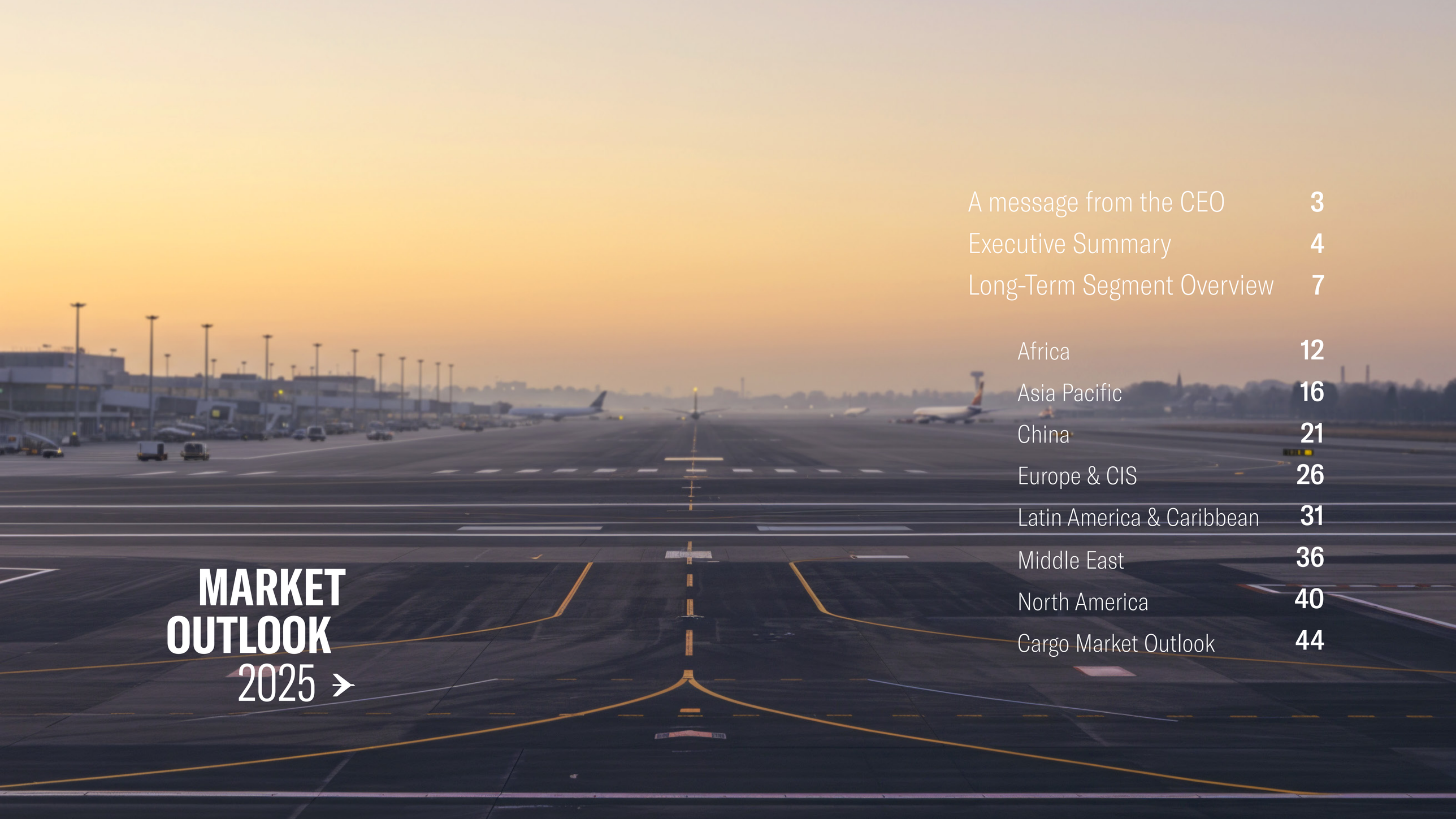
EMBRAER

MARKET OUTLOOK 2025



MARKET OUTLOOK 2025

A MESSAGE FROM THE CEO

TOWARD A MORE CONNECTED AVIATION INDUSTRY

The aviation industry continues to navigate a world shaped by shifting economic forces, geopolitical uncertainty, and environmental priorities. Five years after the onset of the pandemic, many of the structural changes it triggered have proven to be lasting. It's clear that air transport will also be affected by this new global landscape, so it's essential to understand and anticipate how market dynamics will unfold.

In our first post-pandemic Market Outlook, we highlighted the transition from globalization to a more polarized geopolitical panorama. Today, as countries and regions pursue greater strategic autonomy, the demand for regional access will continue to grow.

To succeed, air transport must deliver better connectivity and higher-quality service. This is where smaller aircraft play an increasingly important role. Up-to-150-seat aircraft offer the agility to serve thinner-demand routes, increase frequencies, and connect underserved communities, all while helping airlines maintain cost discipline and environmental performance.

Our 2025 Market Outlook explores how air transport is evolving and how airlines can respond with more flexible and resilient fleet strategies. We believe mixed fleets that combine small and large narrowbodies are essential for long-term growth. They provide the versatility needed to better match capacity with demand, expand networks, and support national and regional development goals.

At Embraer, we remain focused on delivering aircraft solutions that are ready for today's challenges and tomorrow's opportunities. The future of aviation will be shaped not just by scale, but by how well we connect people, places, and economies.

Enjoy reading this year's Market Outlook. It offers clear insights into the relevance of the up-to-150-seat segment and the opportunities ahead.

ARJAN MEIJER
President & CEO
Commercial Aviation

EXECUTIVE SUMMARY

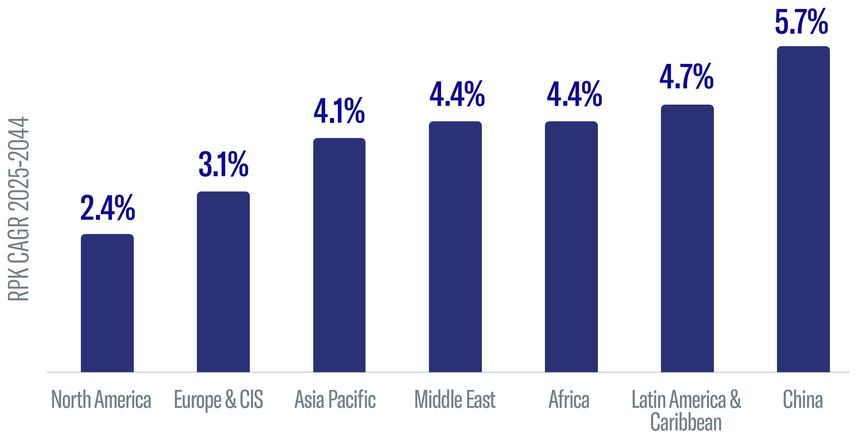
EXECUTIVE SUMMARY

AIR TRANSPORT DEMAND FORECAST: RPK GROWTH RATES BY REGION

World passenger traffic is expected to grow at an average annual rate of 3.9% (CAGR) between 2025 and 2044. The rate is a notable deceleration compared to pre-pandemic growth rates for the next two decades, a reflection of the expected slowing of the global economy, the impact of the transition towards net-zero emissions, and the uncertainties related to more geopolitical conflicts.

Over the next 20 years, China will show the strongest growth with RPKs increasing 5.7% annually. This will be followed by Latin America (4.7%), Africa (4.4%), the Middle East (4.4%), Asia Pacific (4.1%), Europe (3.3%, including CIS), and North America (2.4%).

Worldwide Air Transport Demand Growth: 2025-2044



World RPKs will reach 19 trillion by 2044. Asia Pacific and China will be the largest markets by then, representing 39% of global traffic. Combined, Europe and North America will generate 37% of total air transport demand.

Source: Embraer Analysis.

THE UP TO 150-SEAT MARKET

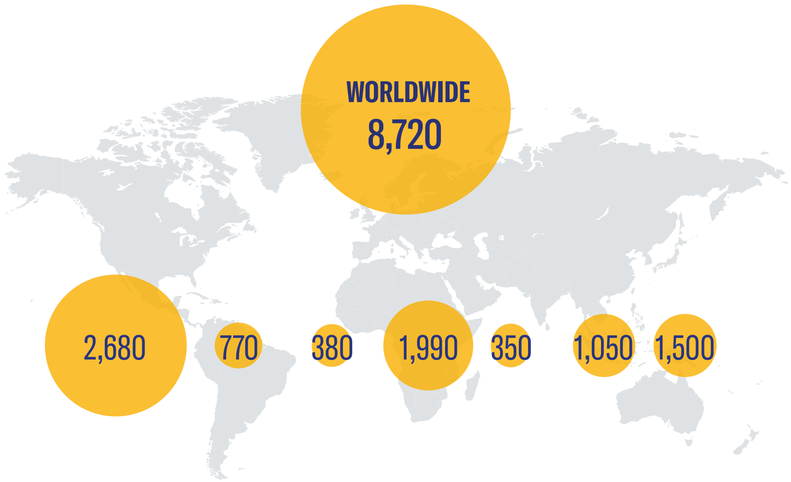
Embraer foresees world demand for 10,500 new up-to-150-seat jets and turboprops over the next 20 years. Those aircraft will have a market value of USD 680 billion. Replacement of aging aircraft will account for 52% of all new deliveries, while 48% will be used to grow markets.

EXECUTIVE SUMMARY

THE JET SEGMENT

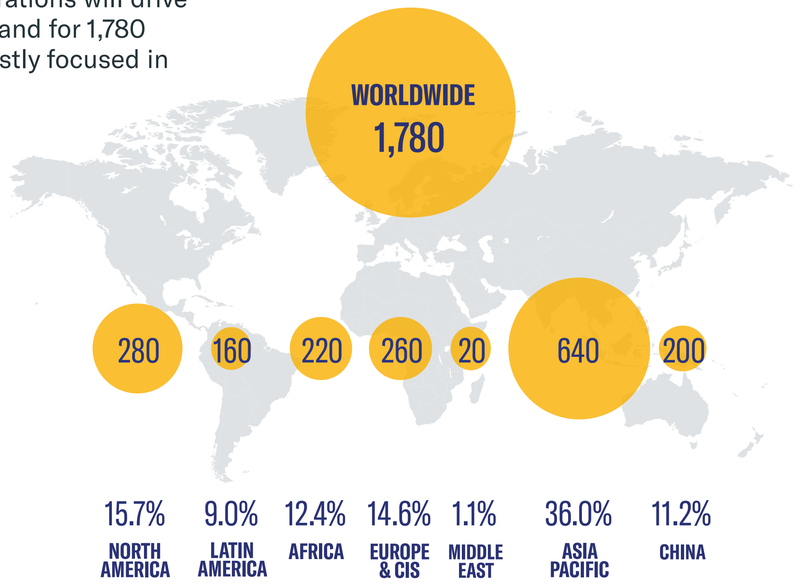
A need for smaller aircraft will drive worldwide demand for 8,720 jets with up-to-150-seat capacity.

The efficiency of new generation of small narrowbodies will drive a trend to more mixed-aircraft fleets. Fleets with different-sized aircraft better address overall weaknesses and variations in demand, traffic patterns that favor short-haul over long-haul, and an increasing need for scheduling flexibility and operating efficiency. Small narrowbodies also support the aviation industry's pursuit of lower aircraft emissions.



THE TURBOPROP SEGMENT

Short-haul operations will drive worldwide demand for 1,780 turboprops, mostly focused in Asia Pacific.




LONG-TERM
SEGMENT
OVERVIEW

LONG-TERM SEGMENT OVERVIEW

THE SMALL NARROWBODY JET SEGMENT IS GAINING TRACTION

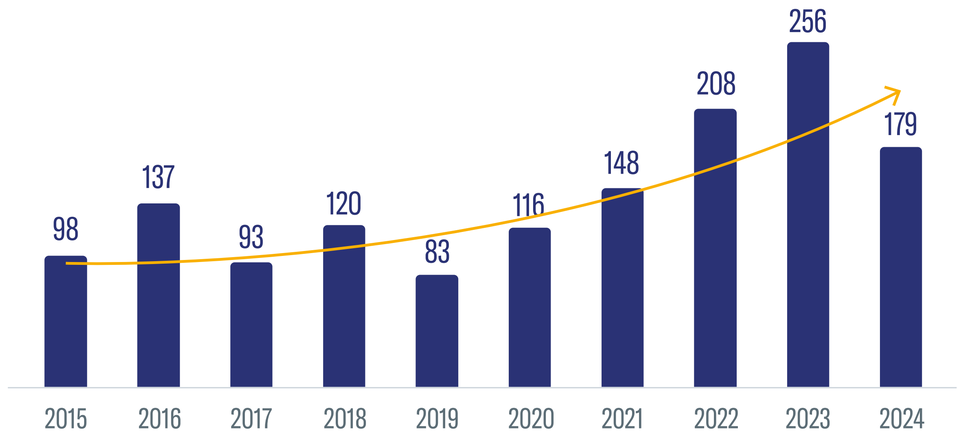
Small narrowbody jets, defined as 100 to 150-seat aircraft, are essential in building airline network connectivity in today's volatile, competitive, and polarized world.

