## FIGERIA OF THE SUSINESS JETS | ASIA-PACIFIC REGION | ASIANSKYMEDIÂ | ASIA-PACIFIC REGION | YE 2021



OPERATOR
AIRCRAFT REGISTRY
OEM
ENGINE

10 YEAR FORECAST
BIZJETS VS. UHNWI / BILLIONAIRES
CHANGES SINCE THE FIRST FLEET REPORT

**Interviews & Product Spotlights** 

AIRBUS

















## THE FUTURE HAS LANDED

Meet the strongest and most advanced fleet in Gulfstream history.

With the addition of the all-new Gulfstream G800™ and G400™,

our expanded portfolio offers an aircraft for every mission.



#### CONTENTS

**EXECUTIVE SUMMARY** 

The Executive Summary is where you will find the guick overview of all of the headline findings from the report.

**REGIONAL OVERVIEW** 

The Regional Overview shows a high-level snapshot of the fleet by region and country.

**COUNTRY SNAPSHOTS** 

The Country Snapshots give a brief overview of the business jet fleets in each country, and includes the total fleet size, number of transactions and biggest operators.

**CHANGES SINCE FIRST BUSINESS JET FLEET REPORT** 

> We take a look back over ten years of the Business Jet Fleet Report to see how it has evolved.

**BIG NEW JETS FROM DASSAULT** ON THE HORIZON

DASSAULT AVIATION

Dassault Aviation updates us on two of the most exciting upcoming business jets; the Falcon 6X and Falcon 10X.

**MARKET TRENDS** 

The Market Trends section looks the deliveries and transactions in the region, with data presented by OEM, type and value.

**SUCCESS WITH SAFE AND EFFICIENT SERVICES** 

SINO JET

Sino Jet shares the secret of its success as it celebrates having the biggest fleet in the APAC region for the third year in a row.

**MARKET UPDATES** 

The Market Updates section is where you'll find more granular data on the aircraft and engines in the region.

28 Operator Overview

39 Aircraft Registry Overview

50 OEM Overview

**62** Engine Overview

#### **BUSINESS JETS VERSUS UHNWIS AND BILLIONAIRES**

We take a look at how developed a country's business jet market is, by plotting the number of business jets in its fleet versus its population and number of UHNWIs and hillionaires

**INTERVIEWS** 

We talk to some of the biggest names in business aviation to find out what's really going on in the region;

36 Gulfstream

44 The V Executive Search

48 Airbus

58 Textron Aviation

76 Metrojet

79 Amber Aviation

THE POWER OF CERTAINTY: WHY IT'S TIME TO CONSIDER AN **OPERATING LEASE** 

GLOBAL JET CAPITAL

Global Jet Capital's Alexander Tang explains why now is the perfect time to consider an operating lease.

**SUPPORTING** MODERN TIME MACHINES

**ROLLS-ROYCE** 

Rolls-Royce explains how its dedicated business aviation unit looks after all of its engines in the region.

**10 YEAR FORECAST** 

We surveyed business aviation professionals in Asia-Pacific and asked one simple question; how big will the APAC business jet fleet be in ten years?

**APPENDIX** 



#### **EDITOR'S NOTE**



If you've read the recent headlines about China's business aviation fleet, then you'd be forgiven for thinking that we are fast approaching doomsday; 'China's business jet fleet in freefall!', 'More than 100 jets leave China's business jet fleet!', 'Chinese registered G650 spotted on the moon!'.

The more astute will have noticed that the last one was completely made up. It is only included to show how ridiculous the other two headlines are. The reality is that the Chinese fleet did dip, but only by six aircraft. Hong Kong saw a steeper drop, by 19 aircraft, whilst Taiwan's fleet dropped by one. This means that overall, there were 26 less aircraft in the Greater China fleet at the end of 2021 than there were at the end of 2020.

That is a dip of 5.1% for mainland China in 2021, and whilst it was the biggest contributing factor in Asia-Pacific's overall 1.1% dip, it is hardly worth all of the screaming headlines. If there was a headline to write it would be that mainland China's dip is probably only temporary, with most experts saying that China will likely return to growth again once all of its COVID-19 restrictions, lockdowns and quarantines are over. The same is true for Hong Kong which has at the time of writing, has just announced that nonresidents will be allowed back in soon, albeit with a seven-day quarantine.

The difference between the mainland China and Hong Kong fleets is simply the size of China. That might sound obvious, but in a country the size of China there is a big domestic market, and that has, to a certain extent, helped maintain the country's fleet. Hong Kong of course is a completely different story. Although there are technically two airports, Shek Kong Camp is a Chinese military airfield used mainly for flight training purposes. And even if it was open to non-military flights, gcmap.com says it is just 14 miles away from the main Chek Lap Kok Airport.

The state of Greater China's fleet in ten years' time is one of the special features in this special tenth anniversary business jet fleet report. We have come a long way since that first edition, partly due to expanding our coverage – that first edition only covered Greater China. To help celebrate we ran a survey asking business aviation professionals how big they think the Asia-Pacific business jet fleet will be in ten years. We also asked some of the biggest names in the region for their views.

As well as all of the usual hard data and intel that you have come to rely on, this issue also presents a special feature that can be used to see how developed a country's business jet market is by looking at the number of business jets that the country has, and then plotting it against the total population and then the number of Ultra High Net Worth Individuals (UNHWIs) and billionaires. This gives us a ratio for the population versus the number of business jets, which we then rank from highest to lowest, with the higher score denoting a more mature market.

**SPECIAL THANKS TO OUR CONTRIBUTORS** 























Articles and interviews this edition have been supplied by Sino Jet, which talks us through its recipe for success, Airbus talks us through the advantages of its new ACJ TwoTwenty, Amber Aviation talks through its plans following its funding by NetJets, Dassault talks us through the progress of its new Falcon 6X and Falcon 10X business jets, whilst Global Jet Capital writes about the advantages of operating leases. This edition also includes interviews with Mike Shih, VP of China Strategy and Sales with Textron Aviation and Vinna Tsang of The V Executive Search.

As always we would like to take this opportunity to thank everybody that has contributed to this report, as well as all of its sponsors.

Sincerely

Sincerely,

Alud Davies

Media & Communications Director

Asian Sky Media

#### **PUBLISHER**

#### **ASIANSKY**MEDIÂ

#### **EDITORIAL & MARKET RESEARCH**

Alud Davies
Bowen Zhang
Casper Zhuang
Changhe Wang
Icy Ho
Liana Liu
Michelle Chan
Qianyun Zhou
Tiffany Tong

#### **DESIGN**

Amy Liu Luna Huang

#### ADVERTISING/ENOURIES:

jwong@asianskygroup.com (852) 9199 7751 sales@asianskygroup.com www.asianskymedia.com

Asian Sky Media is part of the Asian Sky Group. The materials and information provided by Asian Sky Media ("ASM") in this report is for reference only. While such information was compiled using the best available data as of December 31, 2021, any information we provide about how we may interpret the data and market, or how certain issues may be addressed is provided generally without considering your specific circumstances. Such information should not be regarded as a substitute for professional advice. Independent professional advice should be sought before taking action on any matters to which information provided in this report may be relevant.

ASM shall not be liable for any losses, damage, costs or expenses howsoever caused, arising directly or indirectly from the use of or inability to use this report or use of or reliance upon any information or material provided in this report or otherwise in connection with any representation, statement or information on or contained in this report.

ASM endeavors to ensure that the information contained in this report is accurate as at the date of publication, but does not guarantee or warrant its accuracy or completeness, or accept any liability of whatever nature for any losses, damage, costs or expenses howsoever caused, whether arising directly or indirectly from any error or omission in compiling such information. This report also uses third party information not compiled by ASM. ASM is not responsible for such information and makes no representation about the accuracy, completeness or any other aspect of information contained. The information, data, articles, or resources provided by any other parties do not in any way signify that ASM endorses the same.

## 10<sup>TH</sup> ANNIVERSARY

The Business Jet Fleet Report is definitive reference source for all information on Asia-Pacific's business jet fleet. But don't just take our word for it; here's what the aviation community has to say about it.



**Jason Liao**Chairman and CEO
China Business Aviation Group

Thank you, Asian Sky Media, for your very valuable work for the last 10 years. The Asia-Pacific Business Jet Fleet Report and Asian Sky Quarterly have been very useful for us and the industry.



