%**
Cargo (RTK)	**6.4%**
Airplane fleet	**3.7%**

Ratio	
RPK / GDP	**3.3**

Market size	
Deliveries	**1,180**
Market value	**$190B**
Average value	**$160M**

	New airplanes	Share by size
Large	60	**5%**
Twin aisle	560	**47%**
Single aisle	480	**41%**
Regional jets	80	**7%**
Total	**1,180**	

	2008 Fleet	2028 Fleet
Large	130	110
Twin aisle	300	660
Single aisle	250	610
Regional jets	20	80
Total	**700**	**1,460**

Southeast Asia

Dynamic Competition

Southeast Asia is one of the most dynamic regions for air travel. Rapidly expanding low-cost carriers are opening new routes and offering dramatically lower fares than have been customary in the region. These airlines are making air travel more accessible by keeping operational costs low and using innovative distribution strategies to reach people without credit cards. Particularly in island nations, which are predisposed to air travel, carriers like Lion Air, Air Asia and Cebu Pacific continue to expand, despite the world-wide economic slowdown. Such market dynamics have spurred established carriers like Malaysia Airlines, Philippine Airlines, and Garuda Indonesia to focus on improving their efficiency and product offerings to compete. These restructured carriers will also be poised to compete more aggressively against other global network airlines as the economy recovers. New, efficient airplanes with greater capabilities and lower operating costs are integral to all of these carriers' business strategies.

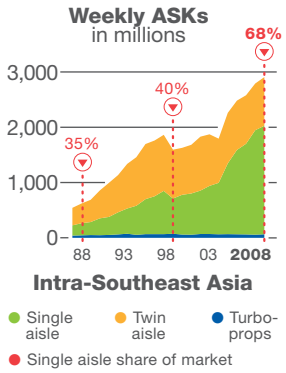
Liberalization and Infrastructure

Regulatory changes and infrastructure development are critical components of air travel expansion in Southeast Asia. Traditional barriers to growth are being lifted as market regulations lessen among ASEAN nations and on the cross-strait market between Taiwan and China. For example, the Kuala Lumpur-Singapore market restrictions were lifted in December 2008 and capacity has grown over 35 percent by mid-2009. This trend will continue, as ASEAN intends to establish a unified aviation market by 2015. Governments and airport authorities are also eager to develop their aviation infrastructure. Work is underway to upgrade and expand airports and to improve local connectivity. Committed projects in Taipei, Denpasar (Bali), Kuala Lumpur and Hanoi exemplify this development.

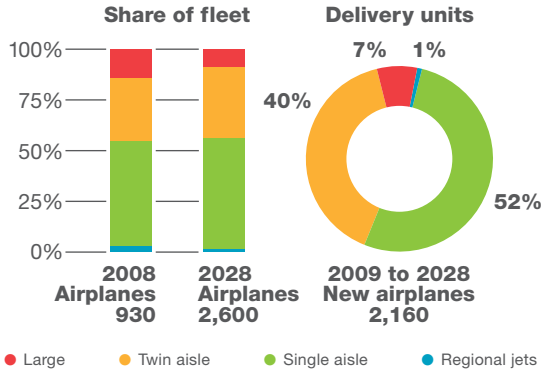
Aviation Expansion

Southeast Asia continues to strengthen its economic community and encourage collaboration. Air transport plays a vital role in the region's relatively rapid projected GDP growth. More affordable air travel options spur growth across the spectrum of service industries in the region, from tourism to financial services. Well-developed air cargo operations enable efficient shipment of manufactured goods. The air travel growth rate for Southeast Asia is projected to average 6.6 percent per year over the next 20 years. Travel within the region will grow even faster, averaging 8.1 percent annually. Because much of the traffic increase will be flights within Southeast Asia, more than half of new airplane deliveries will be single-aisle aircraft.

Southeast Asia
Single aisle share of market



Southeast Asia
Market value: $330 billion



Southeast Asia
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**4.6%**
Traffic (RPK)	**6.6%**
Cargo (RTK)	**5.5%**
Airplane fleet	**5.3%**
Ratio	
RPK / GDP	**1.4**
Market size	
Deliveries	**2,160**
Market value	**$330B**
Average value	**$150M**

	New airplanes	Share by size
Large	150	**7%**
Twin aisle	860	**40%**
Single aisle	1,130	**52%**
Regional jets	20	**1%**
Total	**2,160**	

	2008 Fleet	2028 Fleet
Large	130	220
Twin aisle	290	910
Single aisle	490	1,450
Regional jets	20	20
Total	**930**	**2,600**

Oceania (Australasia)

Competitive marketplace

New players continue to enter Oceania markets as countries in the region expand air services agreements. Australia and the United States signed an open skies agreement in 2008 and the number of carriers in the trans-Pacific market promptly expanded. Recent entrants into Australian international markets include several Middle East carriers, young low-cost long-haul operators like V Australia and AirAsia X, and Delta Air Lines. This additional capacity, coupled with the worldwide decline in premium demand, has weakened yields in international markets. Expanding LCC operations in Australia and New Zealand are compressing profits in domestic markets as well. Carriers with low costs and minimal premium services are faring best in the current economic environment, and traditional carriers are working hard to streamline their businesses.

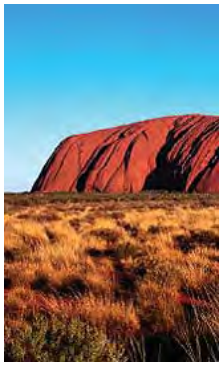
Future potential

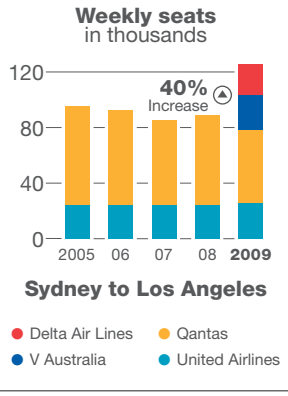
While today's challenges are considerable, the future potential of the Oceania commercial air market is great. Air travel growth is forecast to average 5.1 percent per year over the next 20 years, slightly higher than the world average. Air transport is fundamental to tourism and international trade, major drivers of the region's economy. New, efficient single-aisle airplanes on order by the region's airlines will support continued expansion of LCC operations. New mid-size twin-aisle airplanes with increased range will enable airlines to open more direct markets. North America, China and Middle East routes will gradually gain market share against today's dominant intra-Oceania market.