A mixed fleet of large and small narrowbodies allows airlines to access every market size, offering the right capacity for every route, and providing the opportunity to add frequencies without introducing excess capacity.

The small narrowbody segment has become increasingly relevant over the last years. It has proven to be an effective tool for navigating a dynamic environment that seeks growth in secondary markets and flexibility to adjust capacity quickly to changes in demand.

Graph 1 shows a steady increase in net orders over 10 years.

Graph 1: Small Narrowbody Net Orders - 3-Year Moving Average



Source: Cirium, Embraer Analysis, 2025.

Three main trends will favor the growth of this segment:

1. THE EVOLUTION OF CONNECTIVITY IN A FRAGMENTED WORLD

In a multipolar world, where economies are becoming increasingly stronger and more competitive, the need to build more efficient network connectivity will be greater.

In the five years since the onset of the pandemic, several predictions for structural changes to the global economy and its complex relationship with society are now confirmed.

One of the most significant is the transition from an integrated world to one that is more polarized. Of the three structural changes highlighted in the 2020 Embraer Market Outlook, Strategic Autonomy has become the most significant because it reflects how the world is repositioning itself in the face of rapid and profound changes in the geopolitical order. The other two changes - Climate Agenda and Social Revolution - are still fluid and will be influenced by the degree of Strategic Autonomy.

The actions to reach Strategic Autonomy will redefine how business and society are connected. Domestic industries will become more prevalent with greater demand for short-distance supply chains, travel, and commerce.

Airlines with predominantly large aircraft in their fleets will be limited in their ability to improve network connectivity as distances shrink in the new environment. Small narrowbody jets, however, have the ideal capacity and greater operational flexibility to provide more frequencies and serve more destinations, especially in shorter sectors.

2. DEVELOPING SMALLER MARKETS: THE NEW PATH FOR FUTURE TOURISM

Global tourism is now rebounding after travelers stayed home during the pandemic.

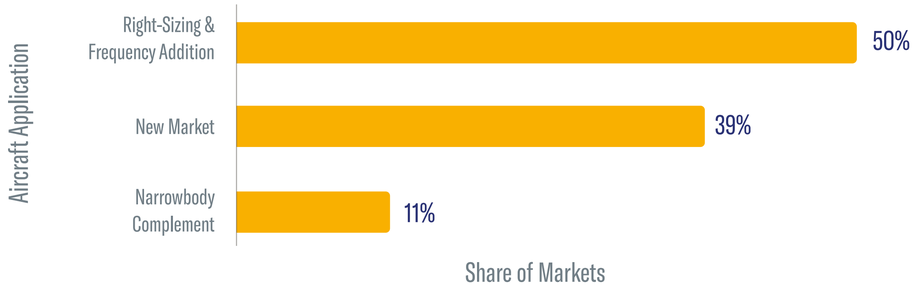
An emerging trend is the growing interest to visit lesser-known destinations to avoid the negative experiences associated with overtourism in the world's most popular regions.

The trend to exploring those new destinations is especially strong in Asia according to the Trip.com Group. The combination of smaller aircraft in low-cost airline fleets has proven effective in making the new markets more accessible.

Small narrowbodies are also bringing greater efficiency to airlines that operate large aircraft. They are complementing existing flights in off-peak periods and replacing medium and large narrowbody flights that have low load factors. (Graph 2)

Graph 2 - Small NB Role in Emerging Tourism Trend

Flexible LCC Fleets / Adding Operating Efficiency 2024



Source: Sabre, 2025.

Figure 1 shows seven new markets in Southeast Asia with nonstop small narrowbody jet flights.

The island city of Phu Quoc (PQC) in Vietnam's southern Kien Giang province is expected to become an international center of resort tourism, trade, and technology by 2040.

In the summer of 2024 in Europe, measures were considered to reduce overcrowding in popular destinations.

One approach tried to restrict the number of visitors at peak times while another encouraged people to avoid peak season travel and come in the shoulder season. Tourism industry officials raised the idea of dispersal - persuading tourists to go to alternative or similar destinations that are less busy.

Over the next 20 years, the development of smaller tourist markets will be necessary to counter the limitations of today's larger, over-saturated destinations.

Figure 1 – New Markets

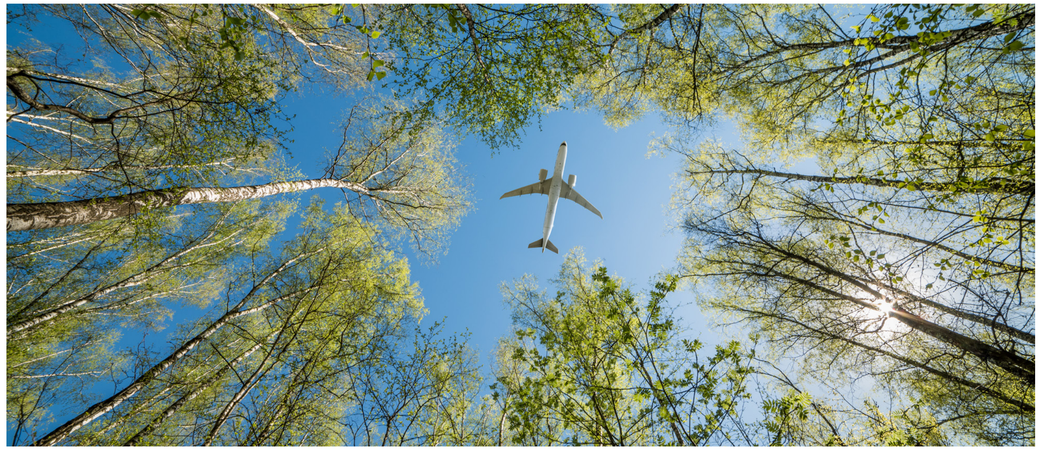
Source: Sabre, 2025.

LONG-TERM SEGMENT OVERVIEW

3. GROWING THROUGH CAPACITY DISCIPLINE: ACHIEVING LONG-TERM SUSTAINABLE PROFITABILITY

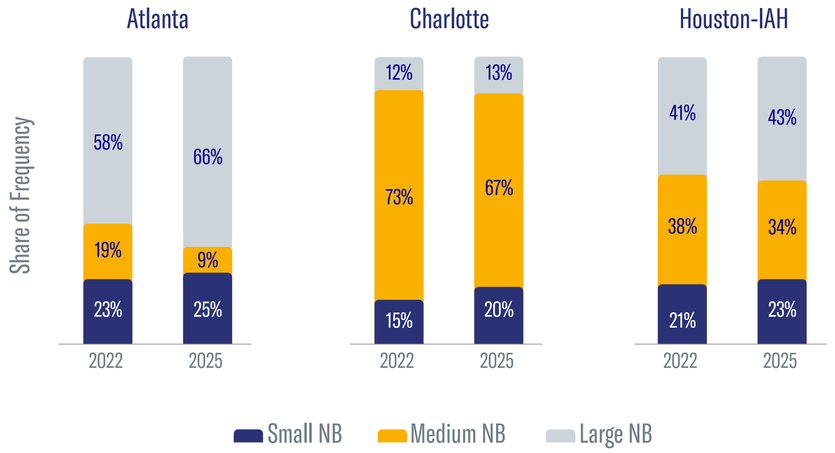
Continually evolving markets make it difficult for airlines to optimally match capacity to demand. Since no single aircraft perfectly satisfies passenger demand on every flight, every day of the week throughout the year, maximizing passenger yield and minimizing operating costs for any market can be a delicate balancing act.

Providing competitive market frequency has always been the foundation of a successful commercial airline strategy. In this age of evolving markets and aggressive competition, schedule frequency is more critical than ever. Striking the right balance between supply and demand is an age-old industry challenge that is further complicated when airlines operate a single aircraft type.



Carriers at major North American hubs are addressing the supply/demand imbalance. They deploy large narrowbody jets on high-demand routes and during peak hours, and schedule small narrowbodies during off-peak times and in low-demand seasons. This strategy maintains the best balance of capacity and frequency throughout the year to keep airlines competitive and profitable. (Graph 3)

Graph 3 - Small Narrowbodies at Key American Hubs
Main Hub Airline



Source: Sabre, 2025.

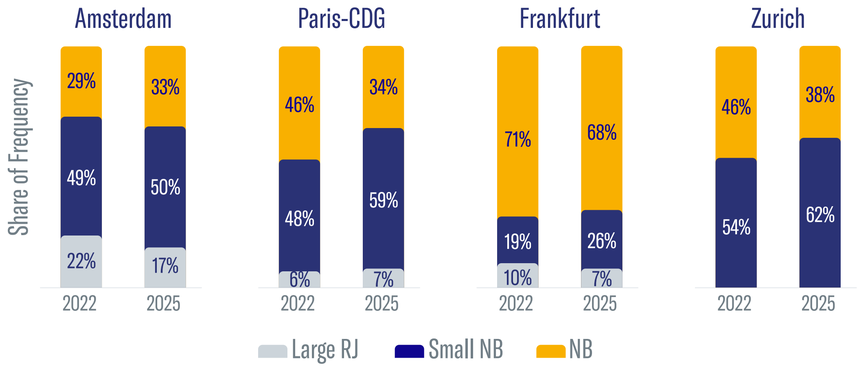
LONG-TERM SEGMENT OVERVIEW

3. GROWING THROUGH CAPACITY DISCIPLINE: ACHIEVING LONG-TERM SUSTAINABLE PROFITABILITY

Airlines at European hubs follow a similar strategy (Graph 4) but small narrowbodies have other advantages. They are often the biggest aircraft linking regional cities. Their size delivers enormous cost savings compared to larger jets serving those routes. Small narrowbodies are also the most economical aircraft to link small and medium-sized markets to a hub with high frequency flights.

For constrained airports like Amsterdam Schiphol, small narrowbodies deployed on shorter-haul regional sectors allow carriers to feed traffic to/from larger aircraft that serve bigger markets. The result is an optimal combination of capacity and frequency to ensure maximum network connectivity.

Graph 4 - Small Narrowbodies at Key European Hubs
Main Hub Airline



Source: Sabre, 2025.

Small narrowbody jets are essential for airlines to expand their business beyond the most competitive, popular, and dense markets. They are effective tools for growth - opening new routes while maintaining the capacity discipline that promotes profitability.

AMSTERDAM AIRPORT SCHIPHOL (AMS), AMSTERDAM, NETHERLANDS


AFRICA

AFRICA

KEY MESSAGES

- Shaping the future: there is an untapped opportunity to build a robust and efficient air transport network.
- The best tool for growth: thinner markets are better served by up-to-150-seat aircraft that boost connectivity through increased flight frequency and higher load factors.

