

Executive summary

People want
and need
to fly



The background

From the very earliest days, necessity and the human spirit have driven the need for travel. People have travelled in the search of better lives and knowledge, to trade and maintain family ties or friendships, and probably most importantly of all, to discover and understand other cultures. For centuries, travel was often a lengthy affair. In the not so distant past, travellers on cramped trans-Atlantic ships or trans-continental wagon trails could only dream of the miracle of flight, yet today using air travel as a fast, efficient, way to connect the entire world is so commonplace that it is easy to take it for granted.

The benefits of air travel are becoming more accessible, more affordable and more important to people from all economic backgrounds and from all parts of the world, but more particularly those from emerging nations like China, India and in Africa, who stand to gain the most from air transport. Air travel is a vital element of people's lives around the world. People want and need to fly.

While there is unquestionably an environmental impact from the growth in air transport, some 80% of the industry's 2% contribution to man-made CO₂ is generated by flights for which there are no practical alternative. This is considerably less than the 16% created by other forms of transport, yet aviation contributes, directly and indirectly, 8% of world gross domestic product.

However, the need for an increasingly eco-efficient industry, which creates economic and social value with less environmental impact, is well understood by the millions of people involved in aviation. Aircraft manufacturers have an intrinsic requirement to be technological pioneers and to develop increasingly eco-efficient aircraft.

But, if the evolution of transport technology from the horse and cart to the advent of aviation was impressive; the subsequent technological progress within the aviation industry has been quite simply astonishing.



In just the last 40 years, technological advances have reduced fuel consumption and CO₂ emissions by 70%, noise by 75% and unburned hydrocarbons by 90%, while increasing the number of people moved per take-off or landing slot and setting unprecedented levels of comfort.

Such progress is the result of a continual cycle that improves the best mature technologies, while gradually introducing the most appropriate new innovations. The cycle won't change, but the driving force behind future development has expanded from pure competitiveness to include environmental necessity, with research and development continuing to provide a series of incremental improvements as well as searching for more substantial technological step changes.

Such substantial advances are particularly evident with the A350 XWB and A380, which are certainly step changes from the aircraft they replace. The A380 in service today, consumes less than three litres per 100 seat kilometres, some 20 years ahead of the world fleet as a whole. Today, when the aviation industry considers new product developments, like the potential for a new generation of short-range aircraft, a step change to its predecessors will be required. This will not only require innovation but also vision, ambition and absolute determination: determination to follow a path towards zero emissions. This is a path that may never end, but it is never-the-less Airbus' ultimate ambition.

The highlights

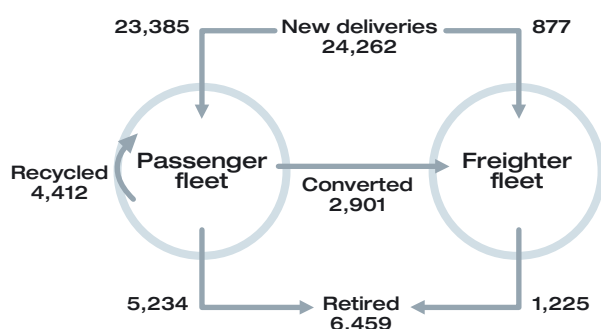
In recent years a number of significant developments have influenced passengers and airlines, affecting the shape and direction of the aviation industry, as well as determining the level of future demand around the world.

Markets in the emerging economic nations continue to grow; their economies and demographic developments both driven by and benefiting from air travel. Continued global liberalisation is giving greater market access to airlines and wider choice for passengers. Low-cost carriers will also continue to grow around the world, but particularly in Asia, while the network airlines will benefit from fast growing international markets, with a wave of new international travel consumers from the emerging

countries. Changing dynamics, particularly network evolution and the role of megacities and congestion are influencing the future of aviation. All these drivers are taken into consideration when developing the Airbus Global Market Forecast (GMF).

75% less noise and 70% less CO₂ emissions in last 40 years

24,262 new passenger and freighter aircraft deliveries over the 2007-2026 period



Passenger aircraft ≥100 seats

Passenger air traffic demand to grow 4.9% per year

The traffic

All of which means that over the 2007-2026 period covered by this forecast, world passenger traffic is expected to increase by 4.9% per annum and the number of frequencies offered on passenger routes will more than double.

However, faced with increased competition and rising fuel costs, airlines have already achieved considerable productivity gains. Today, very few seats are “wasted”, with historically high load factors across most major markets and flows.