The greatest incremental traffic growth will be between Oceania and Southeast Asia. By 2028, air traffic in this market will nearly equal traffic within Oceania, thanks to fewer air service regulations, new trade agreements and Southeast Asia's prime location as a connecting point to Europe. In February 2009, ASEAN, Australia and New Zealand signed a free trade agreement that will strengthen commercial ties among the participating countries. Europe continues to be an important economic partner for the countries in Oceania, with strong markets for tourism, services and commercial goods, reinforced by cultural, political and person-to-person ties. New Zealand is in negotiations with the European Union to develop a full air services agreement with all member states. New Zealand also signed an open skies agreement with Canada in July 2009, which will lift restrictions on frequencies in this market.

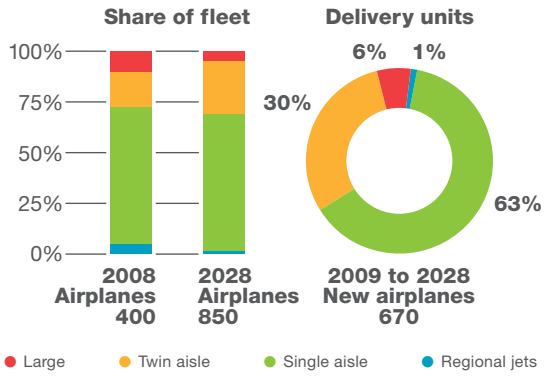
Oceania (Australasia)
Airline capacity growth

Source: Official Airline Guide August 2009





Oceania (Australasia)
Market value: $90 billion



Oceania (Australasia)
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**2.9%**
Traffic (RPK)	**5.1%**
Cargo (RTK)	**6.1%**
Airplane fleet	**3.8%**
Ratio	
RPK / GDP	**1.8**
Market size	
Deliveries	**670**
Market value	**$90B**
Average value	**$130M**

	New airplanes	**Share by size**
Large	40	**6%**
Twin aisle	200	**30%**
Single aisle	420	**63%**
Regional jets	10	**1%**
Total	**670**	

	2008 Fleet	**2028 Fleet**
Large	40	40
Twin aisle	70	220
Single aisle	270	580
Regional jets	20	10
Total	**400**	**850**

North America

Travel markets

North America's well-developed internal market is projected to grow at a modest rate of 2.5 percent over the next 20 years. Longer-haul international services will continue to achieve higher growth rates, driving strong demand for efficient twin-aisle airplanes such as the Boeing 787 and 777.

Airplane replacement

Slow growth in short-haul markets means that the majority of airplane deliveries (over 60 percent) will be for replacement. Fuel-thirsty existing fleets continue to age. By the year 2014, more than 700 passenger airplanes, mostly single-aisle types, will be at least 25 years old, unless significant numbers of airplanes are retired.

The broad capabilities of newer generation airplanes, such as today's 737 family, provide economic incentives to replace a wide spectrum of older types, including the large number of MD-80s and the oldest 737s, 757s, and A320s in the existing fleet.

Consolidation and new entrants

Some industry observers see the recent merger of two of the region's top airlines as a sign that there is room for further industry consolidation, which would have a dramatic effect on the structure of the industry. Consolidation typically creates economies of scale, bringing revenue and cost improvements from elimination of redundant services and excess capacity.

Any resulting realignment of major airline route networks would provide opportunities for smaller airlines and startups to fill the voids created by the withdrawal of network carriers. New entrants will benefit from access to lightly utilized facilities and a customer base revitalized by new services and innovative product offerings.

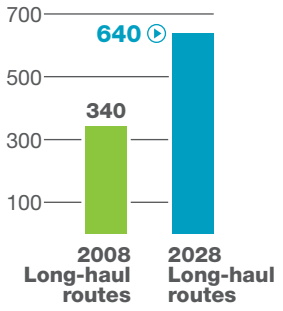
Larger regional jets

North America's airlines are reshaping their regional fleets to use larger-sized regional jets and small single-aisle airplanes. The larger airplanes cost less to operate per seat and offer greater revenue potential. We project demand for more than 1,600 large regional jets and small single-aisle airplanes over 20 years.

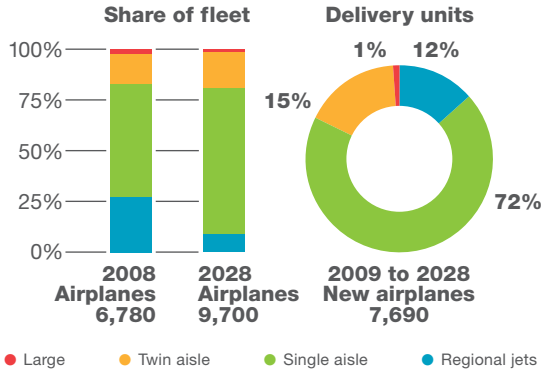
Fuel costs and intense competition have taken a heavy toll on small RJ economics. Many relatively young RJs are being removed from fleets as network airlines cope with an unforgiving business environment. We forecast only 140 new deliveries in this category, all of them to replace older airplanes. RJs will account for only 9 percent of the fleet in 2028, compared to over 27 percent today.

North America
Long-haul route development

Unique airport pairs
More than 5,000 km



North America
Market value: $680 billion



North America
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**2.4%**
Traffic (RPK)	**3.2%**
Cargo (RTK)	**4.6%**
Airplane fleet	**1.8%**
Ratio	
RPK / GDP	**1.3**
Market size	
Deliveries	**7,690**
Market value	**$680B**
Average value	**$90M**

	New airplanes	Share by size
Large	40	**1%**
Twin aisle	1,130	**15%**
Single aisle	5,630	**72%**
Regional jets	890	**12%**
Total	**7,690**	

	2008 Fleet	2028 Fleet
Large	140	120
Twin aisle	1,010	1,720
Single aisle	3,780	6,980
Regional jets	1,850	880
Total	**6,780**	**9,700**

Europe

Strength in time

Despite current market conditions, the long-term forecast for airplanes in Europe has increased a little this year. So far, the European airline market has been less affected by economic factors and shows traffic declines about half those in other regions. Several factors give us confidence in a return to strong development of air transport in Europe.