Vinna Tsang
Founder and Director
The V Executive Search Company Limited

I believe ASM has certainly made a significant impact to the business aviation industry. From aviation consulting to market intelligence, ASM continuously innovates its products and services to provide an all-rounded coverage to the industry. When I was working with a business jet operator in a Sales & Marketing capacity, I relied heavily on the data provided by the Business Jet Fleet Report to determine my sales strategy and marketing spend. Now with my own venture in Executive Search, I still rely on the various publications provided by ASM to check the pulse of the market for determining the potential human resources needs across Asia Pacific. Grateful to have ASM's support all along and I look forward to witnessing the company's continued growth and success.



**Louis-Jerome Monnier** Jet & Yacht Finance, Wealth Management BNP Paribas

I am quite in admiration of what you have achieved. You are running a brokerage activity and at the same time a media business. Your publications are a key source of information in my jet activity. I have also attended my first Metaverse conference with Asian Sky Media. The technology was maybe still at an early stage, but you were able to get traction of the market for instance with Dassault with their aircraft in your metaverse showroom. In an industry where most of the brokers are quite secretive, you share most of the data that you collect. I find it quite interesting.



**Gary Dolski** Chief Executive Officer Metrojet Ltd.

I have always enjoyed reading your publications and genuinely look forward to the annual fleet jet reports. The individual and special reports (infrastructure, MRO updates etc.) are always an interesting read and since my days in Jet Aviation Singapore I have used the reports as a base and foundation for some of the new business development projects that I have pursued over my time in Asia. I/ Metrojet appreciate the work that ASM do and appreciate your efforts, the research and the resultant reports. Keep up the good work.



**Omar Hosari** Co-Owner/Founder - CEO **UAS International Trip Support** 

Asian Sky Group, Asian Sky Media, and affiliated publications have been a source of stellar industry insight and knowledge for the past decade and I've no doubt that they will continue to prove themselves an asset to our industry for many more to come.



Jan Grube Head of Asia Sales VIP & Special Aircraft Services Lufthansa Technik AG

Indeed ASM has set the standards in terms of its market intel and quality of information in Asia. I can only congratulate what you and your team achieved!



**Paul Chang** CAMP Systems International, Inc.

CAMP really values the publication and resources that ASM have produced, so please continue to provide the high quality publications and products to the aviation industry. Asian Sky Quarterly has been one of the primary resources we use to gain insight information to the corporate aviation trend in the Asia Pacific region. It allows companies to develop and adjust strategies based on the market trend.



**Carlos Gomez** Senior Director Jet Aviation Business Jets HK & Singapore

I personally like very much the contribution of your publications to the business of private jets, the efforts that ASM makes to collect the information, and the way it is presented, easy to understand, and attractive. I am always looking forward to seeing what the latest edition has to say. Also, your continuous support in promoting our business even in the most difficult circumstances like the Virtual Conference.



**Peter Lochhead** Head of Sales MedAire Asia-Pacific

MedAire works with thousands of business jets around the globe on medical and security risks. For the Asia region, Asian Sky Media is one of our primary sources for market intel. The information from quarterly and annual reports feeds in to our overall market data bank with key indicators showing areas for growth and operator stats. The data received is reliable, credible and can be easily actioned. Additionally, ASM's recent virtual conference provided another great way of interacting with our customers in Asia. We look forward to our continued partnership with ASM.



**Herb Chahal** Managing Director, Asia **ACASS** 

ASM's publications are excellent and certainly gives me and my team a very good insight into the region's aircraft base, operators, MROs etc. The info is well researched, easy to read, excellent graphs and tables. The country snapshots are very detailed and saves me searching for any other websites to get the info I need. I have extracted info from there regularly to use in my dialogue with our clients / prospects etc. A big thank you and please convey our thanks and gratitude to all your team and continue to do the good work.



#### **Global Jet Capital**

Asian Sky Media has been a long time and valued partner to Global Jet Capital. Jeff and the team are always looking for new and innovative opportunities to connect the business aviation community. Asian Sky Media provides important industry knowledge and resources for anyone looking to connect with and understand the APAC market.



**Quentin Bond** Director of Business Development - Hong Kong Jet Support Services, Inc.

Asian Sky Quarterly continues to improve its content and I really like the year on year comparable data - it's very informative and a good reference point.



TJ Trinidad ACTSI

ASM's Year End Infrastructure and Business Jet Fleet Report reports have always been our go to publication and one of the tools we often use to get the latest business aviation information in the Asian market. Congratulations on the 10 years and more power!



**Jeffrey S. Towers** General Counsel TVPX

ASM's insights into the Asia Pacific aviation marketplace are invaluable to TVPX and others who are actively involved in global aircraft transactions. The ASM team has done a great job educating the global market on sales trends in the region, as well as introducing new ways to advance transaction activity such as the Virtual Exhibition.



**David Mezenen** ACJ Sales Director for Asia

Congratulations on this milestone and for the achievements of ASG and Asian Sky Media over the past 10 years! Wishing you continued success for the years to come!



Zhang, Rocky (Chuanyong) Textron Aviation

Within the past years, ASM has published very useful reports for the industry and for the investors as very valuable references. It has been well recognized by the industry. Thanks for all your team's hard work and look forward to seeing more valuable reports, analysis and details in your reports.



Blanche Na Senior Manager - Customer Service Hong Kong Business Aviation Centre Limited

Asian Sky Media (ASM) has been widely recognised by the aviation industry. In the past AsBAA Icons of Aviation Awards, ASM has been awarded as "Best Media" which was a recognition of the contributions and devotion made by ASM publications in providing the readers with business aviation insights and intelligence. Similar to many associates in the aviation field, we review regularly the Asian Sky Quarterly Report and Fleet Report (such as Business Jet Fleet, Helicopter Fleet, etc) to get detailed and valuable information. The unprecedented Virtual Conference held in Sep 2021 provided an excellent experience to us to connect with our business partners and clients during the pandemic situation. We believe that "virtual meetings" will become a new trend in future. We highly appreciate the great efforts and dedication of you and your fantastic team and look forward to continuous good collaboration.



Jérôme Desmazures Dassault Falcon

Over the last 10 years, ASM becomes a reference through its fixed and rotary wing promotion activities as well as its Media activity. Every year, we are eager to receive the Asia-Pacific Business Jet Fleet Report which becomes a reference in the industry. Thanks to its expertise it gives some great indicators about the Asian market, which was emerging 10 years ago. ASM pioneered and developed a complete set of publications highlighting the challenges and opportunities in the Asia region. Congratulation, Happy Birthday and keep your publications running.



**Aldi Dexter P.ampong** General Manager **INAEC Aviation Corporation** 

Asian Sky Media has been truly helpful to operators like INAEC in keeping us informed of the latest developments on aviation matters in the Asia Pacific region. The thorough research that goes into their fleet reports means that we can rely on their data to be accurate and up-to-date.

What is more, dealing with Asian Sky Group for aircraft sourcing and similar services has always been a pleasure. The way they do business is simple: straight-forward, transparent, and accountable. This creates an environment that generates trust and confidence, enabling all parties to reach successful and satisfying outcomes on their transactions.



**Darmilo Sosa** Managing Director Wingbox Aviation

Throughout the years, Asian Sky Media has been successful in providing us with new perspectives in Aviation. The information has been used in the decision-making of our industry leaders. As a reader, I am enthusiastic about the future of our industry and the new perspectives that ASM will share.



Jenny Lau President Sino Jet Management Limited

Congratulations to Asian Sky Group on their 10th anniversary! Asian Sky Group and Asian Sky Media have always been extraordinary in their work. It is their masterwork in providing key market information and the collaborative culture they foster for key stakeholders in business aviation that earn their highest appreciation and respect. They are a staunch representative of aviation information, and at the same time a marketing company in business & general aviation which professional organisations partner with. On behalf of Sino Jet, we thank ASM for their tireless great work and contribution to the industry. We wish them a bright future, with the same everlasting energy and commitment in the pursuit of their mission.



**Rolland Vincent** JETNET iQ Creator / Director

I have always admired the innovative ways in which Asian Sky Media has analyzed and communicated business aircraft market information, helping inform stakeholders around the globe on emerging developments and market trends in this key region. ASM has been amongst the leaders in introducing customers in the world's largest regional economy to the benefits of business and private aviation. ASM was amongst the few to have the foresight to invest years ago to stimulate the expansion of the Asia Pacific fleet. Congratulations on your 25th anniversary, and best wishes for many, many more successes in the next 25 years!



**Andrew Young** General Manager AMSTAT & Aircraft Shopper Online

We have been working with Asian Sky Media for several years. Advertising in Asian Sky Quarterly gives AMSTAT great exposure and has enabled us to grow our market share in Asia.