Economic & Traffic Growth 2025-2044

GDP	RPK
3.8%	**4.4%**

New Deliveries 2025-2044

Up-to-150-Seat Jets:	Turboprops:
380	**220**

Fleet in Service – Up-to-150-Seat Segment

2025:	2044:
500	**870**

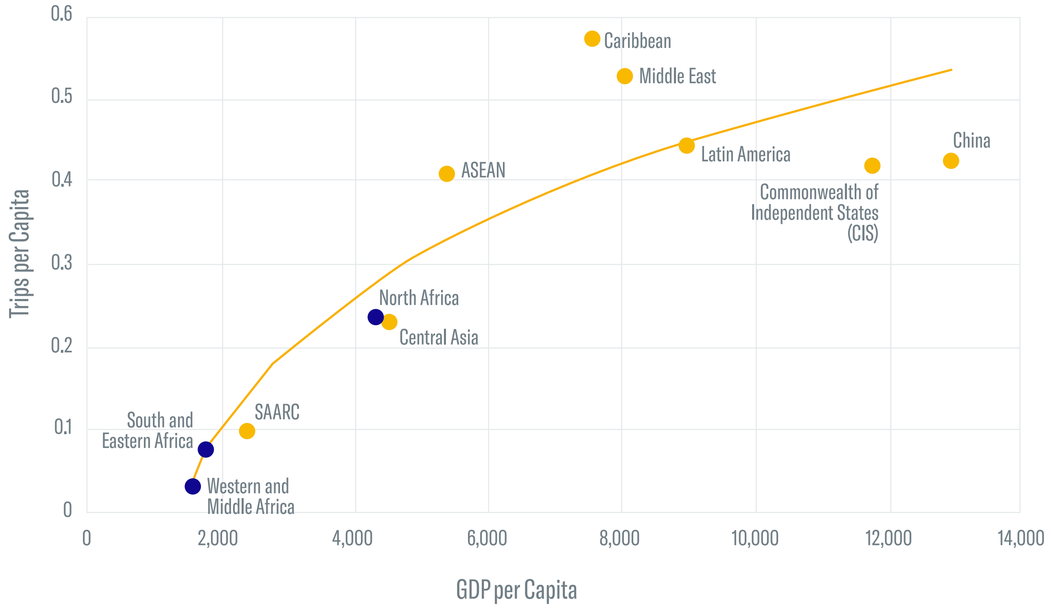
MARRAKESH MENARA AIRPORT (RAK), MARRAKESH, MOROCCO

AFRICA

People living in Africa have the lowest propensity to travel in the world's emerging and developing regions. (Graph 1) The low rate is the result of a combination of economic, infrastructure, and regulatory barriers.

Graph 1 - Propensity to Travel

2024



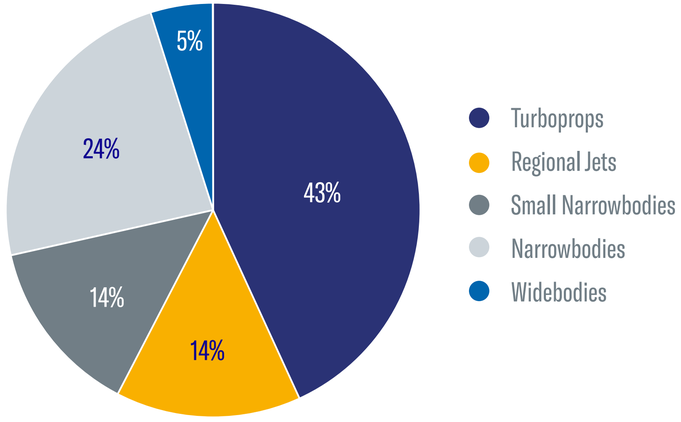
Source: Sabre, S&P Global IHS Markit, 2025.

Although air travel is still beyond the reach for many people due to its high cost and limited connectivity, the continent is undergoing a promising transformation. GDP per capita is gradually rising and Africa's emerging middle class is expanding. A United Nations study indicates that more than 40% of the continent's total population could be classified as middle class by 2060. As incomes rise and more people attain the means to travel, Africa holds immense potential for an expanding aviation market.

Fundamentals of the region are conducive to up-to-150-seat aircraft. The segment plays a fundamental part in maintaining connectivity across the continent since over 70% of intra Africa departures are operated by turboprops, regional jets, and small narrowbodies. (Graph 2)

Graph 2 - Share of Flights by Aircraft Segment

Intra Africa 2024



Source: Sabre, 2025.

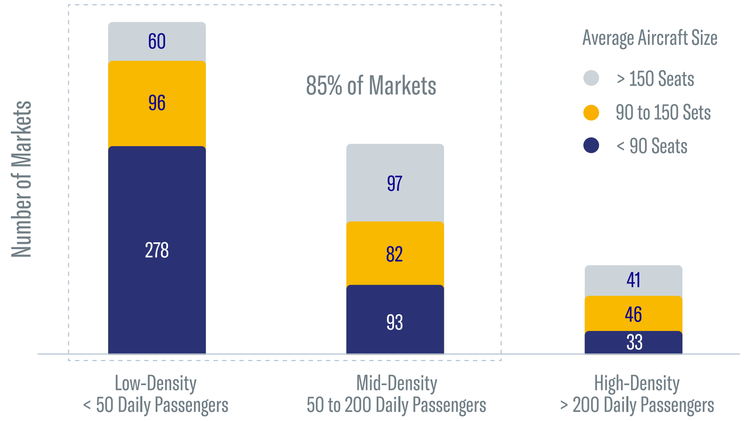
AFRICA

Africa's air travel markets are predominantly thin demand – 85% of intra-regional markets have fewer than 200 daily passengers. (Graph 3)

Small aircraft are better suited to those routes. They offer the right capacity, are cost efficient, and enable airlines to open new, lower-demand routes and connect underserved markets with more frequent flights with reduced economic risk.

Yet some 160 low-to-mid density markets are still served by aircraft with over 150 seats. The resulting low load factors and low frequency service limits financial returns and operational efficiency. It is an ideal environment in which to introduce small narrowbody jets.

Graph 3 - Market Density Profile
Intra Africa 2024



Source: Sabre, 2025.

With the appropriate policy frameworks in place, sound fleet planning, and closer regional collaboration, aviation can help advance Africa's sustainable development goals. It can improve access to services, facilitate trade, and strengthen regional economic and transport connectivity. Accordingly, up-to-150-seat aircraft allow airlines to deploy capacity more efficiently thereby providing more expansive and robust access to air transport.

MARRAKESH MENARA AIRPORT (RAK), MARRAKESH, MOROCCO


ASIA PACIFIC

ASIA PACIFIC

KEY MESSAGES

- In emerging regions of APAC, demand is growing steadily but airlines still concentrate capacity in key markets (leading to price wars) despite plenty of new options to explore.
- The path to profitability lies in using right-sized aircraft to seize opportunities beyond big markets and congested airports.
- In mature regions of APAC, low-growth economies and domestic market relevance will lead to further expansion of the up-to-150-seat segment.
- Increasing demand in turboprop markets and further infrastructure development represent opportunities for small narrowbody jets.

Economic & Traffic Growth 2025-2044	
GDP **3.1%**	RPK **4.1%**

New Deliveries 2025-2044	
Up-to-150-Seat Jets: **1,050**	Turboprops: **640**

Fleet in Service – Up-to-150-Seat Segment	
2025: **820**	2044: **1,610**

INCHEON INTERNATIONAL AIRPORT (ICN), SEOUL, SOUTH KOREA

ASIA PACIFIC

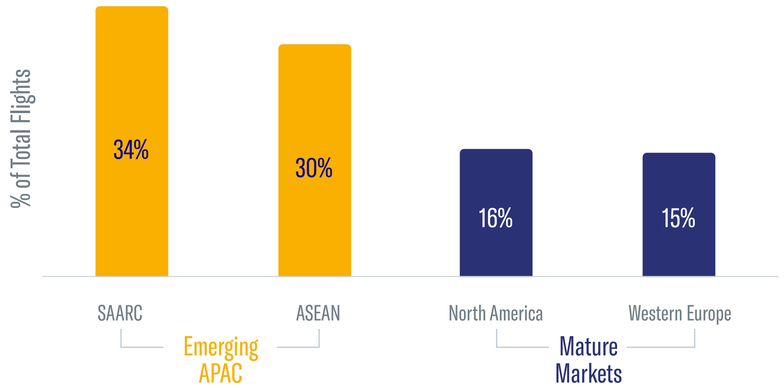
Emerging Markets – SAARC and ASEAN

Demand is growing steadily, but still highly concentrated

SAARC and ASEAN countries continue to enjoy fast-paced economic expansion. According to S&P Connect, India's GDP will grow 5.7% annually over the next 20 years, while Indonesia will expand at 4.8% annually in the same period. This growth is bringing millions of people into the middle class every year and leading to increased consumer consumption, including transportation and travel.

However, airline preference for key markets with large aircraft leads to unrealized potential to grow their networks. Between 30% and 35% of all flights in SAARC and ASEAN countries operate at the top 5 airports. This compares to some 15% at the top 5 airports in North America and Western Europe which have more expansive networks, more destinations, and greater connectivity. (Graph 1)

Graph 1 - Flights Concentration at Top 5 Airports
Flights to/from/within Subregion 2024



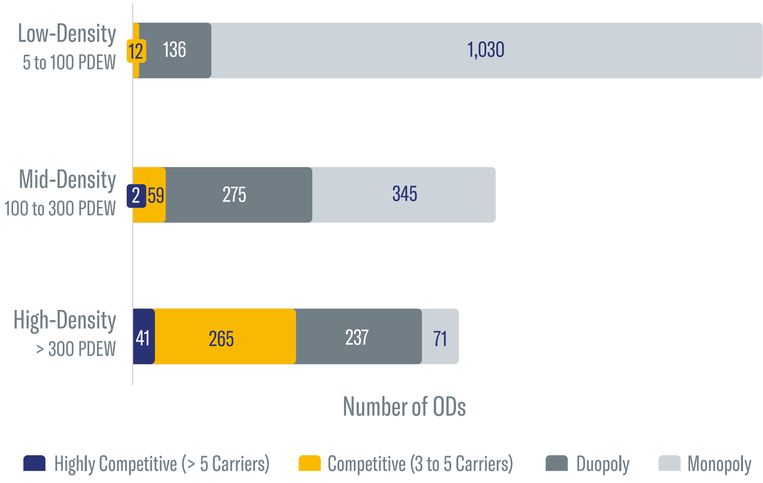
Source: Sabre, 2025.

Drawbacks with top market focus – there are plenty of other markets to explore

Airlines allocate most of their capacity in the same high-density, airport-congested markets as their competitors, which can lead to price wars. According to IATA, Asia Pacific airlines collectively reported a 1.3% profit margin in 2024.

Yet the region still has more than 1,000 low-density markets and some 350 mid-density markets that are currently served by a single airline. (Graph 2)

Graph 2 - Competition Profile
ODs to/from/within Emerging Asia Pacific 2024



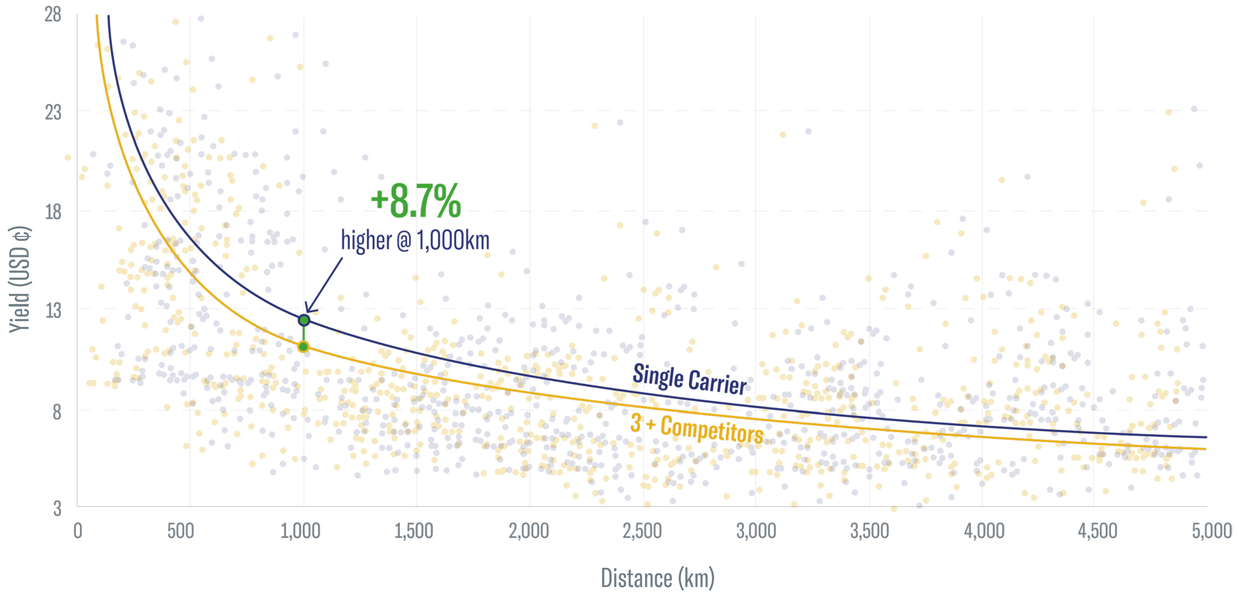
Source: Sabre, 2025.