For example, the region is highly diverse economically, and newly developing leisure markets generate rapidly growing traffic flows. The European Union continues to pursue air transport liberalization with countries such as Turkey, Brazil, India and Korea. And, as airlines address markets that are not suitable for high-speed rail, average flight length will increase.

European airlines' strategy for environmental responsibility includes replacement of older airplanes with newer models that allow them to lower fuel consumption, carry more passengers and fly longer hours using fewer airplanes to accommodate the same amount of traffic. We calculate that in the year 2028, 94 percent of European airplanes will have been delivered new since 2009.

Leading strategic change

European airlines are shaping global airline trends in two distinct but related areas. First of all, larger airlines with well established long-haul networks are strengthening their market presence through pursuing mergers, acquisitions and antitrust immunity[1]. Secondly, low-cost airlines are securing a larger share of local markets.

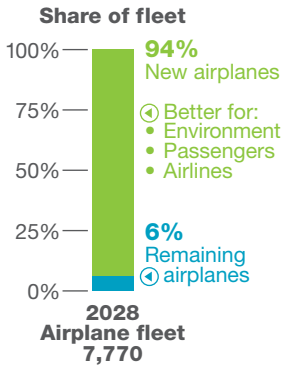
Larger network airlines continue to shift their focus away from carrying passengers between local destinations targeted by low-cost airlines. They are not able to compete profitably with carriers whose business model is designed specifically to make money by stimulating high levels of demand with simple, low-cost service.

Low-cost long-haul and charter airlines

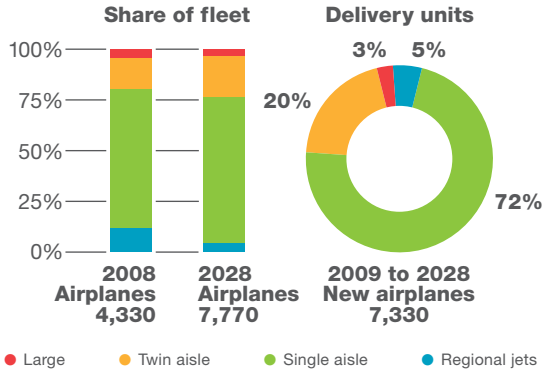
European charter airlines were the pioneers of the operating model behind long-haul low-cost service and benefit from the flexibility of mixing direct and packaged sales of low-cost seats. Competition with new low-cost entrants from other regions on long-haul routes will stimulate response from European airlines as they benefit from a large local market base.

[1]Authorization for extensive cooperation with partner airlines on transatlantic routes.

Europe
Fleet in 2028: 7,770



Europe
Market value: $800 billion



Europe
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**1.9%**
Traffic (RPK)	**4.1%**
Cargo (RTK)	**4.8%**
Airplane fleet	**3.0%**

Ratio	
RPK / GDP	**2.2**

Market size	
Deliveries	**7,330**
Market value	**$800B**
Average value	**$110M**

	New airplanes	Share by size
Large	200	**3%**
Twin aisle	1,480	**20%**
Single aisle	5,310	**72%**
Regional jets	340	**5%**
Total	**7,330**	

	2008 Fleet	2028 Fleet
Large	190	230
Twin aisle	660	1,580
Single aisle	2,970	5,620
Regional jets	510	340
Total	**4,330**	**7,770**

Middle East

Unprecedented growth

The Middle East has developed into one of the world's most prominent regions for air travel. Driven by a unique combination of economic expansion, well-coordinated growth plans, modern air transport infrastructure and favorable geographic location, air travel has grown at unprecedented rates during the past several years.

Vital connections

Middle East carriers have focused on establishing the region, with its relatively small population, as a transfer point for passengers traveling between Europe, Asia and Africa. Using the region's central location between three continents generates tremendous market potential. Market access is critical to success. Many routes that the region's airlines currently serve were, until recently, restricted by bilateral agreements intended to protect local air carriers.

New long-haul aircraft capabilities have made it possible for the region to serve as a transfer point on routes to North and South America, as well. Airplanes such as the Boeing 777 can reach nearly any city in the world from the Middle East, allowing the region's carriers to serve the East Coast of the United States and even longer-haul destinations, including Los Angeles, San Francisco, Houston and São Paulo, Brazil.

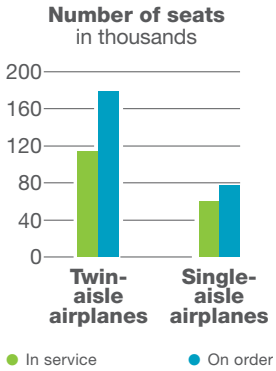
Airplane capability is crucial

The role of Middle East air carriers in global air transport will expand as greater numbers of new, highly efficient airplanes with very long haul capabilities join Middle East airline fleets. More than 100 new airplanes, including 45 twin-aisle airplanes, will be delivered to operators in the region during 2009. This accounts for approximately 20 percent of 2009 twin-aisle deliveries, worldwide. Another 50 twin-aisle airplanes will be delivered to the region in 2010, enhancing the already strong competitive position of the region's carriers.

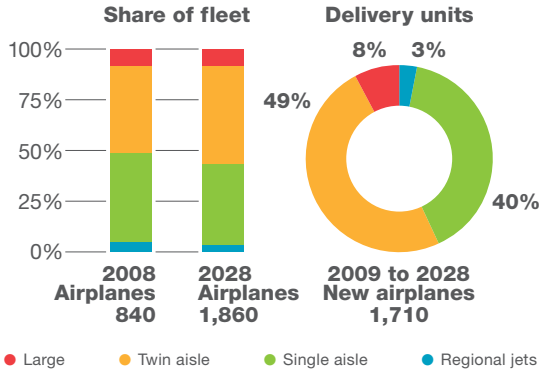
Budget travel markets

The Middle East is a large, relatively underserved market for budget travel. Significant migrant worker populations need an affordable way to return home. The youthful middle-class work-force has a strong appetite for travel, and the region's proximity to high-growth markets, such as India, Europe and Central Asia, create many opportunities to introduce service to medium-haul destinations. During the past few years, six low-cost airlines have initiated service in the region and market potential continues strong.