**Alex Fecteau** Director of Marketing Boeing Business Jets

Thank you for the years of thorough, valuable business jet market data and insight. As a leading business jet publication globally and certainly in the Asia region, we value what you offer and have our best wishes for continued success.

# EXECUTIVE SUMMARY 10% x-wide

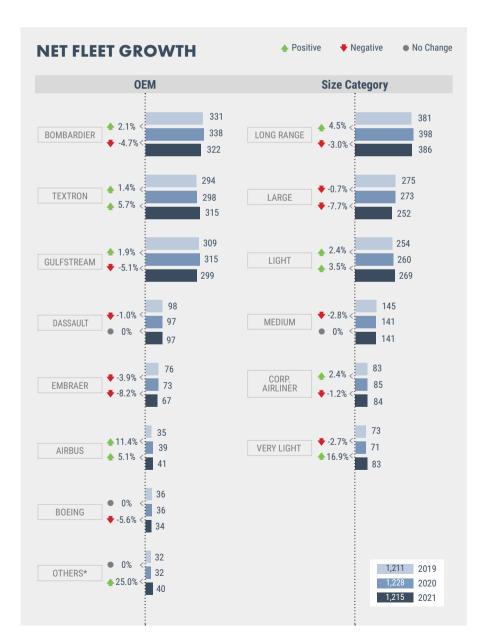
There was a total of 1,215 business jets operating in Asia-Pacific at the end of December 2021, which was a decrease of 1.1% from the end of 2020. Overall, there were 33 new deliveries, 68 pre-owned additions and 114 deductions, all contributing to a net decline of 13 business jets from the fleet. The COVID-19 pandemic still had an effect on the fleet, with more Light and Very Light jets entering the region than in previous years.

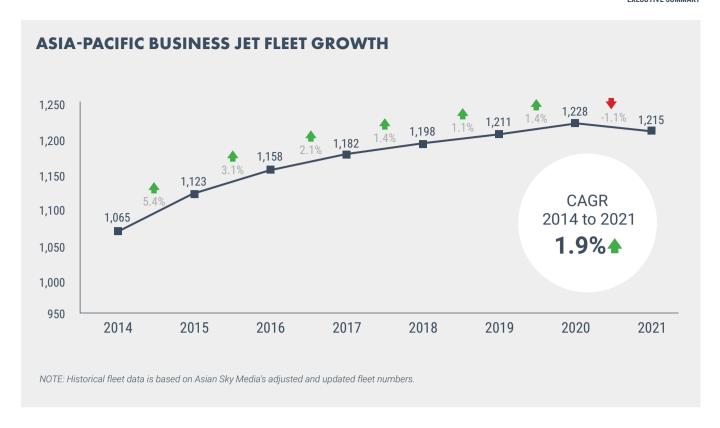
Bombardier continued to be the most popular Original Equipment Manufacturer (OEM) in the Asia-Pacific region and had a market share of 27% at the end of 2021. It also delivered the highest number of business jets during the year. Textron bridged the gap with a 5.7% increase to 315 business jets and in doing so became the second-most-popular OEM, with a market share of 26%. Gulfstream came third thanks to having the second highest number of new deliveries in 2021. Together, the top three OEMs dominated Asia-Pacific, with a combined market share of 77%. Honda's fleet in the region increased to 13 business iets, contributing to the growth seen with smaller OEMs.

Although the Long Range category declined by 3.0% over the year, the 386 Long Range business jets that were operated still made the category the most popular across the region.

The G650, G650ER, Global 6500 and Global 7500 accounted for 19 of the new deliveries. Light and Very Light business jets were the only two categories that saw growth, which could suggest a shift towards domestic flying in countries that can support internal operations.

OTHERS\*: Other OEMs include British Aerospace, Cirrus, Dornier, Eclipse, Fokker, Honda, IAI, Nextant, North American and Pilatus.





Mainland China continued to be the top market for business jets, even though there were six net deductions in 2021. The Hong Kong SAR was the market that saw the biggest drop in fleet size, with the 19 aircraft leaving the market heavily contributing to the region's overall decline of 1.1%. The number of business jets increasing in East Asia, Oceania, and South Asia could not offset the net deductions in Greater China and resulted in an overall decline in the Asia-Pacific fleet.

The number of business jet deliveries continued to shrink in 2021, with 13.2% fewer deliveries than the previous year. Although the secondary market was more active, almost half of all transactions left the APAC region completely. Although there were 33 new deliveries and an increase in the number of pre-owned aircraft entering the region, the additions were unable to completely offset the fleet deductions.

More than half of the top 20 operators saw a net decrease in their fleets. Sino Jet reinforced its position as Asia-Pacific's biggest operator by having the most deliveries. Lily Jet was one of the few operators that saw net fleet growth in 2021; it also saw the biggest increase in its fleet during 2021 - up by six aircraft.

Although offshore registries continue to grow in appeal, 64% of the Asia-Pacific fleet were registered locally. More than 70% of business jets in mainland China, Australia, India, Japan, the Philippines and

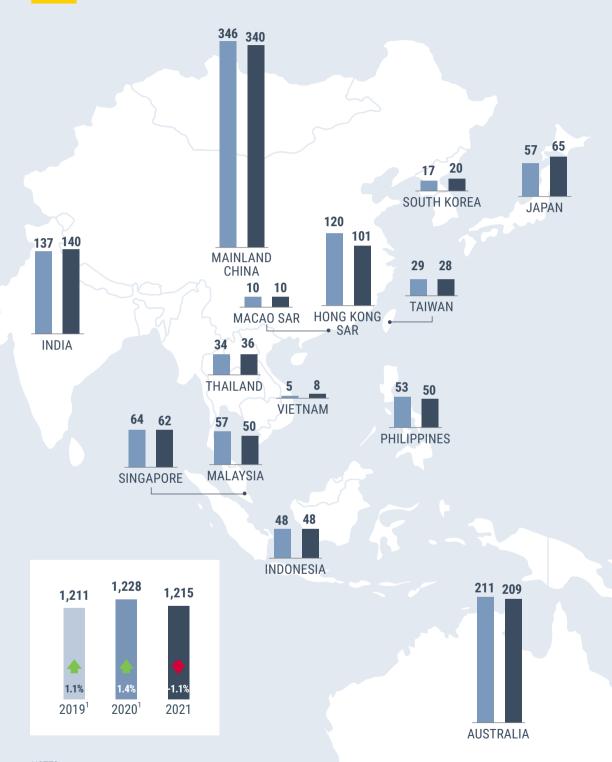
South Korea were domestically registered. The United States register was the most popular besides the local ones. More than 50% of the business jets based in New Zealand and Macao SAR were registered in the United States.

Although many people believed that the COVID-19 pandemic would have a negative effect on Asia-Pacific's business jet fleet in 2020, the region saw full year growth of 1.4%. It now seems that the effects took longer to show their hand, and affected the fleet in 2021 instead, as countries around the region kept their borders shut and imposed strict quarantines. Jet users may have needed to adjust their travel arrangements and limit themselves to domestic flying, which could have been driving the switch in demand from Long Range aircraft to Light and Very Light jets instead.

Global vaccination rates increased significantly in the fourth quarter of 2021, and governments are now more willing to reopen their borders. However, the Russia-Ukraine War is rattling the economy and global market. Inflation and a lack of resources may hamper OEMs in delivering business jets in the future.

OEMs had started to deliver new business jets to Asia-Pacific owners and operators in the first quarter of 2022, which is a positive sign for 2022.

### REGIONAL OVERVIEW



#### NOTES

- 1. 2019 and 2020 data is based on Asian Sky Media's adjusted and updated numbers.
- 2. Fleet distribution is based on business jets in service and their active bases of operation.
- 3. Others include Bangladesh, Brunei, Cambodia, Cook Islands, French Polynesia, Kiribati, Laos, Maldives, Marshall Islands, New Caledonia, PNG and Solomon Islands.
- 4. Region is defined in appendix on page 83.





There was a total of 1,215 business jets in Asia-Pacific at the end of 2021, a 1.06% decrease from the 1,228 jets at the end of 2020.

Although East Asia only accounts for 7% of the total fleet operating in Asia-Pacific, it outperformed all other subregions. During 2021 the East Asia fleet recovered to pre-pandemic levels with the addition of 11 aircraft, which is equivalent to 14.9% growth throughout the year. Both Japan and South Korea saw significant percentage increases in the size of their fleets during 2021.