So, with traffic levels easily surpassing pre-September 2001 levels and with demand continuing to increase, there is now little flexibility in a system working at near maximum capacity. In fact, the gradual rise in congestion has also returned to pre-2001 levels and is a problem already being faced by many of the world’s most important airports and cities. Therefore, any future growth of traffic and frequencies will be an increasing challenge to airport infrastructure and air traffic management. That increasing congestion, coupled with the eventual diminishing returns from increased frequencies and the overall growth of the world fleet, has seen the emergence of a clear trend towards larger aircraft. This is evident in all seat categories, from smaller regional aircraft to very large aircraft, and will result in the average aircraft size increasing by as much as 25% over the next 20 years.

This GMF assumes that all necessary infrastructure improvements, including those already planned, will be undertaken during the forecast period. However, given the substantial investments and time required to carry out such developments, there is the possibility that not all the changes necessary may be achieved. In which case, average aircraft size could increase even more than anticipated levels and airlines could, therefore, be forced to acquire more, larger aircraft, across the whole spectrum of those available, to meet demand.

The fleet

The world's fleet, which includes both passenger (from 100 seats to very large aircraft) and freighter aircraft, will grow from 14,980 at the end of 2006 to nearly 33,000 by 2026. At the same time, some 13,772 aircraft from the existing fleet will be replaced by more eco-efficient models. Of these, 4,412 will be recycled back into passenger service, where they too will replace an older generation model with another airline. It is also forecast that 2,901 will be converted to freighters and the remaining 6,459 will be permanently retired or withdrawn from service, where increasing numbers will be decommissioned through environmentally sensitive programmes, such as the Airbus' PAMELA project.

Looking at this in more detail, the greatest demand for passenger aircraft will come from airlines in the United States, the People's Republic of China and the United Kingdom. Europe will receive 24% of the total, with North America and Asia-Pacific taking 27% and 31% respectively.

In addition, the world's airlines will require more than 6,000 smaller aircraft (with 30 to 100 seats) to serve regional demand, especially in the US and Europe.


While traffic demand will nearly triple, airlines will more than double their fleets of passenger aircraft (with over 100 seats) from 13,284 in 2006 to 28,534 in 2026.

This will include deliveries of 23,385 new aircraft. Some 16,620 of these will be single-aisles for domestic and intra-regional flows, which is more than in previous forecasts due to the emergence of low-cost carriers and increased liberalisation. As many as 5,482 twin-aisle passenger aircraft will be required to serve the existing, mainly international, markets and new routes created by ongoing market evolution, while around 1,283 very large passenger aircraft will be needed to link dynamic hub cities. Noticeably, 56% of the world fleet of very large passenger aircraft will be operated by the airlines in the Asia-Pacific region.

Freight traffic is expected to grow at 5.8% per annum and, combined with fleet renewal, this will create demand for 3,778 freighter deliveries, some of which will come from the conversions and 877 of which will be new generation factory-built freighters.

Overall, this means that by 2026 the world's airlines will take delivery of 24,262 new passenger and freighter aircraft, worth US\$2.8 trillion at current list prices. Most of this business will be generated from single-aisle deliveries, while 1,698 large passenger and freighter aircraft will account for 19% of total aircraft delivery value.

This demand will require an average of 1,213 new, eco-efficient aircraft deliveries per year, which combined with the decommissioning of older generation aircraft, will gradually reduce the average fuel consumption of the world's fleet to less than three litres per 100 seat kilometres, the standard set by the A380 today.



13,772 aircraft
to be replaced
by more
eco-efficient
models

The future

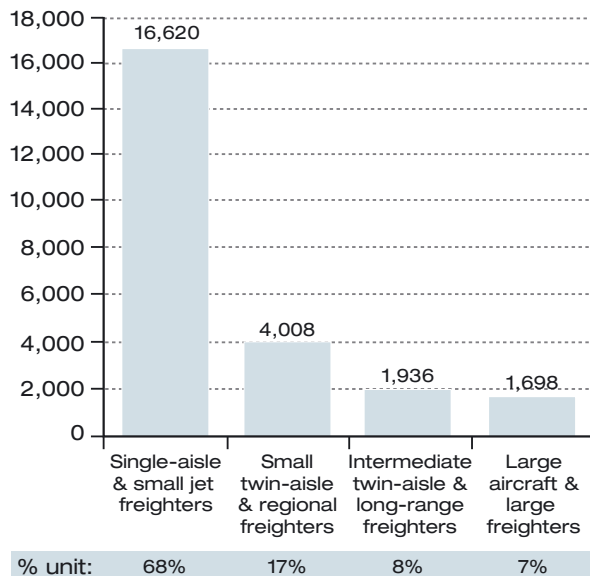
The environmental impact of aviation will remain small compared to other modes of transport and other sources of man-made emissions. However, Airbus and the rest of the industry is determined to minimise and even reduce the environmental impact of aviation at every opportunity, while maximising the contribution that it can make to the quality of life, to better cultural understanding, to greater learning, and to fair and sustainable economic growth.