Middle East
Significant backlog



Middle East
Market value: $300 billion



Middle East
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**3.8%**
Traffic (RPK)	**6.6%**
Cargo (RTK)	**6.3%**
Airplane fleet	**4.1%**

Ratio	
RPK / GDP	**1.7**

Market size	
Deliveries	**1,710**
Market value	**$300B**
Average value	**$180M**

	New airplanes	Share by size
Large	130	**8%**
Twin aisle	850	**49%**
Single aisle	680	**40%**
Regional jets	50	**3%**
Total	**1,710**	

	2008 Fleet	2028 Fleet
Large	70	150
Twin aisle	360	900
Single aisle	370	750
Regional jets	40	60
Total	**840**	**1,860**

Latin America

Rapid traffic growth

Air traffic growth rates for Latin American carriers are among the highest in the world. In South America, economic growth of 3.9 percent per year will drive air traffic to grow 7 percent per year for the next 20 years. In Central America, 3.6 percent economic growth will drive 5.6 percent annual growth in air traffic.

Prosperous operations

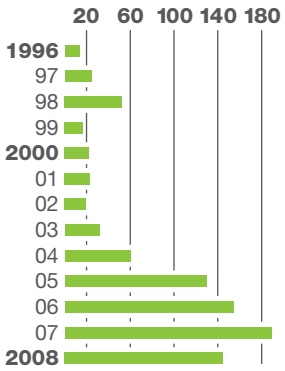
Latin America is home to some of the most profitable airlines in the world. Many carriers in the region have worked hard in recent years to improve their product offerings, their brand and their quality of service. Latin American carriers are also enhancing their fleets with new and efficient airplanes, having placed more than twice as many new airplane orders in the past four years as in the previous 10 years. Many of these recent orders have been in the twin-aisle category for use in international markets. Since the beginning of 2006, Latin American airlines have ordered approximately 115 twin-aisle airplanes, which is nearly one-quarter of the total airplanes ordered in the region.

Potential for market expansion

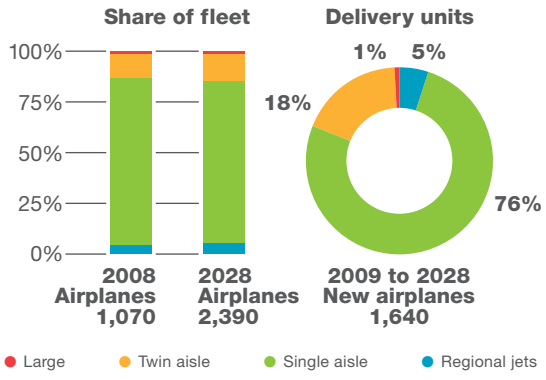
Growing fleets of new aircraft are providing the region's carriers with economies of scale and increased ability to expand route networks. These are important factors that will help Latin American airlines compete with their international counterparts, which provide the majority of service in and out of the region. Only 19 percent of traffic to Europe and 26 percent of traffic to North America is currently carried by Latin American airlines. Although tourism has driven a significant increase in air travel between Europe and Latin America, nearly all of the traffic added since 2005 has been aboard European airlines. Latin American airlines have reduced their capacity on these routes.

Economics and demographics suggest significant potential for air travel growth. Brazil, with its population of nearly 200 million, is the largest country in the region and fifth largest in the world, behind China, India, the United States and Indonesia.

Latin America
Airplane orders per year



Latin America
Market value: $150 billion



Latin America
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**3.8%**
Traffic (RPK)	**6.5%**
Cargo (RTK)	**6.3%**
Airplane fleet	**4.1%**
Ratio	
RPK / GDP	**1.7**
Market size	
Deliveries	**1,640**
Market value	**$150B**
Average value	**$90M**

	New airplanes	**Share by size**
Large	10	**1%**
Twin aisle	290	**18%**
Single aisle	1,260	**76%**
Regional jets	80	**5%**
Total	**1,640**	

	2008 Fleet	**2028 Fleet**
Large	10	10
Twin aisle	130	340
Single aisle	880	1,900
Regional jets	50	140
Total	**1,070**	**2,390**

Russia and Central Asia

Growth continues during downturn

While the near-term economics are slowing, some countries in the region are still showing solid GDP growth. The long-term outlook for the region's economy remains strong, with GDP forecast to grow 3.7 percent per year, slightly ahead of the 3.1 percent world average for the next 20 years.

To accommodate the region's economic growth, Russia and Central Asia will need a fleet of 1,570 airplanes by 2028. The region will take delivery of 1,050 new airplanes to reach that total. New deliveries will account for 67 percent of the 2028 fleet. Boeing market share in the region has grown to 24 percent from 4 percent in 2000.

Liberalization advances

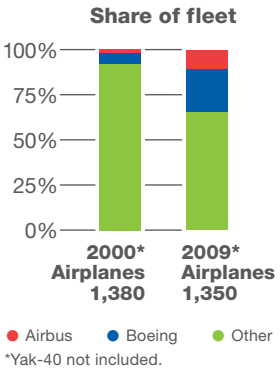
Russia has reinstated third-country codeshare permission for U.S. airlines, which was discontinued in the mid-1990s. U.S. airlines can implement up to eight codeshare operations, two of which are reserved for freight. In Russia, aircraft taxes and duties are being temporarily reduced or even lifted altogether. Import duties on regional jets under 50 seats were suspended for nine months. For the 115- to 160-seat category, duties are suspended for five years. For airplanes in the over-300-seat category, duties are suspended with no expiration date at this time. Duties on engines and components for the under-50-seat category also have been removed temporarily.

Infrastructure and aviation services

Larger fleets and expanded operations are driving enhancements to infrastructure and aviation services. S7 Airlines is installing two 737 simulators and a procedural trainer near Moscow Domodedovo Airport. Ukraine International Airlines has received regulatory approval to open in-house training facilities for their 737 fleet. In 2008, Belarus, along with IteraVnukovo, announced plans for a new maintenance, repair and overhaul (MRO) center in Minsk, offering maintenance service for western-built aircraft. Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan have agreed to establish a joint aeronautical agency to enhance air traffic management and safety in their airspace. Moldova has received 25.5 million Euros from the European Bank of Reconstruction and Development (EBRD) to modernize Chisinau International Airport.