Oceania is the only subregion that has experienced continuous fleet growth since 2014. Despite Australia's fleet decreasing by two aircraft, Oceania's fleet grew by five aircraft thanks to New Zealand's fleet jumping up by 31.8% with the addition of seven aircraft.

India led the change in South Asia. Following a year of no growth in 2020, South Asia saw a minor increase of 2.9% with the addition of four jets in 2021.

Similar to South Asia, Southeast Asia had no overall fleet change in 2020, yet in 2021, Southeast Asia's fleet dropped by seven aircraft, resulting in a 2.6% decrease. Despite the decline, the 263 business jets in the Southeast Asia fleet at the end of 2021 meant that it kept its spot as the second biggest fleet in the Asia-Pacific region.

Greater China saw the most dramatic decrease. with its 5.1% decline attributed to a net loss of 26 business jets in 2021. The fleets in Hong Kong SAR, mainland China and Taiwan all shrank in 2021, but on different levels, whereas the fleet in Macao SAR has not changed for three years. A large proportion of the fleet that left Hong Kong SAR and mainland China also left the Asia-Pacific region completely and went to the United States. Greater China retained its position as the largest fleet in the Asia-Pacific region, although it also saw the steepest decline.

Overall, the Asia-Pacific fleet experienced a decline for the first time since we have been tracking the numbers. This trend may continue in 2022 as uncertainty brought on by the pandemic and the Russia-Ukraine War has affected various industries, including the business jet market.

#### **BUSINESS JET FLEET<sup>2</sup>**



LARGEST MARKET



MOST NET FLEET ΔΠΠΙΠΠΑ

MOST NET FLEET DEDITIONS

HONG KONG SAR

#### FLEET GROWTH IN MAJOR MARKETS

	Net Flee	t Growth	Growth Rate		
SUBREGION <sup>4</sup>	2020	2021	2020	2021	
East Asia	-10	+11	-11.9%₹	14.9%	
Oceania	+14	+5	6.2% 🕇	2.1%	
South Asia	-	+4	-	2.9%	
Southeast Asia	-	-7	-	-2.6% 🖡	
Greater China	+13	-26	2.6%	-5.1% 🖊	
TOTAL	+17	-13	1.4% 1	-1.1% 🖡	
	Net Flee	t Growth	Growth Rate		
COUNTRY/REGION	2020	2021	2020	2021	
Japan	-6	+8	-9.5% 🖡	14.0%	
New Zealand	+3	+7	15.8% 🛊	31.8%	
Vietnam	-	+3	-	60.0%	
India	-	+3	-	2.2%	
South Korea	-4	+3	-19.0%₹	17.6%	
Thailand	-	+2	-	5.9% 🕇	
Indonesia	+1	-	2.1% 🕇	-	
Macao SAR	-	-	-	-	
Taiwan	+2	-1	7.4% 🕇	-3.4% 🖡	
Australia	+13	-2	6.6%	-0.9% 🖡	
Singapore	+1	-2	1.6% 🕇	-3.1% 👢	
Philippines	+3	-3	6.0% 🕇	-5.7% 🖊	
Mainland China	+14	-6	4.2% 🕇	-1.7% 👢	
Malaysia	-6	-7	-9.5% 🖡	-12.3%↓	
Hong Kong SAR	-3	-19	-2.4% <b>↓</b>	-15.8%↓	
Others	-1	+1	-5.3% 🖡	5.6%	
TOTAL	+17	-13	1.4% 🕇	-1.1% 🖊	

Ranked by 2021 net fleet growth in descending order from the highest.









#### **COUNTRY SNAPSHOTS**

#### **Greater China**

Greater China, which includes mainland China, Hong Kong SAR, Macao SAR and Taiwan, had 479 business jets in total at the end of 2021. This was down by 26 aircraft from the end of 2020, attributed to 18 new deliveries, 22 pre-owned additions, and 66 deductions. Despite the decline, Greater China still accounts for 39% of Asia-Pacific's business jet fleet. Eight of the top ten Asia-Pacific business jet operators came from Greater China, although six saw slight declines in their fleets in 2021. Gulfstream and Bombardier were the major OEMs in Greater China, having 39% and 29% market share, respectively. The G550 was the most popular model in 2021, with 52 units.

#### **Australia**

As the second-largest business jet market in the Asia-Pacific region, Australia had 209 business jets in 2021 – two less than at the end of 2020. Overall, four new and 14 pre-owned business jets were added, whilst 20 aircraft left the country. Textron's Cessna Citation 510 Mustang was the model that saw the most net additions – four units, whilst the Bombardier Global Express XRS was the model that saw the most deductions – three units. The Light size category remained the most popular size category, with 91 aircraft in 2021. Australia has one of the oldest business jet fleets in the region - the average age of its jets being around 20 years old.

#### India

India ranked third in the Asia-Pacific region with 140 business jets at the end of 2021. During the year the country saw the net addition of three aircraft, thanks to one new delivery, eight pre-owned additions, and six deductions. Although Textron was the leading OEM in the market, Dassault's Falcon 2000 was the most popular model in 2021. Only one Indian operator – Club One Air made it into the top 20 ranking of business jets operators in the region. The Light size category outnumbered the Large size category in 2021. These two size categories together accounted for about 59% of the total aircraft.

#### Malaysia

Malaysia had 50 business jets in its fleet as of the end of 2021, which was seven fewer than in 2020, equivalent to a reduction of 12.3%. There was one new delivery and three pre-owned additions, whilst 11 aircraft left the country. The Long Range and Large size categories were the primary size categories in Malaysia, making up over 50% of the market. Compared to 2020, Malaysia's fleet of Large size aircraft shrank by 14.3%.

#### Singapore

Singapore's fleet saw a 3.1% drop between 2020 and 2021, leaving the country with 62 business jets at the end of 2021. This was two fewer aircraft when compared to 2020. In total, three new deliveries and seven pre-owned aircraft joined, whilst 12 aircraft left the fleet in 2021. It is worth noting that Bombardier's market share fell by 17.9%, while Gulfstream's market share rose by 22.2%, accounting for 37% and 35% of the total market respectively, which reduced the market share gap between the top two OEMs in 2021. As was the case in 2020, the Long Range size category dominated the market.

#### Japan

With a net addition of eight aircraft - the most in the region, Japan had a total of 65 business jets at the end of 2021, an increase of 14%. Although two business jets left the country, four new and six pre-owned aircraft joined the fleet. Textron was the most popular OEM, making up 48% of the total fleet in the country. The Citation 525C (CJ4) and HondaJet Elite were the most popular types in 2021, with seven of both in the Japanese fleet. The Light size category accounted for the most market share (42%), followed by Long Range (28%). The Very Light jet and Large size category both have market shares of 11%.

#### The Philippines

With no new or pre-owned additions, the Philippines fleet declined by three business jets during the year, finishing 2021 with a total of 50 aircraft - a drop of 5.7% from 2020. Textron's Citation 560XL family (Excel/XLS/XLS+) and Citation 525C (CJ4) dominated the market in the country. In total, 38% of the Philippines's fleet could be classified as Light size, 24% were Medium, and 22% were Large.

#### **Indonesia**

Compared to 2020, the overall fleet in Indonesia did not change in 2021 - 48 units, which was attributed to one new delivery, three preowned additions, and four deductions. Textron saw the most growth during the year, with a 6.3% increase in its fleet, thus obtaining a 36% market share in 2021. The number of Large size jets in Indonesia decreased by 5.9% since 2020, but still made up 33% of the total fleet. The Light and then Medium categories came second and third, with 25% and 19% market share, respectively. Notably, there are no Very Light jets in Indonesia.

#### **Thailand**

Thailand had 36 business iets at the end of 2021. This was two more aircraft than 2020, which were all pre-owned additions. One G550 and one HondaJet Elite joined the Thai fleet, giving the country a growth rate of 5.9%. Gulfstream and Textron were the major OEMs in Thailand, with 12 units and ten units in 2021, respectively. The Gulfstream G650 was the most popular model in the market. The number of Long Range business jets increased from 11 in 2020 to 12 in 2021, while the number of Medium size aircraft and Corp. Airliner stayed the same as in 2020.

#### South Korea

South Korea saw a net increase of three business jets in 2021, thanks to one new delivery and two pre-owned aircraft joining the country's business jet fleet. South Korea now has a total of 20 based business jets, with the three additions equal to growth of 17.6%. The fortunes of Textron Aviation swung from a 40.0% decline to an increase of 33.3% in 2021 due to the addition of two pre-owned jets. Long Range, Very Light jets and Corp. Airliner were the top three size categories, which made up a combined 80% of the total market.