ASIA PACIFIC

Fare yields are notably higher in the absence of intense competition. For a 1,000 km route in an emerging Asian region with one carrier, the average yield is 8.7% higher than a similar route with three or more carriers. (Graph 3) The difference is significant in an industry which has tight profit margins.

Pursuing a mixed fleet strategy with large and small narrowbodies enables airlines to serve different density markets which typically generate higher yields and margins.

Graph 3 - Yield Comparison in Competitive Markets
to/from/within Emerging Asia Pacific 2024



Source: Sabre, 2025.

Mature Markets – Northeast Asia and Oceania

Compared to the fast-growing emerging regions of Asia, Northeast Asia and Oceania have mature economies and well-connected airline networks that employ up-to-150-seat aircraft.

Japan is the best example in all of Asia Pacific with its well-developed international and domestic network. The domestic market is robust and accounted for 51% of all ASKs generated by Japanese carriers, and an impressive 89% of their departures in 2024. Of those departures, 34% were operated by jets and turboprops in the up-to-150-seat category.

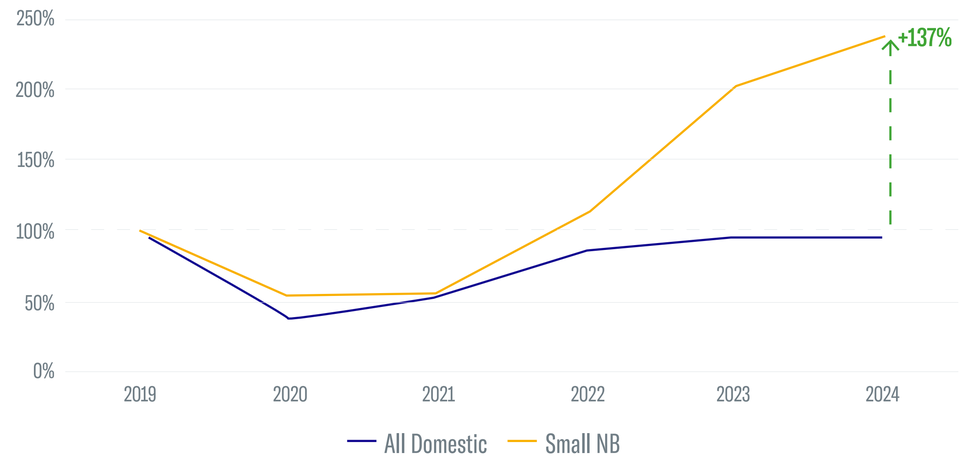
Japan's economy is projected to grow an average of 1% per year over the next decade. South Korea's economy is forecast to grow 2% annually. Yet both countries face population decreases due to low birth rates. A shrinking population contribute to the continued increase in the participation of the up-to-150-seat segment in NE Asia, both in terms of volume and importance.

ASIA PACIFIC

In Oceania and the Pacific Islands, despite the often vast distances between cities, there is a proliferation of short-haul domestic and regional flights. According to IATA, domestic flights represented 66% of all Origin & Destination (OD) departures from New Zealand in 2023, and a whopping 77% from Australia in the same period.

Small narrowbody jets are growing more prominent in Australia, especially in Brisbane and Perth, by serving medium and smaller cities. While domestic ASKs remained unchanged between 2019 and 2024, ASKs produced by small narrowbodies increased 137% in the same period. (Graph 4) Older aircraft types, including Fokker jets, were replaced with newer models. Accordingly, domestic ASKs generated by small narrowbody jets doubled from 5% to 10% in 5 years.

Graph 4 - Australia Domestic ASK Evolution
2019 Benchmark



Source: Sabre, 2025.

BRISBANE AIRPORT (BNE), BRISBANE, AUSTRALIA

In addition to scheduled airline flights, small narrowbodies are also operating fly-in-fly-out (FIFO) charters that serve remote mining sites. The number of those flights has been increasing, particularly in Queensland and Western Australia.

In New Zealand, 75% of all domestic departures are flown by turboprops. The aircraft's performance and economics are ideally suited to the country's low-demand markets, short route distances, and airport infrastructure.

With increasing demand and airport infrastructure improvements, larger turboprops have gained share over smaller turboprops. As markets grow, there could be sufficient demand to replace turboprops with new-generation small narrowbodies which would bring new efficiencies and air service to new destinations.


CHINA

CHINA

KEY MESSAGES

- / Demand for air travel is accelerating in lower-tier cities, growing over three times faster than in Tier-1 markets.
- / Small narrowbody impact: fleet flexibility emerging as key to unlocking regional air connectivity.
- / Tourism and infrastructure driving next aviation boom, but international recovery lags.

Economic & Traffic Growth 2025-2044	
GDP	RPK
3.8%	**5.7%**

New Deliveries 2025-2044	
Up-to-150-Seat Jets:	Turboprops:
1,500	**200**

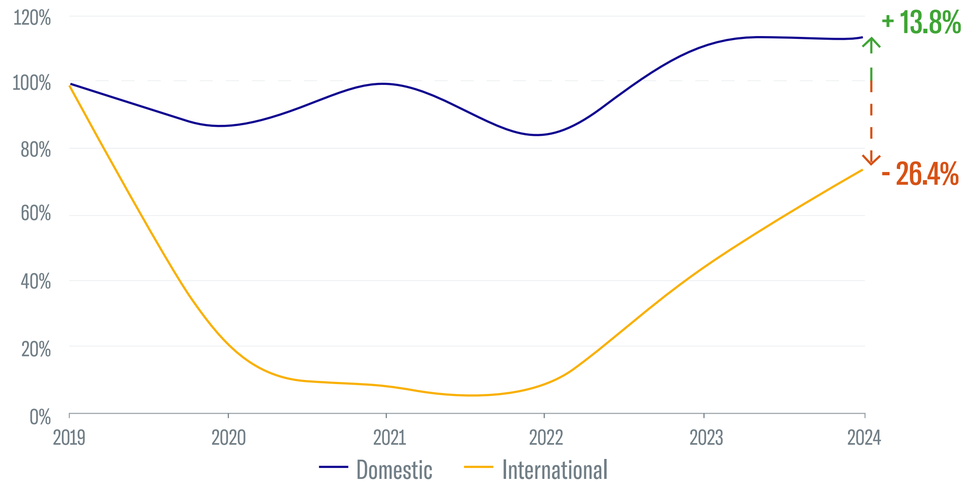
Fleet in Service – Up-to-150-Seat Segment	
2025:	2044:
580	**1,830**

BEIJING DAXING INTERNATIONAL AIRPORT (PKX), BEIJING, CHINA

CHINA

China's aviation sector is navigating a complex mix of recovery, growth, and ongoing challenges. There is a notable difference between domestic and international travel trends.

Graph 1 - Total Seat Capacity Evolution
2019 Benchmark



Source: Sabre, 2025

Domestic seat capacity (the total number of available seats airlines offer) has not only recovered but surpassed pre-pandemic levels to be 13.8% higher than in 2019. (Graph 1) The country continues to consolidate its position as the world's second-largest aviation market by passengers flown, with projections pointing to eventual global leadership.

In contrast, the international market remains slow with overall seat capacity still 26.4% below the 2019 level. Many international carriers have cut back or even suspended routes due to higher operating costs and weaker-than-expected demand. The sluggish recovery pushed airlines to redirect their fleets to domestic markets, causing an oversupply of larger aircraft. That, in turn, affected profitability with most carriers reporting losses. Although demand is returning to Chinese carriers, domestic markets are saturated and global airfares continue to soften.

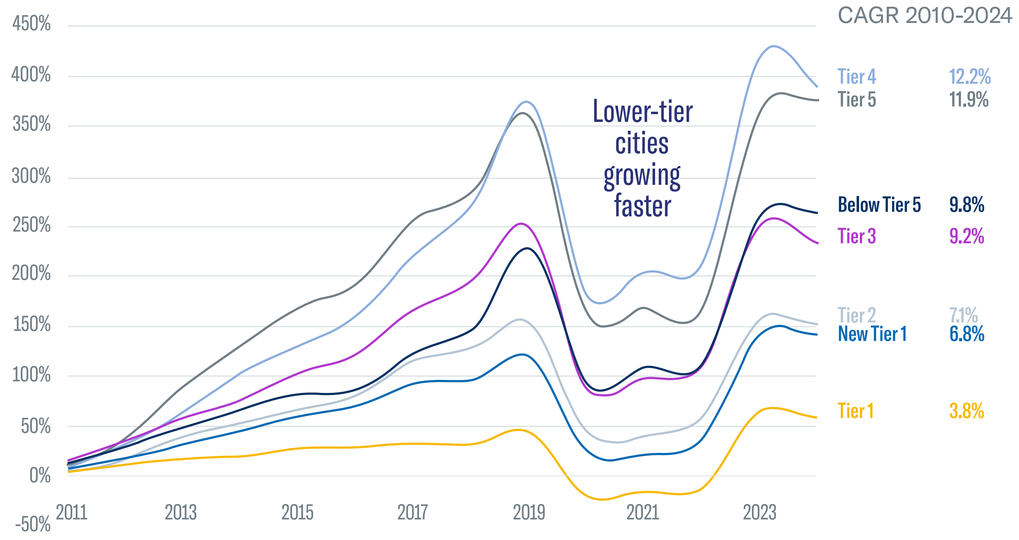
ZHENGZHOU XINZHENG INTERNATIONAL AIRPORT (CGO), ZHENGZHOU, CHINA

CHINA

Domestic growth is largely driven by rising demand in emerging urban centers (often referred to as sub-second tier cites) that is outpacing growth at larger hubs. Between 2010 and 2024, the annual growth rate (CAGR) of air traffic in Tier-4 cities reached 12.2%, far above the 3.8% rate of Tier-1 cities. (Graph 2) This is a clear indication that there are tremendous opportunities in secondary markets.

Graph 2 - Total Annual Passengers

Accumulated Growth - Benchmark 2010



Source: Sabre, 2025.

SHENZHEN BAO'AN INTERNATIONAL AIRPORT (SZX), SHENZHEN, CHINA

Unlocking that potential will require more than just increasing seat capacity – it will involve stimulating demand through improved air-ground integration, better regional connectivity, fleet flexibility, and smart network design. These are essential in bringing air travel closer to the everyday traveler.

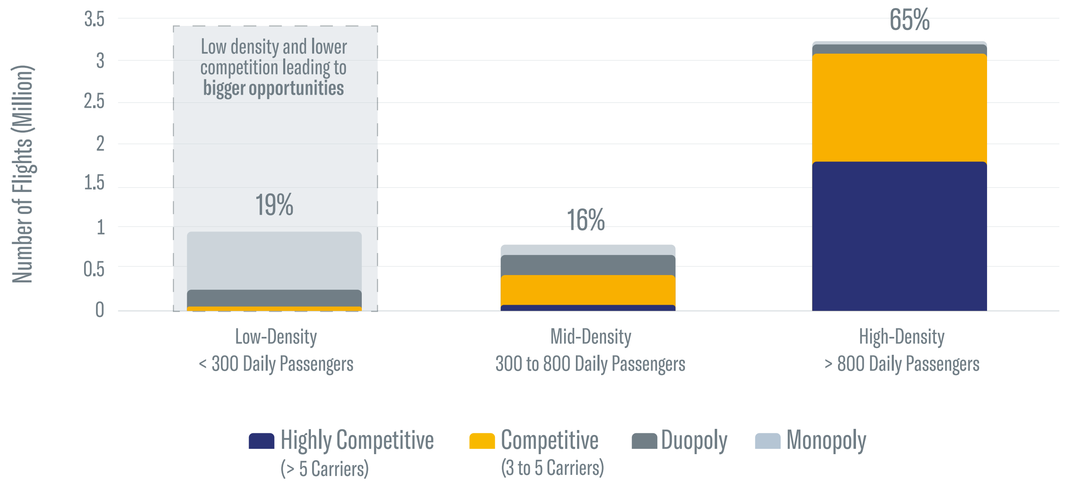
Although overall demand continues to grow, airlines often face challenges in maintaining profitable and sustainable operations on high-density routes, where competition is intense and fare levels are subsequently lower. In these mature markets, the presence of multiple carriers drives down yields, limiting growth potential.

CHINA

65% of flights operate in high-density markets (more than 800 daily passengers) yet a significant portion of these routes are intensely competitive, with up to five or more airlines on the same route. (Graph 3)

Low-density markets, by comparison, account for 19% of all flights, have fewer competitors, and are more economically attractive to serve. Targeting underserved markets offers airlines an opportunity to capture market share more effectively, benefit from stronger yields, and establish a competitive foothold. These are key factors driving the rapid development of lower-tier cities and emerging routes.