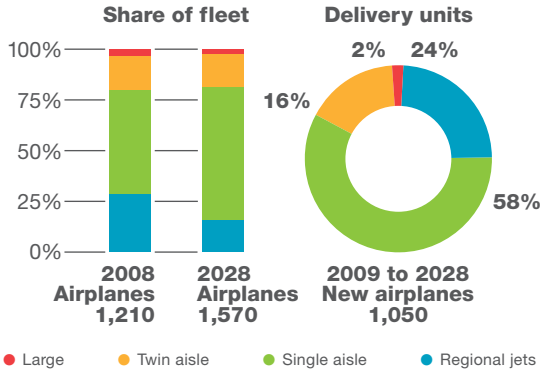
Russia and Central Asia
Passenger and freighters fleet

Source: Airclaims, May 2009



*Yak-40 not included.

Russia and Central Asia
Market value: $90 billion



Russia and Central Asia
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**3.7%**
Traffic (RPK)	**5.1%**
Cargo (RTK)	**5.3%**
Airplane fleet	**1.3%**

Ratio	
RPK / GDP	**1.4**

Market size	
Deliveries	**1,050**
Market value	**$90B**
Average value	**$90M**

	New airplanes	Share by size
Large	20	**2%**
Twin aisle	170	**16%**
Single aisle	610	**58%**
Regional jets	250	**24%**
Total	**1,050**	

	2008 Fleet	2028 Fleet
Large	40	40
Twin aisle	200	250
Single aisle	620	1,030
Regional jets	350	250
Total	**1,210**	**1,570**

Africa

Internal growth potential

Air travel within Africa will grow at 6.4 percent per year over the next 20 years, a growth rate comparable to that of the world's emerging economies. Increasing trade and commerce are fueling growth among the region's airlines, and new airlines are emerging as the number of people who can afford to fly rises. Geographical challenges and the lack of good roads and railways emphasize the importance of air travel to economic development. Single-aisle airplanes provide most service within the continent, accounting for about 75 percent of the region's internal capacity, measured in available seat-kilometers (ASK).

Tourism and trade

Intercontinental travel represents about 80 percent of the region's total air travel market. Routes to and from Europe will continue to be the largest market segment, accounting for nearly 67 percent of Africa's intercontinental service. A wide variety of tourist attractions and cultural interests, particularly in North Africa — already very popular with European holiday travelers and becoming more so, as currency exchange rates remain favorable — enhance demand for intercontinental service.

Trade links with the Middle East and China are growing. African carriers are also extending service to less traditional destinations in North and South America and the Asia Pacific region, including nonstop flights to Hong Kong, Bangkok, Singapore, Delhi, Mumbai, Rio de Janeiro, Sao Paulo, New York, Washington, Montreal, Perth and Sydney.

Twin-aisle prospects

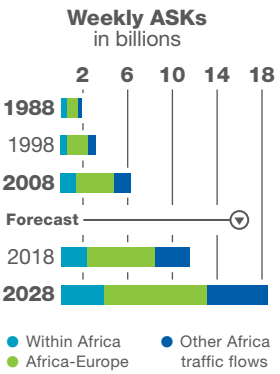
Twin-aisle airplanes provide about 75 percent of Africa's intercontinental capacity, with small- and intermediate-size twin-aisle airplanes gaining significant market share. Cargo is also an important component of air service in Africa. Europe is the major air trade partner, along with the Middle East and North America.

More open aviation policies

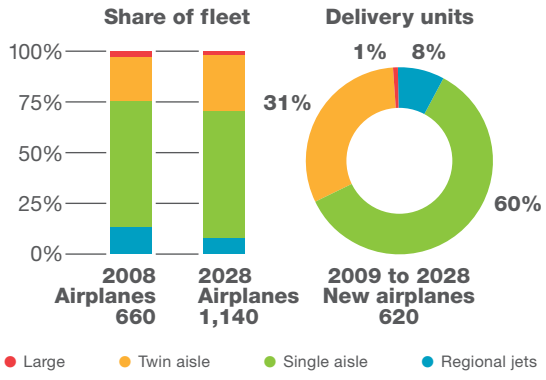
Low-cost airlines are entering many markets as countries within Africa adopt less restrictive policies on air services, more open bilateral agreements with China to promote tourism, and measures to harmonize legislation, licensing and technical standards across the African continent.

Africa
Growth in emerging markets

Source: Official Airline Guide and Boeing



Africa
Market value: $70 billion



Africa
Key indicators and new airplane markets

Growth measures	
Economy (GDP)	**4.9%**
Traffic (RPK)	**5.8%**
Cargo (RTK)	**5.4%**
Airplane fleet	**2.8%**
Ratio	
RPK / GDP	**1.2**
Market size	
Deliveries	**620**
Market value	**$70B**
Average value	**$110M**

	New airplanes	Share by size
Large	10	**1%**
Twin aisle	190	**31%**
Single aisle	370	**60%**
Regional jets	50	**8%**
Total	**620**	