#### **New Zealand**

New Zealand had 29 business jets at the end of 2021, an increase of seven aircraft compared to 2020, all comprised of pre-owned additions. It had the second-highest number of additions in the region. Growth over the past few years has been slowly increasing and is now in double digits, the fleets of Textron, Bombardier, and Dassault, all increasing in 2021. The Citation 510 Mustang was the most popular model, with five aircraft operating in the country. Of the country's total jets, 31% belonged to the Light size category. The age of New Zealand's business jets was about 16 years.









#### TOTAL FLEET BY COUNTRY/REGION AND OEM

	BOMBARDIER	TEXTRON	GULFSTREAM	DASSAULT	EMBRAER	AIRBUS	BOEING	OTHERS	TOTAL	% OF TOTAL	
MAINLAND CHINA	99	51	122	29	9	16	13	1	340	28%	340
AUSTRALIA	76	80	11	10	12	3		17	209	17%	209
INDIA	32	57	6	22	21	1	1		140	12%	140
HONG KONG SAR	29	3	56	4	1	5	2	1	101	8%	101
JAPAN	6	30	13	6			1	9	65	5%	65
SINGAPORE	23	6	22	4	2		3	2	62	5%	62
MALAYSIA	16	6	12	4	2	5	3	2	50	4%	50
PHILIPPINES	8	24	14	2		1		1	50	4%	50
INDONESIA	9	17	8		12			2	48	4%	48
THAILAND	2	10	12	2	2	4	2	2	36	3%	36
NEW ZEALAND	6	14	2	5	1			1	29	2%	29
TAIWAN	9	3	10		1	4	1		28	2%	28
SOUTH KOREA	2	8	4	1		1	3	1	20	2%	20
MACAO SAR	4		3	1	2				10	1%	10
VIETNAM			1	4	2		1		8	1%	8
OTHERS	1	6	3	3		1	4	1	19	2%	<b>1</b> 9
TOTAL	322	315	299	97	67	41	34	40	1,215	100%	





## BUSINESS AVIATION FINANCING. FOR THOSE WHO VALUE SIMPLICITY.



Ultimately, business aviation is an exercise in simplicity. The fastest way to get from here to there. No complications. No delays. Simple.

Unfortunately, the business of business aviation can be complicated—particularly when it comes to financing. We understand that. Which is why we provide the most straight-forward, flexible and solutions-oriented financing experience in the industry—along with the experience and responsiveness you'd expect from a partner focused exclusively on business aviation financing. With no complications. And no delays. Simple.

344.436.8200 \ info@globaljetcapital.com \ globaljetcapital.com

GLOBALJET



Despite the Mesoamerican Long Count calendar ending and the associated doomsday prophesies, 2012 turned out to be a pretty okay year.

It was the year that we were first introduced to an upscale neighborhood in Seoul and taught to dance like we were riding a horse. In the cinema the Dark Knight rose, whilst the Sky Fell and the Avengers Assembled. In the UK there were double celebrations as not only was it the 60th Jubilee of Queen Elizabeth II, but London would host the summer Olympics for the first time in 64 years.

In a not so quiet corner of Hong Kong, we published our first annual Business Jet Fleet Report.

The very first Fleet Report was released due to public pressure. With the brokerage side of our business booming, we knew that we were in the perfect position to report the size and state of the Asia-Pacific business jet market. The first report, released in time for ABACE 2013, showed the direction that the Fleet Report that you are reading now would take, only with one major difference; It only covered Greater China.

It was also mostly data and charts, with very little analysis or commentary. But the main sections of the report were there, including the breakdowns by fleet and operator. The response we received to the release of the report was phenomenal. In the years leading up to the report people would only be able to estimate the size of the Greater China fleet based on the number of locally

registered business jets. But this only gives part of the picture, to get the full version of the story you need to include of all of the offshore registered aircraft, as well as those registered in places like the US.

To get to the full story is a long process that begins shortly after the end of the preceding year. We first take a snapshot of the Asia-Pacific fleet from our data partner AMSTAT. We will then take extracts from official aircraft registers around the region. During the year people feed us information, so we will then combine everything together to give us a rough idea of the fleet. For us, this is effectively the data collection part of the process. The fun part, the data validation part, comes next.

Once we have built up a picture of the fleet, we start to contact the operators to ask them to validate their fleets and let us know if any of the aircraft we have listed against them have left, or if



there are any additions. You might think that this is a fairly straight forward process, but in fact its where the skullduggery begins.

You would be surprised at the lengths that some companies go to have us count extra aircraft in their fleet. Sometimes these are entirely valid - the verification process is in place to ensure that we have not missed anything, but often it's a case of an operator wanting its fleet to appear bigger than it is. Our answer in these cases is always the same. "Sorry, no. If the aircraft was not in Asia-Pacific, operating for you, at the end of the year, then it can't be counted in your fleet." We say this to every operator, from the biggest to the smallest. Every year.

Following the release of the first business jet fleet report we received many requests asking us to expand our coverage to the rest of Asia-Pacific, which we did from the third year of the report. With the expanded area of coverage came an expansion of the sections. First to be added was a regional overview, which looks at different subregions in Asia-Pacific. The data here is presented in several ways, including breakdowns by manufacturer, model, and type. Sections on new deliveries, pre-owned additions and deductions were also expanded.

Special features were also introduced later as a way of bringing more of the story behind the numbers. It is also a way that many Asia-Pacific business aviation companies have introduced themselves to the world. All of the top names have appeared in the report, including Sino Jet, Metrojet, Hongkong Jet, Amber Aviation and Business Aviation Asia. But the articles in the report are not just limited to operators; OEMs and service providers have also used the report as a way to introduce or update the Asia-Pacific market on the status of their newly introduced products.

Special features also includes the articles that we have written in house. In previous years they have included a look at how COVID-19 has affected the industry, the future of connectivity on private jets, and in this edition we mix together the number



of business jets based in a country, the country's population and the number of billionaires that call the country home, to find out how developed the country's business jet market is by looking at how many business jets there are per capita, as well as how many business jets per billionaire there are. Some of the results you might find surprising.

Back in the very first Business Jet Fleet Report in 2012, the Top three Business Jet OEMs in the Greater China Area were Gulfstream (36%), Bombardier (29%) and then Textron Aviation (10%).

Ten years later the OEM share has shifted, with Bombardier as the most popular OEM with a market share of 27%, followed by Textron with 26% and Gulfstream with 25%. Although all three major manufacturers remain in the top three, the market share of each is more evenly distributed. Back in 2012, the top two OEMs made up 65% of fleet, versus 55% in 2021.

As the Asia-Pacific fleet has grown, the business jet fleet report has grown with it. More features and analysis are being added all of the time. We are always open for comments and suggestions, so if you do have anything that you think we should add please do get in touch and help the report in the next ten years be as successful as the past ten years.





Dassault very much has Asian customers in its mind for its new business jets. The French manufacturer, which also builds the Rafale fighter, is focusing on large, comfortable cabins in aircraft that can fly long distances, which are the top criteria for customers in China and elsewhere.

The company also wants its customers to know that comfort and capability come with technologies derived from the fighter jet side of the business. These include advanced fly-by-wire systems; all-seeing enhanced vision systems for operation in any weather; and military grade safeguards such as fuel tank inerting to prevent sparks.

It is a unique approach aimed at delivering rugged, reliable aircraft that still feel like flying penthouses.

The 5,500 nm (10,200 km) Falcon 6X exemplifies this philosophy. The 6X was designed for long-range comfort with the tallest and widest cabin in its class, six feet six inches tall (1.98 meters) by eight feet six inches wide (2.58 meters). In fact, until the introduction of the larger 10X, it will have the widest cross-section of any business jet, allowing customers to create unique cabin arrangements that provide exceptional comfort whilst crossing many time zones.

The flight test program for the 6X is on schedule, and certification is due before the end of the year. As of this writing, one test aircraft is in Iqaluit, Canada in the Arctic Circle undergoing "cold soak" testing, seeking temperatures down to -40°C. The 17-person test team reports being really cold, but very satisfied with the aircraft's performance.

Test pilots have flown five examples of the aircraft for more than 600 hours, expanding the flight envelope from the slowest speeds (the aircraft can land as slowly as 109 knots) to the fastest. They've performed stalls in all sorts of weight and balance combinations, landed with high crosswinds and tailwinds, mapped a completed cabin for sound and for temperature variations, and performed hundreds of other tests.