Graph 3 - Market Density vs Competitiveness
2024



Source: Sabre, 2025.

These emerging markets require a fundamentally different approach from operating on high-density routes. Smaller aircraft are essential to open and sustain underserved markets. Their reduced capacity and cost-effectiveness are ideal for carefully adding frequencies as demand grows. They are economical to fly, especially to smaller, lower-yield tourist, and leisure destinations.

Mixed fleets of large and small aircraft give airlines the versatility and operating cost advantages to serve existing and new markets more profitably. Smaller aircraft are strategic tools that can stimulate demand and make networks more resilient. They support national connectivity objectives, open new routes, link underserved regions to major hubs, and improve load factors and route viability.

A shift is needed in how airlines prioritize markets if aviation is to reach its full potential. Carriers need to transition from an emphasis on volume and scale to a vision that values adaptability, network connectivity, and smart growth. That means investing not only in infrastructure, but in fleet diversification, regional network planning, and the systems that connect air and ground transport into a seamless travel experience. Achieving this shift will unlock growth and ensure that Chinese aviation remains resilient and globally competitive over the next decades.


EUROPE
& CIS

EUROPE & CIS

KEY MESSAGES

- The right aircraft size efficiency for each market segment maximizes sustainable connectivity and airline profitability: greener flights will cost more, raising ticket prices and dampening air travel demand growth. Significant share of Intra-European traffic is served by large narrowbodies at low frequencies. Many markets can benefit from right-sizing, enabling improved connectivity and a more sustainable way of flying.
- Low-density markets represent a significant part of the air transport system in Europe: at main European hubs > 50% of markets are low-density (< 300 daily passengers). Saturation of the hubs due to slot constraints puts connectivity to those markets at risk. The small narrowbody segment is the right tool for the development of new direct routes from secondary airports in Europe, leading to enhanced connectivity and greater integration across Europe.

Economic & Traffic Growth 2025-2044	
GDP **1.5%**	RPK **3.1%**

New Deliveries 2025-2044	
Up-to-150-Seat Jets: **1,990**	Turboprops: **260**

Fleet in Service – Up-to-150-Seat Segment	
2025: **1,470**	2044: **2,670**

MADRID-BARAJAS AIRPORT (MAD), MADRID, SPAIN

EUROPE & CIS

One aircraft size does not serve all market sizes efficiently

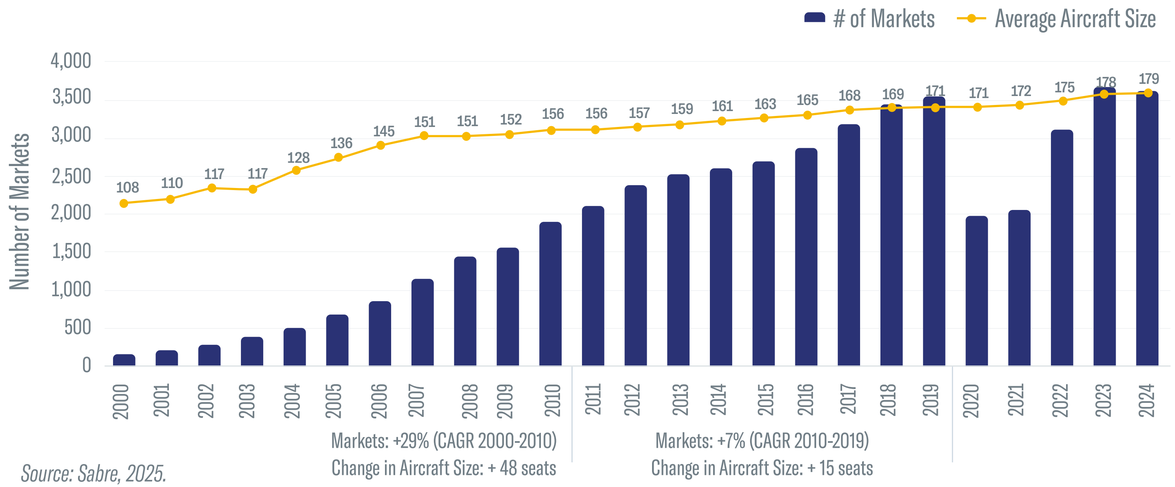
Today's point-to-point air transport model was built on the premise that different market sizes can all be served by large narrowbodies. That approach, however, limits an airline's ability to adapt quickly to economic and geopolitical changes, and to sustain efficient network connectivity.

Ryanair and easyJet exemplified the single-type strategy. After European bilateral air regulations were liberalized to allow cabotage rights on the continent at the end of 1997, the two airlines quickly added flights starting in 2000.

The number of markets grew steadily, 29% annually from 2000 to 2010 and 7% annually from 2010 to 2019. (Graph 1) The average size of intra-European aircraft grew by 48 and 15 seats, respectively, in the same periods.

Graph 1 - Number of Markets and Average Aircraft Size Evolution

Markets with at Least One LCC

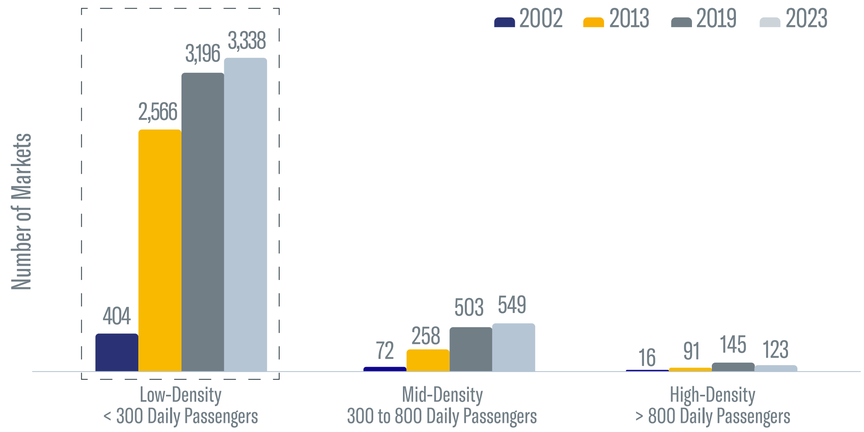


Source: Sabre, 2025.

The rate of new market growth and aircraft size has decreased to only marginal annual increments showing that there is a limit to the number of new markets that can be served with large aircraft. Increasing the size of the aircraft in every market has an impact on daily frequency and connectivity.

Historically, the main source of growth has been in low-density markets that have fewer than 300 daily passengers. (Graph 2)

Graph 2 - LCC Market Evolution by Market Density

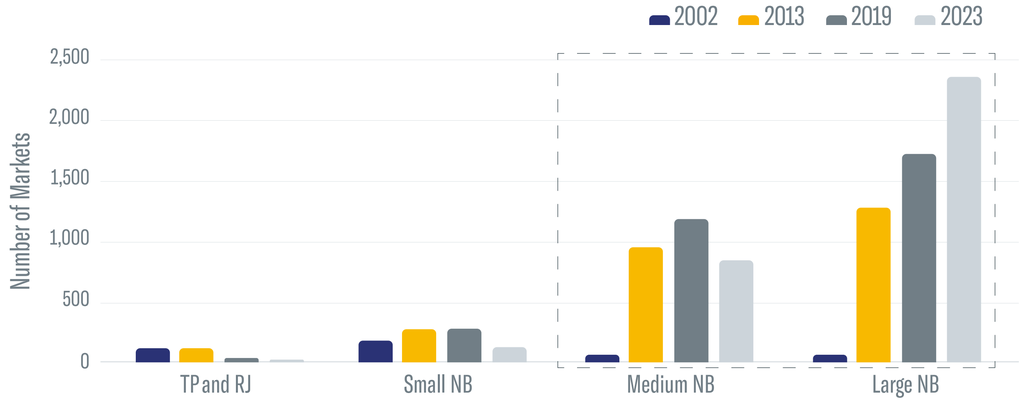


Source: Sabre, 2025.

EUROPE & CIS

From 2013 to 2023, medium and large narrowbodies were predominant in low-density markets. (Graph 3)

Graph 3 - Aircraft Deployment Profile
Low-Density Markets (< 300 Daily Passengers)



Source: Sabre, 2025.

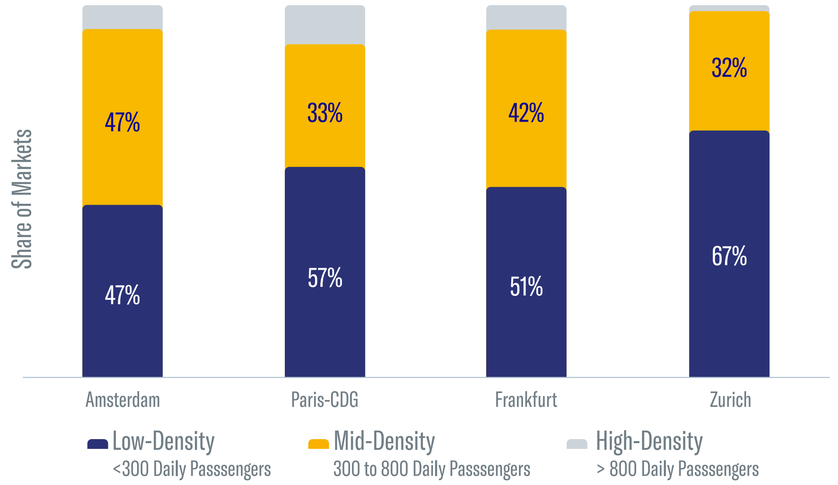
All carriers will face higher operating costs in the future as new environmental charges and levies are imposed. Those expenses will be reflected in higher ticket prices. The up-gauging trend to larger aircraft is not sustainable in the long term given that most intra-European markets are influenced by heavily-discounted LLC pricing.

Smaller aircraft, with their lower operating costs, can adapt more easily. They can profitably open and develop new markets in which larger aircraft are not economically viable.

Low-density markets are key players at hubs

Low-density markets are the backbone of mobility in the region. (Graph 4) Their importance to hubs is significant, especially in key European centers like Amsterdam (47%) and Zurich (67%). Access to large hubs is essential for global connectivity.

Graph 4 - Market Density Profile
Key European Hubs 2024

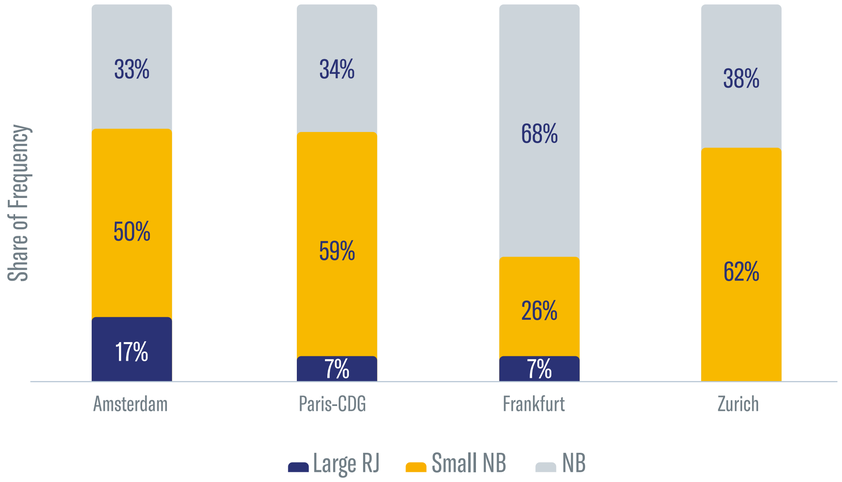


Source: Sabre, 2025.

EUROPE & CIS

Small narrowbodies constitute a large share of frequencies in hubs. (Graph 5) At Paris CDG, 59% of all flights are operated by small narrowbodies compared to 26% at Frankfurt, which has fewer frequencies to low- and mid-density markets.