	2008 Fleet	2028 Fleet
Large	20	20
Twin aisle	140	310
Single aisle	410	720
Regional jets	90	90
Total	**660**	**1,140**

Database: **Passenger traffic**

Airline passenger traffic
Growth by regional flow

Regions

RPKs in billions	2000	2001	2002	2003	2004	2005	2006	2007	2008	2028	Average growth 2008 to 2028
Africa – Africa	19.4	19.9	21.2	22.5	24.0	26.4	29.7	33.9	34.6	118.6	6.4%
Africa – Europe	**99.4**	**96.2**	**97.2**	**99.1**	**105.2**	**111.3**	**115.2**	**122.4**	**126.3**	**359.9**	**5.4%**
Africa – Middle East	9.8	10.6	13.2	13.9	13.9	16.4	17.9	19.9	23.0	75.3	6.1%
Africa – N. America	**4.4**	**4.6**	**4.3**	**4.4**	**3.9**	**3.8**	**4.8**	**8.3**	**8.5**	**35.5**	**7.4%**
Africa – S.E. Asia	3.2	3.4	3.6	3.7	3.9	4.7	4.8	5.7	5.6	32.2	9.2%
C. America – C. America	**24.0**	**23.0**	**23.4**	**24.8**	**26.0**	**25.2**	**26.0**	**26.9**	**27.7**	**88.3**	**6.0%**
C. America – Europe	66.4	69.8	68.1	69.8	75.7	80.1	82.0	85.4	92.3	172.0	3.2%
C. America – N. America	**90.1**	**88.6**	**87.7**	**92.0**	**103.5**	**104.9**	**107.9**	**116.6**	**119.2**	**234.8**	**3.5%**
C. America – S. America	7.3	7.2	7.1	7.1	8.3	10.7	12.7	14.9	15.8	52.2	6.2%
China – China	**76.7**	**86.9**	**101.5**	**106.9**	**143.8**	**163.8**	**182.4**	**210.7**	**227.6**	**1,174.9**	**8.6%**
China – Europe	40.1	40.2	42.6	37.5	51.2	60.9	73.9	77.4	77.9	235.1	5.7%
China – N. America	**33.2**	**36.2**	**33.2**	**24.9**	**34.4**	**40.2**	**48.5**	**56.4**	**57.2**	**182.3**	**6.0%**
China – N.E. Asia	19.4	18.4	24.5	20.1	27.3	29.0	30.0	35.7	33.3	101.9	5.7%
China – Oceania	**12.1**	**12.4**	**13.2**	**10.6**	**15.0**	**17.1**	**19.3**	**20.4**	**22.4**	**71.1**	**5.9%**
China – S.E. Asia	29.3	31.7	36.9	27.7	41.2	48.9	48.6	52.1	50.4	145.7	5.5%
R&CA – R&CA*	**39.4**	**43.5**	**46.9**	**50.2**	**54.7**	**56.0**	**57.3**	**57.7**	**61.4**	**177.5**	**5.5%**
R&CA – International	49.2	48.1	51.4	56.4	63.0	65.2	66.6	74.6	85.7	232.2	5.1%
Europe – Europe	**440.1**	**449.3**	**453.8**	**474.7**	**521.2**	**561.9**	**593.3**	**634.2**	**661.8**	**1,279.5**	**3.4%**
Europe – Middle East	65.0	59.8	58.6	58.9	67.7	74.1	88.3	105.2	113.8	329.8	5.5%
Europe – N. America	**420.0**	**373.8**	**346.0**	**349.5**	**375.7**	**390.7**	**403.4**	**420.6**	**433.2**	**1,055.7**	**4.6%**
Europe – N.E. Asia	63.6	55.8	53.3	48.3	59.8	61.0	61.8	68.3	68.7	163.1	4.4%
Europe – S. America	**53.2**	**52.1**	**49.2**	**49.5**	**57.9**	**65.4**	**71.7**	**78.7**	**84.9**	**241.1**	**5.4%**
Europe – S.E. Asia	95.8	95.9	96.4	95.0	104.5	111.3	110.3	108.3	108.9	327.4	5.7%
Europe – S.W. Asia	**26.2**	**27.5**	**27.6**	**29.5**	**35.7**	**44.3**	**54.1**	**54.3**	**53.6**	**174.6**	**6.1%**
Middle East – Middle East	27.8	27.1	27.5	28.1	32.0	34.0	36.3	39.6	41.8	140.0	6.2%
Middle East – N. America	**16.1**	**12.0**	**10.4**	**9.6**	**12.6**	**14.4**	**19.5**	**30.1**	**34.8**	**133.1**	**6.9%**
Middle East – S.E. Asia	24.0	22.9	24.0	26.4	29.2	33.3	38.3	45.1	45.7	165.0	6.6%
Middle East – S.W. Asia	**29.4**	**29.9**	**31.1**	**33.8**	**35.6**	**38.3**	**44.0**	**48.8**	**58.2**	**188.1**	**6.0%**
N. America – N. America	857.5	812.8	783.5	828.3	927.7	972.3	977.4	1,022.4	976.0	1,583.8	2.5%
N. America – N.E. Asia	**140.2**	**127.5**	**121.2**	**103.0**	**120.8**	**126.2**	**122.4**	**124.1**	**122.9**	**229.7**	**3.2%**
N. America – Oceania	30.0	27.6	26.5	25.9	30.1	31.5	32.2	29.5	29.5	89.3	5.7%
N. America – S. America	**47.2**	**44.8**	**42.7**	**37.6**	**39.9**	**49.9**	**59.0**	**66.6**	**59.2**	**214.7**	**6.7%**
N. America – S.E. Asia	32.1	29.3	30.5	26.8	33.6	36.5	36.5	42.7	27.4	136.2	6.7%
N.E. Asia – N.E. Asia	**79.0**	**80.2**	**85.0**	**86.1**	**83.6**	**83.9**	**84.1**	**82.0**	**81.6**	**167.1**	**3.6%**
N.E. Asia – Oceania	24.1	22.5	24.5	22.8	27.1	25.7	24.6	23.3	20.9	57.3	5.2%
N.E. Asia – S.E. Asia	**48.5**	**47.8**	**54.4**	**45.7**	**61.5**	**67.1**	**74.3**	**79.0**	**74.1**	**234.4**	**5.9%**
Oceania – Oceania	49.2	50.7	50.2	55.5	58.8	63.0	67.8	72.6	78.2	184.3	4.4%
Oceania – S.E. Asia	**46.2**	**47.6**	**46.6**	**42.0**	**54.6**	**60.1**	**57.3**	**55.7**	**65.7**	**183.3**	**5.3%**
S. America – S. America	53.5	50.8	52.7	47.9	52.9	60.8	72.8	78.8	80.0	287.9	6.6%
S.E. Asia – S.E. Asia	**53.7**	**57.0**	**60.6**	**59.4**	**73.9**	**82.4**	**89.2**	**96.7**	**90.0**	**424.0**	**8.1%**
S.E. Asia – S.W. Asia	10.9	11.6	12.6	12.5	14.9	17.1	19.1	20.0	22.2	100.9	7.9%
S.W. Asia – S.W. Asia	**16.0**	**16.6**	**17.4**	**17.7**	**21.3**	**25.0**	**29.5**	**39.1**	**44.2**	**236.4**	**8.7%**
Rest of world	15.2	16.0	16.9	18.2	26.7	31.9	38.7	53.9	64.2	273.5	7.5%
World total	**3,381**	**3,290**	**3,279**	**3,304**	**3,754**	**4,026**	**4,234**	**4,539**	**4,621**	**12,090**	**4.9%**

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

Database: **Airplanes required**

Passenger and freighter airplanes
Market value and demand by region

Demand and value by region

Region	$B	Airplanes
Asia Pacific	1,130	8,960
North America	680	7,690
Europe	800	7,330
Middle East	300	1,710
Latin America	150	1,640
Russia and Central Asia	90	1,050
Africa	70	620
World	**3,220**	**29,000**