Their consensus is that the 6X has delightful flight characteristics, even in comparison with other Falcon models, a line known for precise handling. The 6X has the most advanced fly-by-wire system in a Falcon to date, which helps explain the pilot accolades. Previous fly-by-wire versions controlled ailerons, elevators and the rudder. The 6X controls all moving surfaces, including a new control device known as a flaperon, which aids in the steep approaches required at some airports.

Last December, the aircraft operated for a week from Dassault's Paris-Le Bourget Fixed Base Operator (FBO), where it was fueled with a sustainable aviation fuel (SAF) blend from TotalEnergies. The 6X can be operated on up to 50 percent SAF. Sustainability has become a major objective for many of Dassault's customers' flight departments.

Meanwhile, detailed design is nearly complete for the 10X, indisputably the largest and most advanced purpose built business jet. The 10X has been designed to compete at the very top of the business jet market, with a range of 7,500 nautical miles (13,900 km) and a maximum speed of Mach 0.925. The cabin dimensions create new possibilities for highly customized environments where passengers can be at home on trips up to 15 hours.

For example, aft staterooms of various lengths can be designed and can be equipped with a true queen-size bed, something that is not feasible in other ultra-long-range jets. Cabin dividers can be spaced according to owner preference, creating an extra-large dining area, for example, or a small, intimate TV room with a popup large screen opposite a divan.

The 10X cabin is eight inches wider than the next largest cabin, which happens to be the 6X and height is six feet, eight inches (2.03 meters), the tallest in the industry. Cabin volume is approximately 15 percent greater than ultra-long-range competitors.









As big as it is, the Tux will continue and providing access to smaller reliever airports and will also As big as it is, the 10X will continue the Falcon tradition of have steep approach capabilities for challenging fields such as London City Airport. Takeoff distance is less than 6,000 feet and landing distance is less than 2,500 feet."



The 10X adds even more capability to the digital flight control system. Though it has two engines, it has one Smart Throttle to control them, simplifying power management. The Smart Throttle is linked to a groundbreaking automatic recovery mode that protects against a wake turbulence encounter or other upset scenario. This system was pioneered on the Rafale fighter.

The 10X will be powered by 18,000-pound thrust Rolls Royce Pearl 10X engines, the most recent and powerful in the ultra-efficient

Pearl family. The 10X will break new ground in being 100-percent SAF capable.

The first parts for the 10X will be manufactured in 2022. Dassault expects entry into service for its new flagship in 2025.

www.dassaultfalcon.com



#### MARKET TRENDS



There were 1,215 business jets in operation in the Asia-Pacific region at the end of 2021, which was a decrease of around 1.1% when compared to the 1.228 business iets at the end of 2020. The fleet saw a net reduction of 13 units as a result of 33 new deliveries, 68 pre-owned additions, and 114 deductions. Although the number of preowned additions rose from 53 to 68, it could not offset the decrease in new deliveries and increase in deductions. In addition, there were 11 intra-APAC movements - a decline of eight units since 2020.

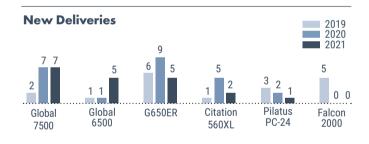
The number of deductions surged from 74 in 2020 to 114 in 2021, which is largely attributed to the relocation of pre-owned aircraft leaving the region. These aircraft mainly left mainland China, the Hong Kong SAR and Australia and went to the United States.

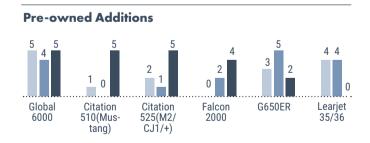
Bombardier overtook Gulfstream and became the OEM that delivered the most new business jets into the APAC region in 2021, with 12 units in total, making up 36% of total new deliveries and 50% of the total new aircraft value. Although the number of new Gulfstream deliveries dropped to nine units in 2021, it still represented 37% of the total new aircraft value - US\$598.5 million. The G650ER lost its place as the most delivered business iet in the region. a title it had held for three consecutive years. It was overtaken in 2021 by Bombardier's Global 7500, with seven new deliveries into the region.

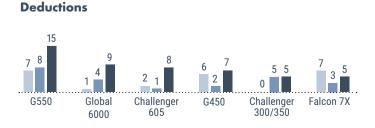
Textron had the most pre-owned additions, 24, in Asia-Pacific in 2021, accounting for 35% of all pre-owned additions. This number increased by 13 aircraft compared to 2020.

Bombardier dropped to second place in 2021, with only 16 pre-owned additions during the year. However, in terms of value, Bombardier retained its top spot, seeing an increase of US\$49.7 million to US\$243.3 million in 2021, which gave it a market share of 33% in pre-owned value. This was followed by Gulfstream and Dassault, while Textron only ranked fourth with US\$74.4 million.

#### **TOP MODELS IN LAST 3 YEARS**







Textron's Citation 510 Mustang and Citation 525 (M2/CJ1/+), as well as Bombardier's Global 6000 were the most popular models in 2021, with five pre-owned aircraft added.

As was the case in 2020, Bombardier saw the most deductions from the region, although this number doubled to 44 in 2021 (39% of the total deductions). Gulfstream and Textron came next, with 35 (31%) and 14 (12%), respectively. The value of the deductions from the Asia-Pacific fleet during the year rose sharply to US\$1.6 billion, an increase of US\$821.2 million when compared to 2020.

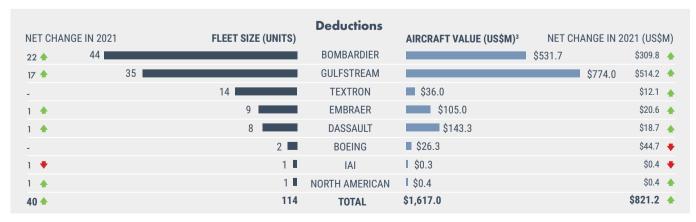
In total, 48% of the value of all business jets that left the Asia-Pacific fleet during 2021 were built by Gulfstream. This is largely due to Gulfstream's fleet mainly consisting of Long Range and Large Cabin business jets. The OEM's fleet dropped by 35 aircraft which was valued at US\$774 million in 2021. This was followed by Bombardier, which lost 44 jets worth US\$531.7 million (33%). The G550 continued to be the type that saw the most deductions, which has now continued for three consecutive years.

#### **BUSINESS JET MOVEMENTS<sup>1,2</sup>**

FOR MORE INFORMATION ON JET MOVEMENTS. PLEASE REFER TO THE OEM OVERVIEW.





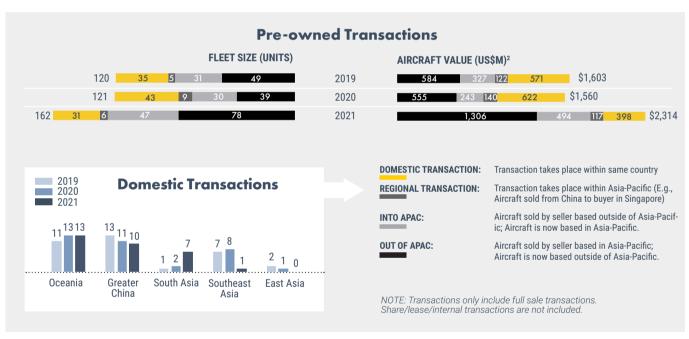


NOTE: 1. Pre-owned Additions and Deductions do not necessary indicate aircraft transactions. They also include aircraft that have changed their base region, returned to use, or retired. Intra-APAC movements are also excluded. 2. OEMs that had no business jet movement in 2021 were not listed in the table. 3. Aircraft Value is sourced from third party valuation sources and ASM research, which are based on the aircraft's year of manufacture, with assumptions of standard equipment, configuration and average yearly utilization.



#### **BUSINESS JET TRANSACTIONS**





The value of new deliveries dropped from US\$2.09 billion in 2020 to US\$1.61 billion in 2021. However, in 2021, pre-owned transactions saw increases in both quantity - from 121 units in 2020 to 162 units in 2021, and value - from US\$1.56 billion in 2020 to US\$2.31 billion in 2021. Pre-owned aircraft seemed to be more attractive than new aircraft when people considered purchasing a business jet, which was a new trend in 2021.

The Long Range size category experienced the greatest growth in terms of brand new and pre-owned transactions, increasing from 62 (25 brandnew and 37 pre-owned) in 2020 to 87 (21 brand-new and 66 pre-owned)

in 2021. There were 16 Very Light Jet transactions (four brand-new and 12 pre-owned) in 2021, an increase of ten when compared to 2020.