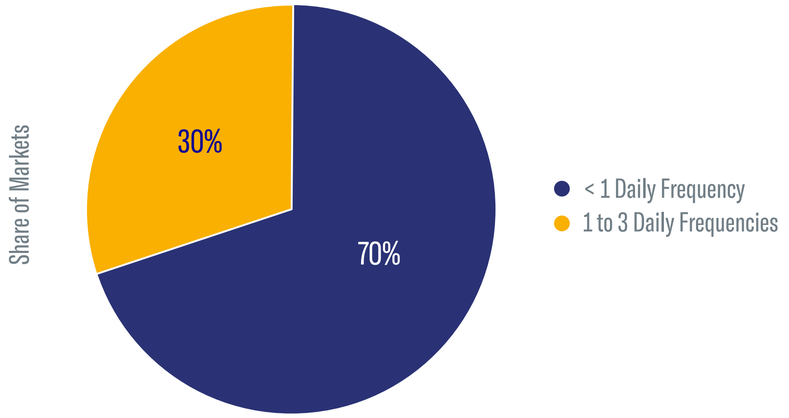
Graph 5 - Deployment by Aircraft Segment
Key European Hubs 2024



Source: Sabre, 2025.

At Frankfurt, 70% of all markets with fewer than 300 daily passengers are served with less than one daily frequency (Graph 6), which is not optimal for a hub system.

Graph 6 - Frequency Profile
Low-Density Markets (< 300 Daily Passengers) from Frankfurt 2024



Source: Sabre, 2025.

That high number suggests an opportunity to develop new secondary or regional hubs to ensure that travelers in low-density markets continue to have sufficient flight frequencies to maximize trans-European mobility and global network connectivity.


LATIN AMERICA
& CARIBBEAN

LATIN AMERICA & CARIBBEAN

KEY MESSAGES

- Regional hubs to create new demand flows: new and better infrastructure capacity will be available to promote air travel throughout the region. Small narrowbodies can develop new and underserved markets, building connectivity efficiently.
- New connecting flows require a new fleet profile: dormant demand not currently served by point-to-point networks will change air travel dynamics. Restricted airports are common and numerous and poorly served by existing fleet. Small narrowbodies will unlock new routes and optimize operations from challenging infrastructure. Including efficient infrastructure is essential for growth.

Economic & Traffic Growth 2025-2044	
GDP **2.8%**	RPK **4.7%**

New Deliveries 2025-2044	
Up-to-150-Seat Jets: **770**	Turboprops: **160**

Fleet in Service – Up-to-150-Seat Segment	
2025: **350**	2044: **990**

BRASÍLIA INTERNATIONAL AIRPORT – PRESIDENTE JUSCELINO KUBITSCHEK (BSB), BRASÍLIA, BRAZIL

LATIN AMERICA & CARIBBEAN

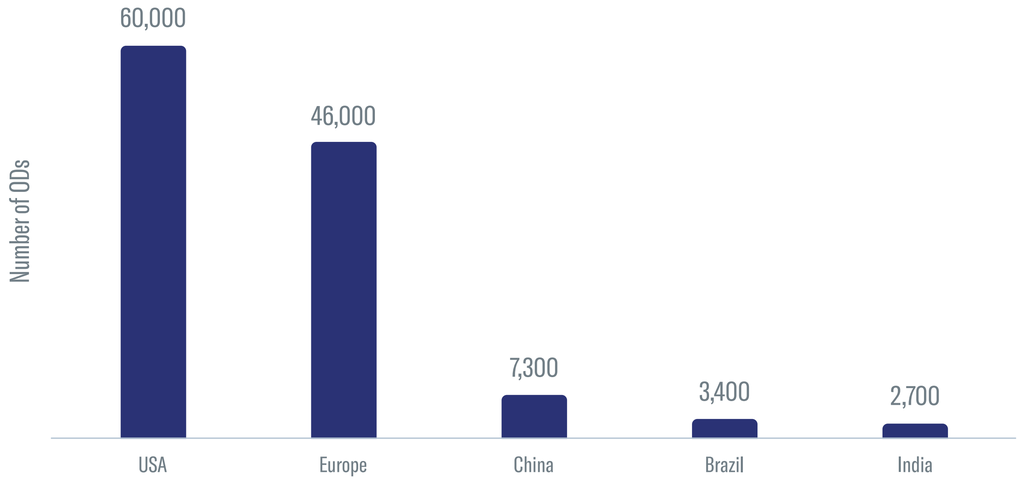
A need for better air travel access with smaller aircraft

Brazil is the largest air travel market in Latin America yet it is still far from having an air transport system that offers sufficient connectivity to support the country's economic development.

The USA, with its mature and well-developed air network, has the most Origin & Destination (OD) city pairs among established and emerging world economies. (Graph 1) Although the number of ODs in China is low, the country has the most extensive network of high-speed trains in the world.

Graph 1 - Air Travel Access Comparison

2024

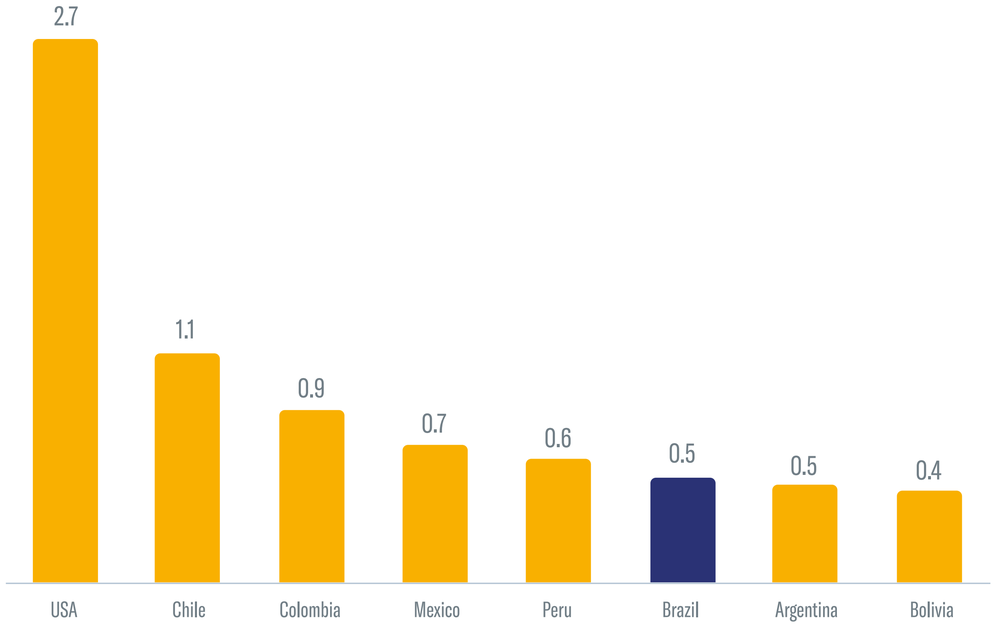


Source: Sabre, 2025.

Latin America ranks far below the USA as a percentage of the population that travels by air. (Graph 2)

Graph 2 - Airline Passengers per Capita

2024



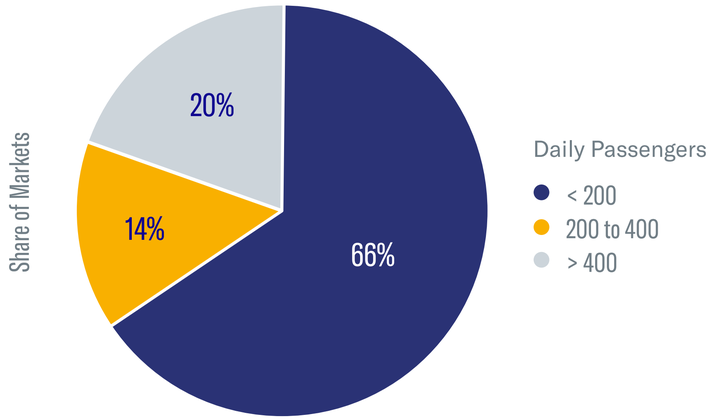
Source: Sabre, 2025.

LATIN AMERICA & CARIBBEAN

Regional hubs are essential for Latin American markets and travelers to access the global airline network. Privatization of airports is expected to accelerate their development in Brazil.

The majority (66%) of markets in Latin America are low-density with fewer than 200 daily passengers. (Graph 3) These markets are the source of air travel demand that helps promote social development and economic growth.

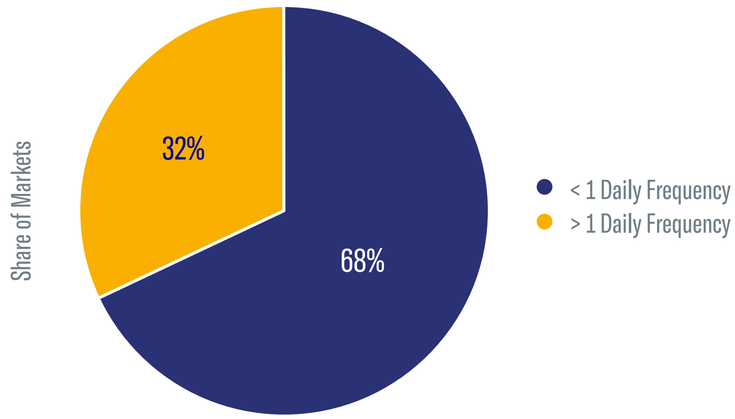
Graph 3 - Market Density Profile
2024



Source: Sabre, 2025.

Among those low-density air travel markets, 68% are served with less than one daily frequency. (Graph 4) This contributes to the low degree of regional connectivity and, consequently, a low level of economic development for most countries.

Graph 4 - Frequency Profile
Low-Density Markets (< 200 Daily Passengers) 2024

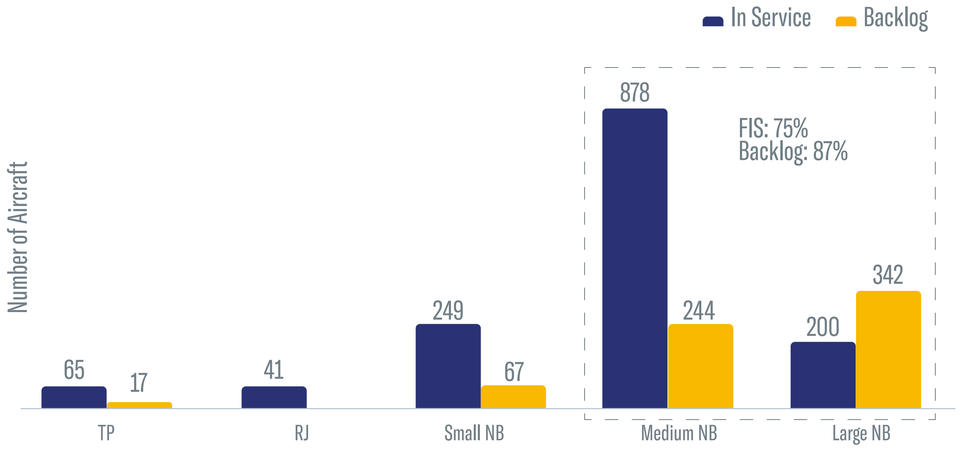


Source: Sabre, 2025.

LATIN AMERICA & CARIBBEAN

Large aircraft dominate Latin American airline fleets with 75% in the medium and large narrowbody category. Their excess capacity hinders the development of new markets and economic viability of flying on low- and mid-density routes.

Graph 5 - Fleet in Service and Backlog
2025



Source: Cirium, 2025.

Adding more small narrowbodies to airline fleets would remedy this historical imbalance.

TOCUMEN INTERNATIONAL AIRPORT (PTY), PANAMA CITY, PANAMA


MIDDLE
EAST

MIDDLE EAST

KEY MESSAGES

- Unlocking regional potential: global connectivity well established - Middle East airlines now ideally positioned to grow through better intra-regional connectivity.
- Tourism as growth engine: strengthening domestic and regional air networks will be critical in supporting national diversification strategies across the Middle East.
- Aligning fleet to opportunity: greater fleet versatility will be essential to more effectively operate in underserved short- and medium-haul markets.