People used to find it incredible to imagine what it would be like to fly; today, it is much more difficult to imagine a world where we can't.

New passenger and freighter aircraft deliveries will average 1,213 per year

New aircraft deliveries 2007-2026

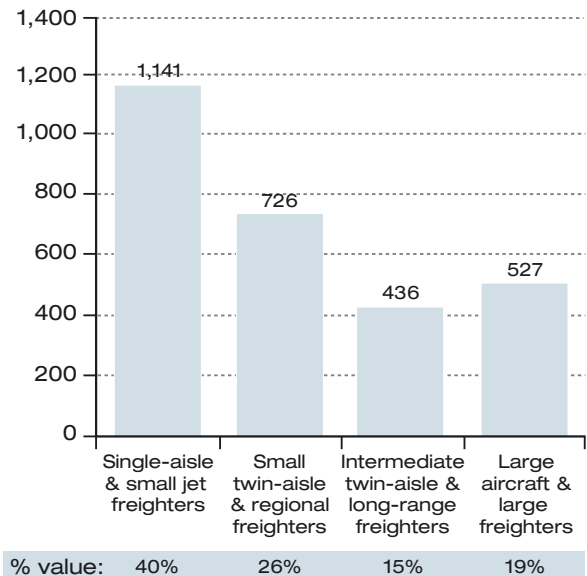
Number of new aircraft



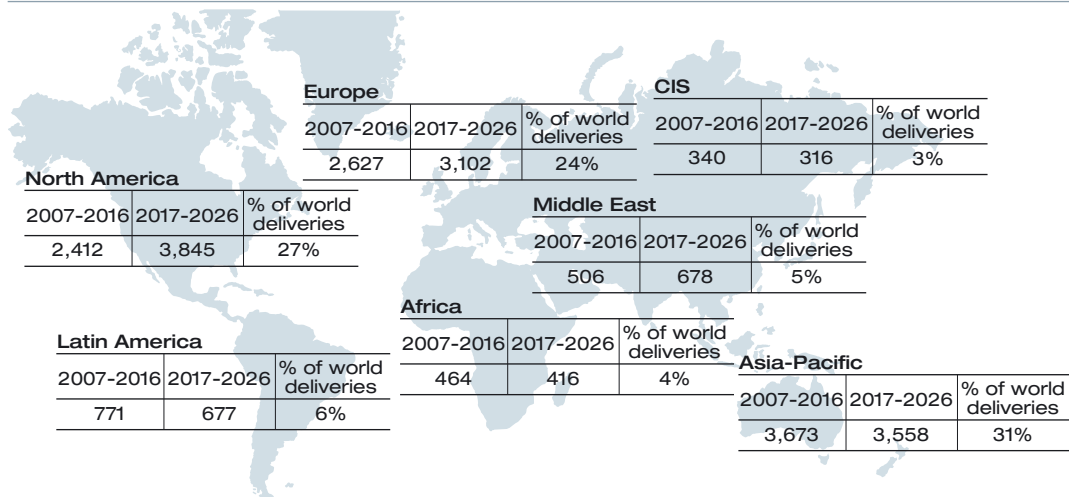
Passenger aircraft \geq 100 seats

Passenger and freighter deliveries worth US\$2.8 trillion

US\$ (billions)



Total new deliveries by region



Passenger aircraft >100 seats (excluding freighters)

Top ten countries (2007-2026)

Passenger aircraft demand			By US\$ value (billions)	
1	United States	6,579	United States	547.4
2	People's Republic of China	3,238	People's Republic of China	391.2
3	United Kingdom	1,307	United Kingdom	159.7
4	Germany	1,069	Germany	118.9
5	India	986	India	118.7
6	Russia	921	Japan	111.6
7	Mexico	661	UAE	91.7
8	Japan	608	Russia	78.7
9	Ireland	538	Australia	62.5
10	Canada	528	France	59.2

New and recycled passenger aircraft >100 seats (excluding freighters)