Deliveries by airplane size and region

Region	Regional jets	Single aisle	Twin aisle	Large	Total deliveries
Asia Pacific	440	5,600	2,590	330	8,960
North America	890	5,630	1,130	40	7,690
Europe	340	5,310	1,480	200	7,330
Middle East	50	680	850	130	1,710
Latin America	80	1,260	290	10	1,640
Russia and Central Asia	250	610	170	20	1,050
Africa	50	370	190	10	620
World	**2,100**	**19,460**	**6,700**	**740**	**29,000**

Market value by airplane size and region*

Region	Regional jets	Single aisle	Twin aisle	Large	Total value
Asia Pacific	14	420	600	100	1,130
North America	30	390	250	12	680
Europe	10	390	340	60	800
Middle East	2	50	200	40	300
Latin America	2	80	60	1	150
Russia and Central Asia	8	50	30	4	90
Africa	2	30	40	2	70
World	**$70B**	**$1,420B**	**$1,510B**	**$220B**	**$3,220B**

*2008 $B, catalog prices. Values above 20 have been rounded to the nearest 10.

Passenger and freighter airplanes
In service and future fleet

Total airplanes in service

Size	2008	2028
Large*	870	1,070
Twin aisle	3,510	8,080
Single aisle	11,360	24,230
Regional jets	3,060	2,220
Total	**18,800**	**35,600**

Passenger airplanes in service

Size	2008	2028
Large*	540	550
Twin aisle	2,650	6,610
Single aisle	10,690	22,970
Regional jets	2,980	2,220
Total	**16,860**	**32,350**

Freighter airplanes in service

Size	2008	2028
Large*	500	1,070
Medium widebody	680	920
Standard body	760	1,260
Total	**1,940**	**3,250**

Airplane demand

Size	$B	Airplanes
Large*	220	740
Twin aisle	1,510	6,700
Single aisle	1,420	19,460
Regional jets	70	2,100
Total	**3,220**	**29,000**

Passenger airplane demand

Size	$B	Airplanes
Large*	170	520
Twin aisle	1,390	6,220
Single aisle	1,420	19,450
Regional jets	70	2,100
Total	**3,050**	**28,290**

Freighter airplane demand

Size	$B	Airplanes
Large*	130	490
Medium widebody	40	210
Standard body	<1	10
Total	**170**	**710**

*Large passenger and large freighter categories differ.

Database: **Fleet development**

Passenger and freighter airplanes
Market value and fleet development

Market by airplane size

Size	Market value 2008 $B	Market share value	New airplane deliveries	Market share units
Large*	220	7%	740	3%
Medium	880	27%	3,390	12%
Small	630	20%	3,310	11%
Total twin aisle	**1,730**	**54%**	**7,440**	**26%**
More than 175 seats	290	9%	3,040	10%
90 to 175 seats	1,130	35%	16,420	57%
Total single aisle	**1,420**	**44%**	**19,460**	**67%**
Total regional jets	**70**	**2%**	**2,100**	**7%**
Total fleet	**3,220**	**100%**	**29,000**	**100%**

Passenger fleet development

Size	End of year 2008	Removed from service	Converted to freighter	New deliveries 2009 to 2028	End of year 2028
Large*	540	510	–	520	550
Medium	1,370	1,220	–	3,120	3,270
Small	1,280	1,040	–	3,100	3,340
Total twin aisle	**3,190**	**2,770**	**880**	**6,740**	**7,160**
More than 175 seats	1,370	1,060	–	3,040	3,350
90 to 175 seats	9,320	6,110	–	16,410	19,620
Total single aisle	**10,690**	**7,170**	**1,170**	**19,450**	**22,970**
Total regional jets	**2,980**	**2,860**	**–**	**2,100**	**2,220**
Total passenger fleet	**16,860**	**12,800**	**2,050**	**28,290**	**32,350**

Freighter fleet development

Size	End of year 2008	Removed from service	Converted to freighter	New deliveries 2009 to 2028	End of year 2028
Large*	500	260	340	490	1,070
Medium widebody	680	510	540	210	920
Standard body	760	680	1,170	10	1,260
Total freighter fleet	**1,940**	**1,450**	**2,050**	**710**	**3,250**

Total fleet

Size	End of year 2008	Removed from service	Converted to freighter	New deliveries 2009 to 2028	End of year 2028
Passenger fleet	16,860	12,800	2,050	28,290	32,350
Freighter fleet	1,940	1,450	2,050	710	3,250
Total fleet	**18,800**	**14,250**	**2,050**	**29,000**	**35,600**

*Large passenger and large freighter categories differ.

Database: **Flow of airplanes**

Airplane fleet
How the fleet develops as airplanes are added and removed

16,860
Passenger fleet in 2008

In service | Parked

Used

\+ **28,290** New airplanes

− **12,800** Removed airplanes

10,750 Permanently retired

2,050 Converted to freighter

32,350
Passenger fleet in 2028

1,940
Freighter fleet in 2008

In service | Parked

Used

\+ **710** New freighters

− **1,450** Removed freighters

1,450 Permanently retired

3,250
Freighter fleet in 2028

Database: **Fleet by region**

Fleet growth
By size and region

Fleet by airplane size

Size	Airplanes in service 2008	Fleet share 2008	Airplanes in service 2028	Fleet share 2028
Large*	870	5%	1,070	3%
Medium	1,540	8%	3,890	11%
Small	1,970	10%	4,190	12%
Total twin aisle	**4,380**	**23%**	**9,150**	**26%**
More than 175 seats	1,620	9%	3,880	11%
90 to 175 seats	9,740	52%	20,350	57%
Total single aisle	**11,360**	**61%**	**24,230**	**68%**
Total regional jets	**3,060**	**16%**	**2,220**	**6%**
Total fleet	**18,800**	**100%**	**35,600**	**100%**

Fleet by region in 2008

Region	Regional jets	Single aisle	Twin aisle	Large	Total fleet
Asia Pacific	170	2,330	1,010	400	3,910
North America	1,850	3,780	1,010	140	6,780
Europe	510	2,970	660	190	4,330
Middle East	40	370	360	70	840
Latin America	50	880	130	10	1,070
Russia and Central Asia	350	620	200	40	1,210
Africa	90	410	140	20	660
World	**3,060**	**11,360**	**3,510**	**870**	**18,800**

Fleet by region in 2028

Region	Regional jets	Single aisle	Twin aisle	Large	Total fleet
Asia Pacific	460	7,230	2,980	500	11,170
North America	880	6,980	1,720	120	9,700
Europe	340	5,620	1,580	230	7,770
Middle East	60	750	900	150	1,860
Latin America	140	1,900	340	10	2,390
Russia and Central Asia	250	1,030	250	40	1,570
Africa	90	720	310	20	1,140
World	**2,220**	**24,230**	**8,080**	**1,070**	**35,600**

*Large passenger and large freighter categories differ.