Economic & Traffic Growth 2025-2044	
GDP	RPK
2.9%	**4.4%**

New Deliveries 2025-2044	
Up-to-150-Seat Jets:	Turboprops:
350	**20**

Fleet in Service – Up-to-150-Seat Segment	
2025:	2044:
150	**380**

ZAYED INTERNATIONAL AIRPORT (AUH), ABU DHABI, UNITED ARAB EMIRATES

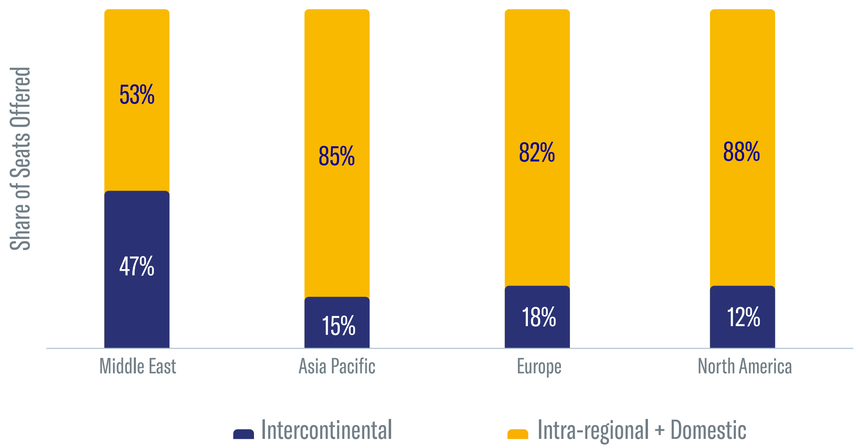
MIDDLE EAST

Dubai, Doha, and Abu Dhabi have firmly established themselves as global aviation transit hubs connecting East and West. This reflects the long-standing strategic focus on intercontinental traffic. (Graph 1) Nearly 50% of all flights in the region depart from just five cities.

Reliance solely on long-haul connecting traffic limits the full economic potential of the aviation sector since countries across the region are looking to diversify their economies from a dependence on oil and gas. By focusing more on intra-regional connectivity and domestic route development, airlines can unlock growth opportunities and contribute more directly to national economic goals.

Graph 1 - Relevance of Intercontinental Traffic

2024



Source: Sabre, 2025.

Tourism is one area in which local governments are investing in order to diversify their economies. The January 2025 UN Tourism Barometer reports that the Middle East leads all global regions in tourism recovery. International arrivals in 2024 reached a remarkable 132% above 2019 levels.

The tourism industry has strong growth prospects. Religious tourism continues to thrive, driven by the region's rich cultural heritage. High-end tourism is flourishing, supported by ambitious national strategies such as Saudi Vision 2030.

Enthusiasm is also growing for niche segments like sporting events, adventure, and eco-tourism. Improvements to facilitate visas and travel are encouraging new visitors to explore the region. Gulf Cooperation Council (GCC) countries are moving forward with plans to introduce an unified tourist visa system, similar to the Schengen visa in Europe.

KING ABDULAZIZ INTERNATIONAL AIRPORT (JED), JEDDAH, SAUDI ARABIA

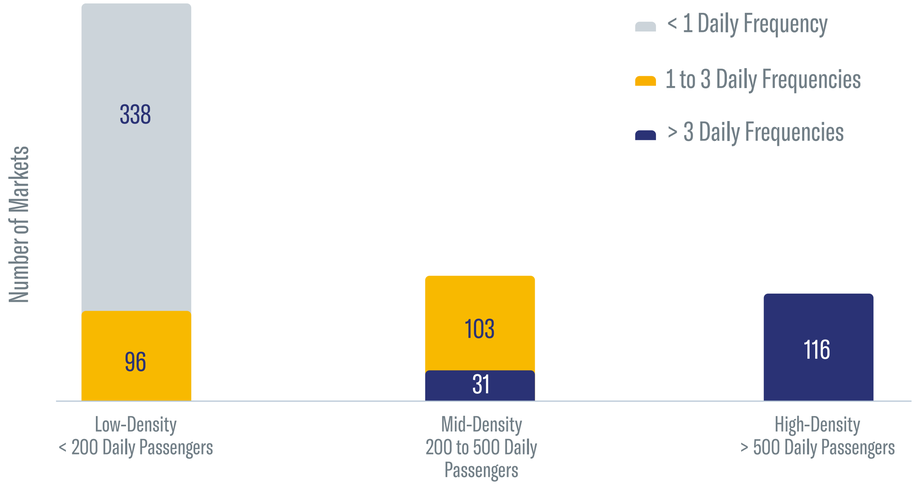
MIDDLE EAST

The development of intra-regional air connectivity is a major opportunity to capitalize on the growing portfolio of tourism sites. Currently, 63% of intra-regional markets are low-density with fewer than 200 daily passengers. Of these, 78% are served with less than one daily airline flight. (Graph 2)

Making it easier to access these flourishing tourism areas with more flights can grow intra-regional travel, stimulate local economies, and support year-round demand for destinations beyond the major cities.

Graph 2 - Market Density Profile

Intra Middle East 2024

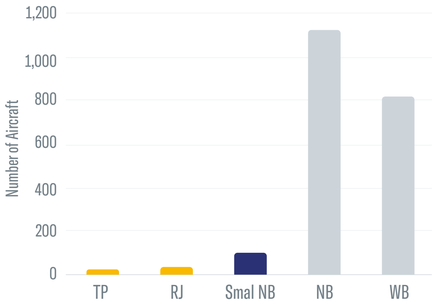


Source: Sabre, 2025.

Aircraft size is crucial in establishing economic and operational route viability. Although large narrowbodies dominate airline fleets (Graph 3), many intra-regional markets would be more efficiently served by smaller aircraft. The average number of passengers per departure in many of these markets remains relatively low. (Graph 4) Relying exclusively on larger aircraft can lead to underutilized capacity and missed opportunities to enhance network connectivity with more cities and more frequencies.

Graph 3 - Fleet in Service

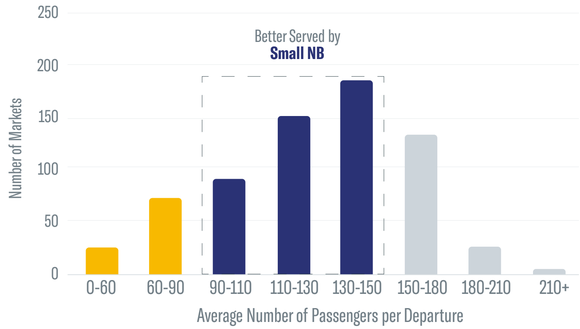
2025



Source: Cirium, 2025.

Graph 4 - Operational Profile

Intra Middle East Markets 2024



Source: Sabre, 2025.

Deploying small narrowbody aircraft allows airlines to better match supply with demand, open new markets, and increase flight frequency between secondary cities that are currently underserved or have no service. This approach can unlock significant growth in domestic and regional tourism, particularly in support of emerging destinations aligned with the national strategies of Middle East nations. By offering greater flexibility and cost efficiency, smaller aircraft provide a practical tool to build a more connected and resilient air transport system.


NORTH
AMERICA

NORTH AMERICA

KEY MESSAGES

- Regional aviation continues to be the backbone of the U.S. airline network.
- Small narrowbodies complement large narrowbodies to ensure multiple daily frequencies that maximize network connectivity in off-peak periods and low seasons.
- A balance of large regional jets and small and large narrowbodies is a fleet mix that enables sustainable growth while maintaining capacity discipline.

Economic & Traffic Growth 2025-2044	
GDP **1.7%**	RPK **2.4%**

New Deliveries 2025-2044	
Up-to-150-Seat Jets: **2,680**	Turboprops: **280**

Fleet in Service – Up-to-150-Seat Segment	
2025: **2,850**	2044: **3,230**

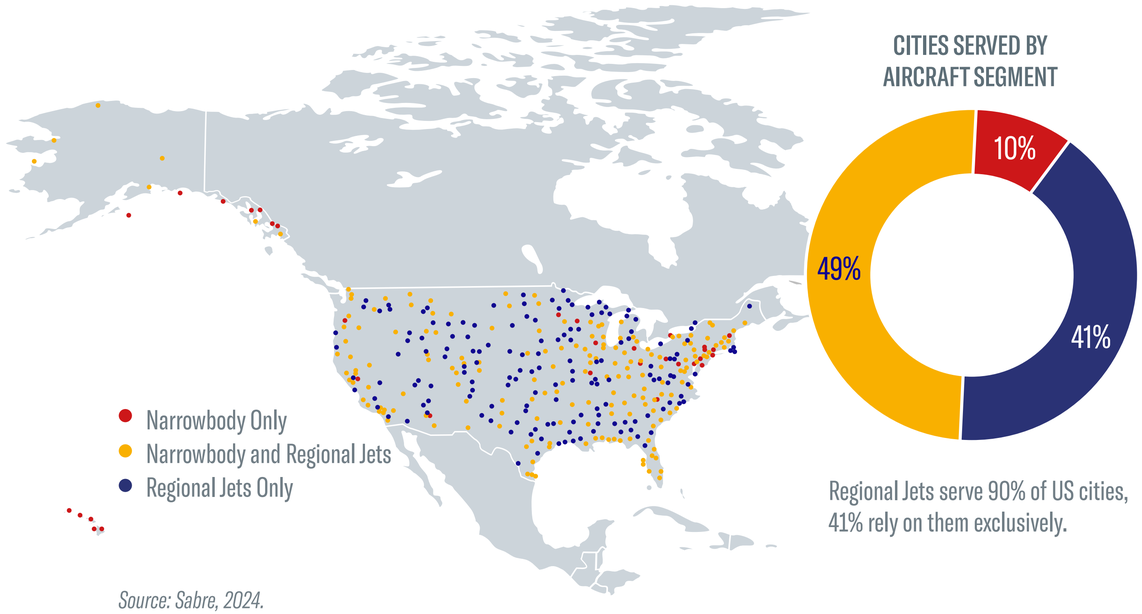
SALT LAKE CITY INTERNATIONAL AIRPORT (SLC), SALT LAKE CITY, USA

NORTH AMERICA

Regionals are the backbone of USA aviation: most markets need small aircraft

The North American aviation network is the most comprehensive in the world with a huge number of small cities connected to major hubs across the country. The role of regional aircraft is significant. In 2024, some 90% of American cities relied on some type of regional air service while 41% of all cities were served exclusively by regional airlines.

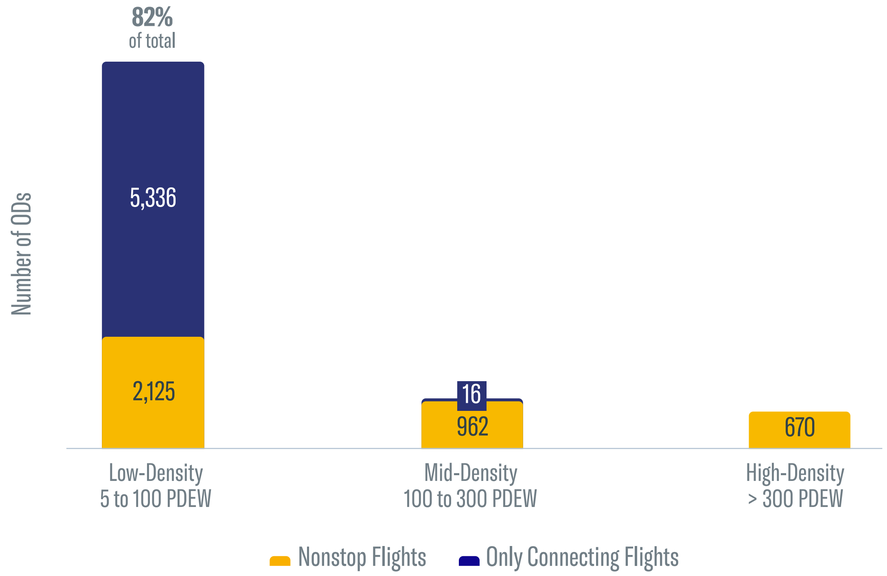
Figure 1 - Regional Aviation in the USA
2024



Source: Sabre, 2024.

In 2024, 82% of Origin & Destination (OD) pairs were classified as low-density markets, with fewer than 100 daily passengers each way. (Graph 1) These markets are crucial to support the hub and spoke concept in which high frequency flights serve multiple connecting banks.

Graph 1 - Market Density Profile - USA Domestic
2024



Source: Sabre, 2025.

NORTH AMERICA

Small & large narrowbodies - the new balanced fleet mix

Mainline airlines seek the most operationally and economically-efficient use of their assets. Carriers have been keen to up-gauge older narrowbodies to take advantage of the benefits of newer generation of 180 to 230-seat single-aisle aircraft.