Large aircraft transactions, which saw the steepest decline in 2020, saw a 24.1% increase in 2021, with 36 transactions (all pre-owned) in total. However, the number of corporate airliner transactions saw the biggest decrease, from eight (three brand-new and five pre-owned) in 2020 to three (one brand-new and two pre-owned) in 2021.

Across the past three years, Long Range, Large, and Light jets were the major size categories in business jet transactions, making up over 75% of total transactions. We expect this to continue in 2022.

## The gateway to great American experiences.

Signature Anchorage is the favorite destination for passengers and flight crews looking to refuel, relax, and reset for the next leg of their journey.

Signature Flight Support, the world's largest Fixed Base Operator, has positioned it's Anchorage, Alaska location as the perfect tech stop for trans-Pacific flyers.

Starting August 2022, our new-build FBO terminal will include:

Authentic Mandarin Chinese restaurant located directly within the FBO

US Customs & Border Protection checkpoint within our terminal, allowing most flights to clear customs in less than 10 minutes

High-end amenities including a large conference room, pilot rest facilities, and a passenger lounge with large fireplace.



Visit SignatureFlight.com/ANC for your next international flight.





in Asia-Pacific for the Third Year

As the global economy continues to be affected by the COVID-19 pandemic, the overall number of business jets in Greater China shrank by 5.1%, the largest drop recorded since 2012. New aircraft came in as older jets left Greater China. A total of eight new business jets were delivered to commercial business jet operators in mainland China in 2021, which helped consolidate its position as the largest market in the Asia-Pacific region with a total of 340 business jets. Of the eight new deliveries, five new aircraft were delivered to Sino Jet, which included the Bombardier Global 6500 and Gulfstream G650. The deliveries solidified Sino Jet's position as the region's star business jet operator, which is now confirmed to have the biggest fleet in the region for three consecutive years.

In this issue, Sino Jet shares the secrets of its success amid the tough operating environment.

Sino Jet specialises the management and operation of large business jets. Its business ranges from aircraft trading, aircraft maintenance, global charter services, ground handling, fixed based operator (FBO), to luxurious travel services and more.

Sino Jet is fully committed to the concept the complete life cycle management of its aircraft and it is also the first business jet company in mainland China to obtain the highest level of safety recognition for international business jet operations - IS-BAO level 3 certification. Furthermore, Sino Jet has been named "The World's Leading Business Jet Company" multiple times at the World Travel Awards.



Sino Jet says that although some business companies have decided to let go of their aircraft assets for different reasons in 2021, the general demand for safe and convenient travel remains strong. Private and efficient business jet travel is still the first choice for businessmen, and this has led to a number of new business jet owners. In 2021, Sino Jet fleet recorded a total of eight additions, five of which were brand new aircraft.

Sino Jet said, "Amid strong demands for business jet travel, stringent restrictions and quarantine requirements in many countries have placed new challenges on scheduling aircraft deliveries and aircraft maintenance work overseas, sustaining safety and efficiency have become the keys to success in the market."

In regard to rising challenges, Sino Jet has put forward a business strategy to develop an "extensive service network", "comprehensive maintenance capabilities" and an "integrated information management". Sino Jet has invented a new aircraft delivery model, obtained operation and maintenance licenses for major business jet aircraft models in Greater China, and created an information management system that is tailored for all aspects of business aircraft management.

In addition to its operating bases in Beijing and Hong Kong, Sino Jet continued to boost investment in its Shanghai branch in 2021 and established a new Jiangsu branch, which complements its Hangzhou base to form a strong Yangtze River Delta service network. At the same time, Sino Jet has also set up offices in Hebei and Fujian. Recently, Sino Jet signed a strategic cooperation agreement with the Hainan Free Trade Port, and its Hainan subsidiary has increased its charter capacity to meet demand from the Port. To date, Sino Jet has operating bases and branches in 20 cities around the world, and its extensive service network can help drive up operational efficiency for its aircraft management clients, and bring the

option of charter jet travel to more business travelers. The safety standard at Sino Jet is widely recognized. Being a holder of multiple operation and maintenance licenses issued by a number of National Aviation Authorities, including China, the United States, Europe, The Cayman Islands, Bermuda, Aruba, The Isle of Man, Guernsey, and San Marino, Sino Jet is able to provide management services to aircraft with various foreign registrations within China. Sino Jet is also licensed to provide qualified scheduled maintenance services to major business aircraft types from Bombardier, Gulfstream, Dassault and other popular aircraft manufacturers, further enhancing their aircraft

In aircraft operations, Sino Jet attributes the very best possible operational scenarios in terms of safety to the latest technology it adopts. Sino Jet created its own information technology development subsidary, which has designed an advanced aircraft operation system, a maintenance management system, safety management system, flight quality monitoring system and other information systems. All these systems are designed to be highly integrated, to ensure traceability of all aircraft operations, as well as every safety and quality management process. These advanced systems are proven to play an important role in maximising aircraft preservation value.

"Begin from the clients' perspectives, sincerely care for the clients' valuable assets through effective controls, make no compromise to safety and operate with the highest degree of efficiency. This is how Sino Jet gains trust and confidence from its customers, promotes the safety and convenience of business jet travel, and leads to new business jet ownerships." Sino Jet said, "As the global economy recovers, the business jet market is expected to usher in even greater development."

#### www.sinojet.org





With a combined total of 387 business jets, the top 20 operators in Asia-Pacific accounted for 32% of the entire APAC fleet at the end of 2021. Approximately 65% of the operators on the list primarily operate in Greater China. None of the top five operators saw net additions to their fleets, instead, they saw a combined net reduction of 16 aircraft during the year.

Sino Jet retained its top spot as having the biggest fleet in the Asia-Pacific region. Despite having one net deduction from its fleet, Sino Jet took the most new deliveries of aircraft directly from OEMs in Asia-Pacific. BAA moved up one spot to second place, although there was no net change to its fleet. During the year it doubled the number of G650ERs in its fleet and introduced two Global 6500 aircraft.

Among the top 20 operators, only four saw growth in their fleet size. Those operators were Lily Jet, Phenix Jet, Astro Air and Seletar Jet. Lily Jet had the most net additions, including four Bombardier Global 6000s. Seletar Jet had the most significant change in fleet size ranking, moving up by nine places to the 17th, thanks to three net additions.

Lily Jet, Phenix Jet, Astro Air and Seletar Jet have now seen positive year-over-year growth for three consecutive years. These four operators all moved up the ranks by at least three places. Amber Aviation and Brilliant Jet have seen no decreases in their fleets since their establishment in 2016.

#### **GROWING OPERATORS IN 2021**



#### RANK CHANGE 2021 VS 2020 SINO JET **46** (-1) BAA **DEER JET<sup>2</sup> 38** (-6) **TAG AVIATION JET AVIATION (HK)** 22 (+6) LILY JET<sup>2</sup> **16** (-3) **METROJET 16** (-1) ACAM<sup>2,3</sup> **EXECUJET<sup>2</sup>** AMBER AVIATION TOP 10 OPERATORS HONGKONG JET<sup>2</sup> **14** (+2) PHENIX JET **BRILLIANT JET<sup>2</sup> 12** (-3) ACJC<sup>3</sup> ASTRO AIR **TOP 20** 10 (-7) **BELLAWINGS JET** OPERATORS = 32% OF SELETAR JET

**TOP 20 OPERATORS BY FLEET<sup>1</sup>** 

NOTE: 1. Special mission and government operators are not included. 2. The fleet numbers of these operators are only based on Asian Sky's internal research and not verified by the operators. 3. ACAM - Asian Corporate Aviation Management; ACJC - Australian Corporate Jet Centres

8 (-3)