Database: **Major traffic flows**

Airline traffic flows
By region

Airline passenger growth rates 2008 to 2028

RPKs	Africa	Latin America	Middle East	Europe	North America	Asia Pacific
Asia Pacific	9.2%	9.1%	6.3%	5.5%	4.9%	**6.9%**
North America	7.4%	4.7%	6.9%	4.6%	**2.5%**	
Europe	5.4%	4.3%	5.5%	**3.4%**		
Middle East	6.1%	–	**6.2%**			
Latin America	5.5%	**6.4%**				
Africa	**6.4%**					

Airline passenger traffic in 2008

RPKs in billions	Africa	Latin America	Middle East	Europe	North America	Asia Pacific
Asia Pacific	6	2	100	310	250	**810**
North America	8	180	30	430	**980**	
Europe	130	180	180	**660**		
Middle East	20	–	**40**			
Latin America	2	**120**				
Africa	**30**					

Airline passenger traffic in 2028

RPKs in billions	Africa	Latin America	Middle East	Europe	North America	Asia Pacific
Asia Pacific	30	14	350	900	640	**3,080**
North America	40	450	130	1,060	**1,580**	
Europe	360	410	330	**1,280**		
Middle East	80	–	**140**			
Latin America	5	**430**				
Africa	**120**					

Bold: Share within region.

Database: **Traffic by region**

Airline traffic distribution
By region

Traffic in 2008

RPKs	Asia Pacific	North America	Europe	Middle East	Latin America	Africa
Asia Pacific	**55%**	13%	17%	33%	1%	3%
North America	17%	**52%**	24%	10%	37%	4%
Europe	21%	23%	**36%**	37%	37%	66%
Middle East	7%	2%	6%	**13%**	–	10%
Latin America	<1%	10%	10%	–	**25%**	1%
Africa	<1%	<1%	7%	7%	<1%	**15%**
Total traffic to and from region	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Traffic in 2028

RPKs	Asia Pacific	North America	Europe	Middle East	Latin America	Africa
Asia Pacific	**61%**	16%	21%	34%	1%	5%
North America	13%	**41%**	24%	13%	34%	6%
Europe	18%	27%	**29%**	32%	31%	57%
Middle East	7%	3%	8%	**14%**	–	13%
Latin America	<1%	12%	9%	–	**33%**	1%
Africa	<1%	<1%	8%	8%	0%	**19%**
Total traffic to and from region	**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 2008, traffic within North America accounted for 52 percent of the total traffic to, from and within North America.
- In 2028, traffic from the Middle East to Europe will account for 32 percent of the total traffic to, from and within the Middle East.
- Traffic to Asia Pacific will rise from 17 percent of total traffic to, from and within Europe in 2008 to 21 percent by 2028.
- Traffic within Asia Pacific will rise from 55 percent of total traffic to, from and within Asia Pacific in 2008 to 61 percent by 2028.

Airplane categories

Passenger and freighter
Airplane market sector definitions

Single-aisle passenger airplanes

Regional jets	90 to 175 seats	More than 175 seats
Antonov An-148	Boeing 717, 727	Boeing 707, 757
AVIC ARJ-700	Boeing 737-100 through -500	**Boeing 737-900ER**
Avro RJ70, RJ85	**Boeing 737-600, -700, -800**	**Airbus A321**
BAe 146-100, -200	**Airbus A318, A319, A320**	**Tupolev TU-204, TU-214**
Bombardier CRJ	Boeing-MDC DC-9, MD-80, -90	
Dornier 328JET	**AVIC ARJ-900**	
Embraer 170, 175	BAe 146-300, Avro RJ100	
Embraer ERJ-135, -140, -145	**Bombardier CRJ-1000**	
Fokker 70, F28	**Bombardier CS100, CS300**	
Mitsubishi MRJ	**Embraer 190, 195**	
Sukhoi Superjet 100	Fokker 100	
Yakovlev Yak-40	Ilyushin IL-62	
	Tupolev TU-154	
	Yakovlev Yak-42	

Twin-aisle passenger airplanes

Small Two class: 230 to 340 seats Three class: 180 to 260 seats	Medium Two class: 340 to 450 seats Three class: 260 to 370 seats	Large* Three class: more than 400 seats
Boeing 767, 787	**Boeing 777**	**Boeing 747-8**
Boeing-MDC DC-10	Boeing-MDC MD-11	Boeing 747-100 through -400
Airbus A300, A310	**Airbus A330-300, A340**	**Airbus A380**
Airbus A330-200	**Airbus A350-900, -1000**	
Airbus A350-800	Ilyushin IL-86	
Lockheed L-1011		
Ilyushin IL-96		

Freighter airplanes

Standard body Less than 45 tonnes	Medium widebody 40 to 80 tonnes	Large* More than 80 tonnes
BAe 146	Boeing 767	Boeing 747-8
Boeing-MDC DC-9	Airbus A300, A310	Boeing 747-100 through -400
Boeing 737	Lockheed L-1011SF	Boeing 777
Boeing 727	Boeing-MDC MC-10	Boeing-MDC MD-11
Tupolev TU-204	Boeing 787	Airbus A340-600 SF
Boeing 707	Airbus A330	Airbus A350
Boeing-MDC DC-8	Airbus A340-300 SF	Ilyushin IL-96T
Boeing 757-200	Boeing 777-A SF	Antonov An-124
Airbus A318, A319, A320, A321	Ilyushin IL-76TD	

Bold: Airplanes in production or launched. Production and conversion (SF) models assumed for each type unless otherwise specified. *Large passenger and large freighter categories differ.

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- **What will be the likely impact of these factors?**

Your feedback

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