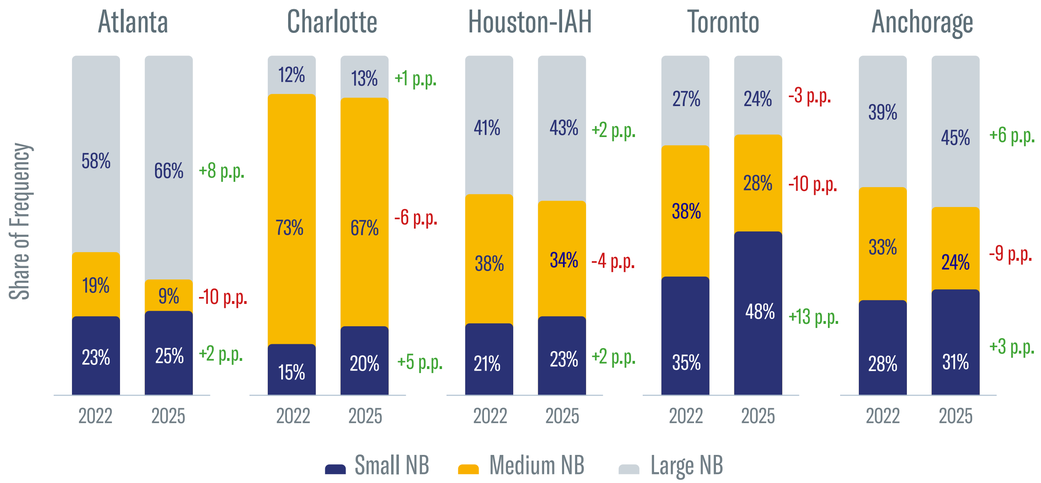
The new generation of small narrowbodies are equally efficient and ideal for complementing large narrowbodies. North American airlines are already using these aircraft at key hubs. While large narrowbodies are scheduled at peak times and on high-demand routes, small narrowbodies maintain a high number of daily route frequencies by flying in off-peak hours and when demand is softer in low seasons. (Graph 2)

Hybrid and low-cost carriers are expected to benefit from the versatility of small narrowbodies. The aircraft are well-suited to opening new routes and serving low-to-mid density markets. Their operating economics are even attractive to turboprop operators who are able to access new markets.

The current manufacturers order book backlog confirms the trend to small narrowbodies. In just five years, the share of medium narrowbodies declined from 57% to 16%. Those orders were reallocated to large narrowbodies and small narrowbodies, the backlog of which tripled from 8% to 25% during that period. (Graph 3)

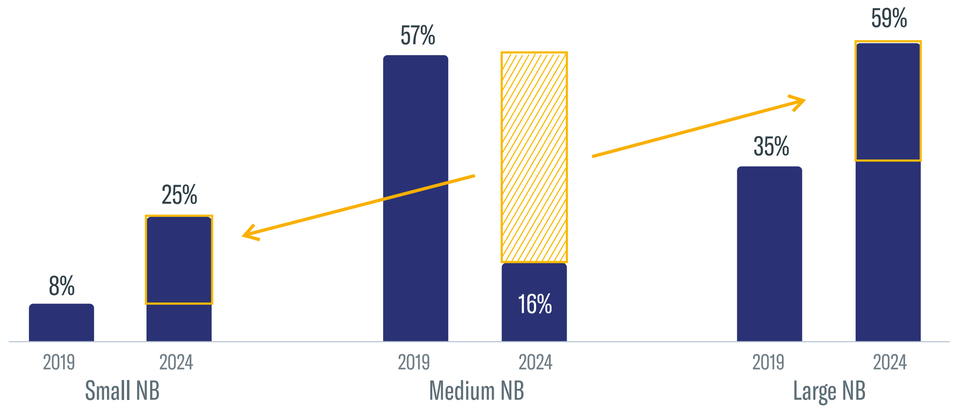
Graph 2 - Small Narrowbodies at North American Hubs

Main Hub Airline



Source: Sabre, 2025.

Graph 3 - Narrowbody Backlog Distribution



Source: Cirium, 2025.

CARGO MARKET OUTLOOK

CARGO MARKET OUTLOOK

KEY MESSAGES

- Air cargo demand is still surpassing pre-pandemic highs, setting new records.
- Remarkably consistent driver: E-Commerce no longer a growth spike but a permanent component. Online giants (i.e. Shein, Temu) continue to fuel growth through fast, low-value shipments.
- From oversupply to opportunity: regional trade is creating a comeback for small narrowbodies and smarter cargo aircraft and operations.

Economic & Traffic Growth 2025-2044

GDP	CTK
2.5%	**3.6%**

New Deliveries 2025-2044

Up to 20-ton payload aircraft (feeders):
600

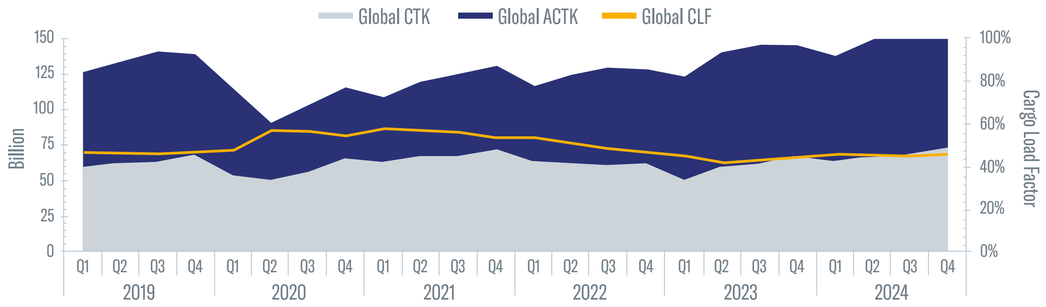
Fleet in Service – Up to 20-ton payload aircraft

2025:	2044:
340	**650**

CARGO MARKET OUTLOOK

The global air cargo market started strong in 2025. According to IATA, demand rose 11.3% in 2024, surpassing the pre-pandemic high and setting an industry record. Capacity also expanded thanks to the return of passenger aircraft belly space and the continued use of dedicated freighters. Yet this recovery masks growing structural tensions, particularly in how the market adapts to shifting demand, regulation, and supply chain strategies.

Graph 1 - World Air Cargo Market



Source: Adapted from IATA Air Cargo Market Analysis, 2024.

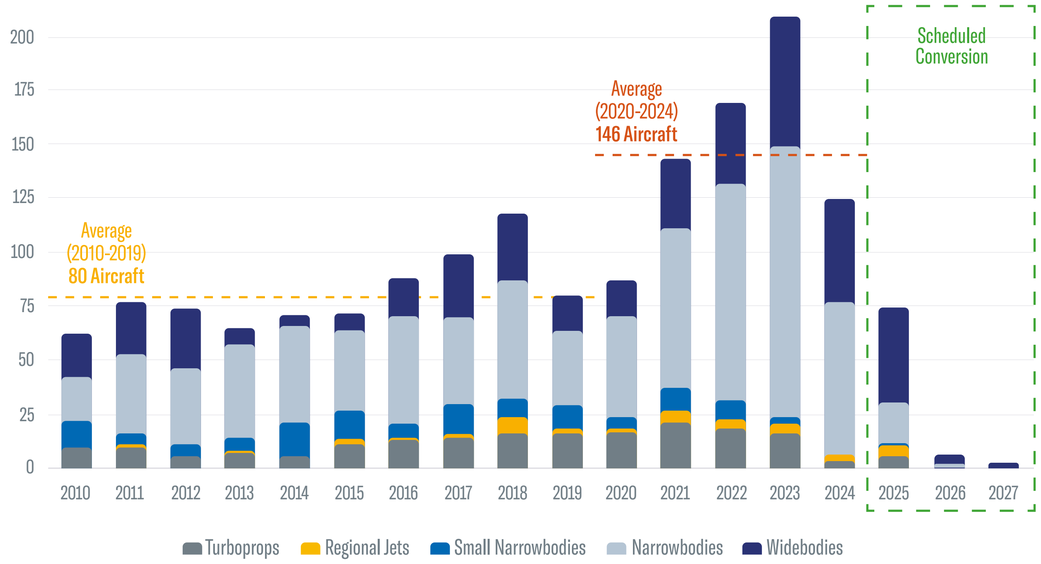
One driver remains remarkably consistent: E-Commerce. Despite predictions that its influence might fade post-pandemic, online-based retailers continue to shape air cargo dynamics. Platforms like Shein and Temu have built supply chains around speed, employing airfreight to ship low-cost goods quickly and directly to consumers. This behavior is partly driven by rules in many countries that exempt low-cost goods from import taxes or are subject to complex customs procedures. E-Commerce is no longer a growth spike – it's a permanent component of air cargo demand.

Response to strong E-Commerce demand led to unintended consequences, especially for narrowbody aircraft. Between 2021 and 2023, the market saw a wave of Passenger-to-Freighter (P2F) conversions, particularly from B737-800s and A321s. Over 500 aircraft were converted in only four years, far above the historical average. Many of these were converted speculatively, backed by lessors hoping to capitalize on short-term E-Commerce gains and the abundance of parked passenger aircraft during the pandemic.

CARGO MARKET OUTLOOK

As passenger demand returned, priorities shifted. The inventory of idle converted freighters increased. Some, like surplus B737-800Fs, were parked or even stripped of engines to support the passenger fleet. With only a handful of conversions recorded in early 2025, the market is now clearly entering a cooling phase. According to Cirium, the pace of conversions seen in recent years is unlikely to return, at least not in its current form (Graph 2).

Graph 2 - P2F Conversions Since 2010



Source: Cirium, 2024.

Meanwhile, a broader transformation is underway. Beyond the aircraft themselves, the structure of global trade is evolving. Rising geopolitical tensions, uncertain trade policies, and the push for national security have accelerated a shift toward regionalization. Companies are rethinking supply chains not only to reduce costs but also to improve control and resilience. The concept of “friendshoring” has taken hold, with countries prioritizing trade with politically aligned partners. As a result, regions like North America and Eastern Europe are seeing growth in nearshoring activity.

This shift in trade geography is redefining how companies design their logistics networks. To reduce lead times and gain more control, many are establishing regional distribution centers closer to their key consumer markets. Large freighters continue to handle long-haul trunk routes, but the need for fast, reliable movement between regional hubs and local warehouses is growing. This is where smaller narrowbody freighters offer a distinct advantage. With the right balance of capacity, frequency, and operating efficiency, they are well-suited to support regional flows, connect secondary markets, and keep pace with the time-sensitive demands of E-Commerce and decentralized supply chains.

What is emerging is a more balanced cargo ecosystem. While the market adjusts to recent overcapacity, new opportunities are opening for aircraft supporting agile, regional operations. The forces reshaping trade are not cyclical - they are structural. And as this realignment continues, smaller narrowbody freighters are well-positioned to become key enablers of the next phase in global air logistics.

DATA SOURCES

ALL ANALYSIS DEVELOPED USING DATA FROM:

- *S&P Global IHS Markit*
- *The Economist, OECD, World Bank, IMF, McKinsey Global Institute, Morgan Stanley Research, Global Trade Alert*
- *OAG*
- *ICAO, IATA*
- *US Census Bureau, US BTS*
- *Sabre*
- *Cirium Fleet Analyzer*
- *Embraer Market Intelligence*
- *Airlines*
- *Seabury Cargo*

REGIONAL DEFINITIONS

- *North America*
- *Latin America & Caribbean (includes Mexico)*
- *Europe & CIS (includes Israel & Central Asia)*
- *Africa*
- *Middle East (includes Egypt & Turkey)*
- *Asia Pacific*
- *China*

AIRCRAFT SEGMENTATION

UP TO 150-SEAT AIRCRAFT:

- *Turboprops - TP:*
  ATR42/72, DHC8-100/200/300/400, EMB-120, Saab 340/2000, MA 60/600/700, Il114, Fokker 50, D328, TBD TP
- *Regional Jets - RJ (30 to 90 seats):*
  ERJ 135/140/145, CRJ 100/200/550/700/900, E170/E175/E175-E2, Fokker 70, AVRO RJ70/85, C909, TBD RJ
- *Small Narrowbody Jets - Small NB (90 to 150 seats):*
  E190-E1/E2, E195-E1/E2, CRJ1000, SSJ100, Fokker 100, AVRO RJ100, BAe 146-300, 737-200/300/500/600/700, 717, 737 MAX7, MD-87, A318, A319, A319neo, A220-100/300, MC21-200, TBD Small NB

ABOVE 150-SEAT AIRCRAFT:

- *Medium Narrowbody Jets - Medium NB (150 to 180 seats):*
  A320, A320neo, 737-400/800; 737 MAX 8, C919, MC21-300, TBD Medium NB
- *Large Narrowbody Jets - Large NB (180 to 210 seats):*
  A321, A321neo, 737-900, 737 MAX9/10, 757-200/300, TBD Large NB

For more information, please visit: www.embraercommercialaviation.com/marketoutlook

June, 2025

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