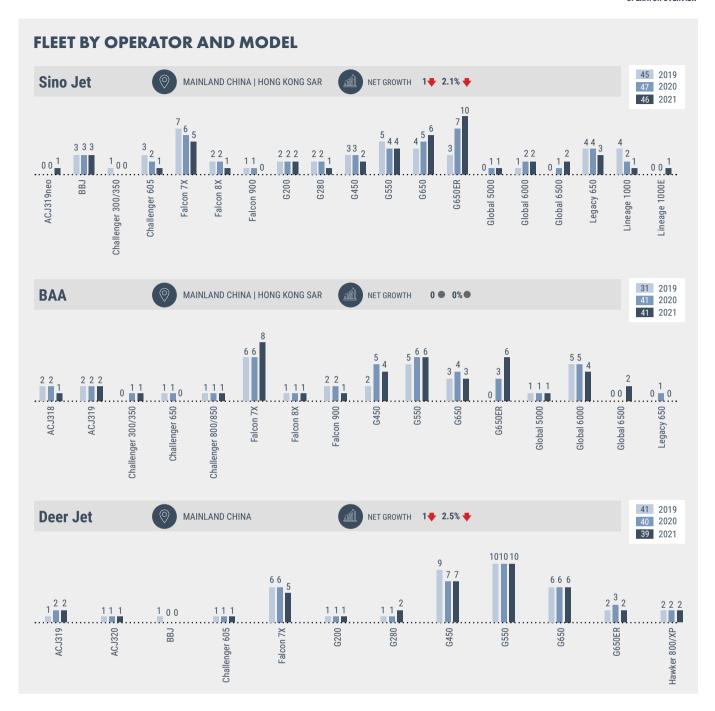
**NANSHAN JET** 

**CLUB ONE AIR<sup>2</sup>** 

PREMIAIR

3

**TOTAL FLEET** 



#### **TOP OPERATORS IN EACH COUNTRY**

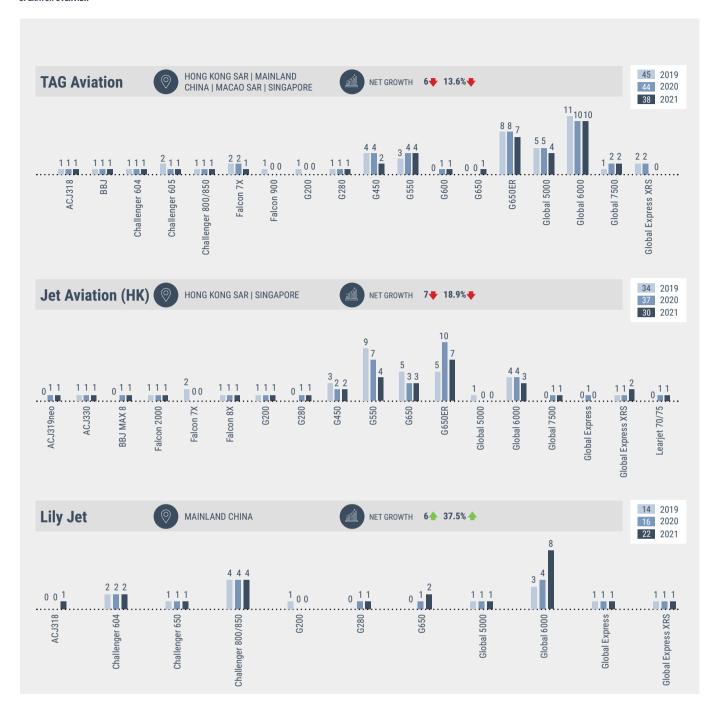
Australia accounted for the second-largest fleet in the Asia-Pacific region, with 209 business jets in 2021. Australian Corporate Jet Centres had the largest fleet in the country with 12 jets. ExecuJet made it to the top 20 operators list, with seven of its 16 aircraft are based in Australia.

Club One Air had no net change to its fleet size and remained the top operator in India with eight business jets. It moved up two places in the overall APAC rankings, making it one of the top 20

operators in the Asia-Pacific region. Reliance Commercial Dealers ranked second in India with seven jets in its fleet.

Five of the top 20 operators operate a portion of their fleets in Singapore. Asian Corporate Aviation Management (ACAM) has the largest fleet in the country. Seletar Jet came second and moved up nine places to land in the top 20 list.

Japan saw the largest net increase in fleet size in 2021, with Phenix Jet



being the top operator in the country. Aero Asahi, Fuji Business Jet and Noevir Aviation tied for the second-largest fleet in Japan.

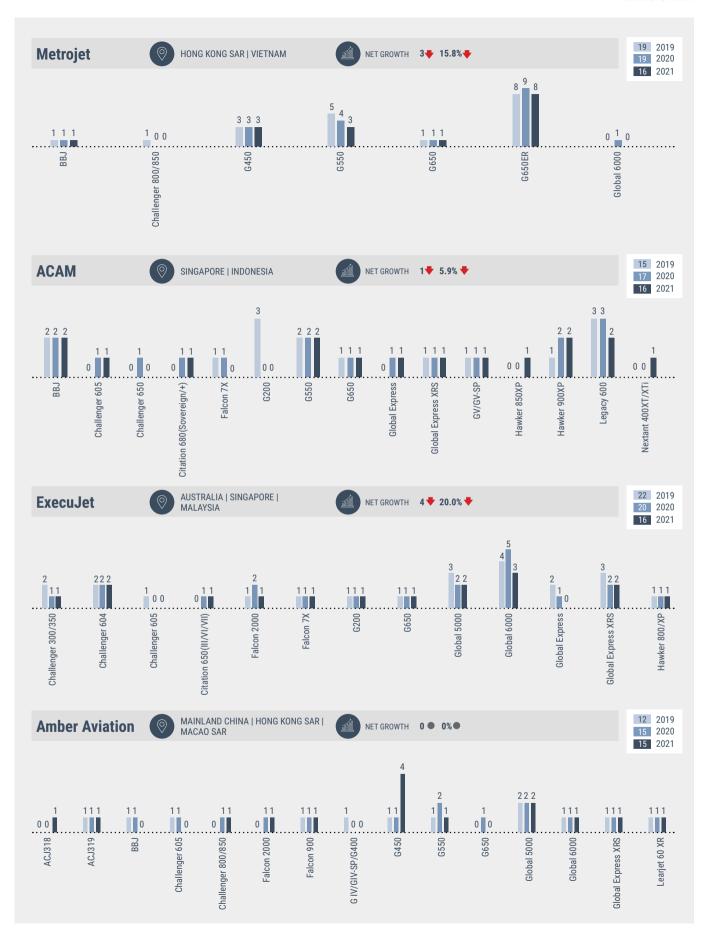
Malaysia saw the second-greatest net decrease in fleet size in 2021. Most of the major operators saw their fleets shrink except for Smooth Route, which operates four business jets and tied with Redland Aviation Services as the biggest operators in the country.

Although the Philippines saw a net decrease of three jets from its fleet, the number of business jets operated by top operators has not changed. Asian

Aerospace and Challenger Aero Air, both have six jets and continued to lead the ranking in the Philippines.

Indonesia saw no net change in its fleet in 2021. Premiair remained the top operator in Indonesia with eight business jets.

Thailand, New Zealand, South Korea and Vietnam all experienced a net increase in their fleet size in 2021. The top operators in these countries are MJets, Skyline Aviation, Korean Air and Metrojet, respectively.



# As the world's gross domestic product (GDP) rebounded by 5.7%, Asia-Pacific's economies managed to grow by 5.8% and accounted for 32% of total global GDP in 2021.

The Asia-Pacific business jet fleet grew by 1.4% in 2020; but declined by 1.1% in 2021. The challenges arising from COVID-19 may be a leading factor in this, as countries tighten movement restrictions, and companies downsize.

A large portion of business jets fall into the category of charter, private or corporate use, where the Ultra High Net Worth Individuals (UHNWIs) with a net worth of US\$30 million or above are the dominant users. This segment values privacy and security as well as efficiency. Business jets allow users to avoid the tedious process of booking, checking in and waiting for a commercial flight, thus bringing the comfort and flexibility that users value.

While UHNWIs may be opting for charter jet services, billionaires are more likely to be private jet owners. From the statistics provided by Wealth-X, the average age of jet owners is 63.6, and has an average net worth of US\$1.66 billion. Although not all billionaires who fit the profile own jets, and not all jet owners are billionaires, billionaires do

dominate the private jet market.

According to Knight Frank's Wealth Report 2022, the Asia-Pacific region was home to 32% of the total UHNWI population in 2021. From the 2021 Forbes list, about 76% of billionaires in the Asia-Pacific region reside in Greater China or India.

The fleet size to billionaire ratio in Australasia is relatively high compared to other areas. The Australasia population is significantly lower than in other subregions, and so is the number of billionaires. It is worth noting that Australia has the second biggest fleet in Asia-Pacific, which means that there are around eight jets per one million people in Australia. New Zealand also has a large fleet size to population ratio of about five jets per one million people. Japan only has 0.5 business jets per million people. Most other countries and regions range from 0.4 to 0.3 business jets per one million people, whereas India only has 0.1 jets per one million people, even though it has a very high population.

COUNTRY	FLEET SIZE VS. BILLIONAIRES	FLEET SIZE	BILLIONAIRES	UHNWIS (US\$30M+)	POPULATION (MILLIONS)
NEW ZEALAND	14.5	29	2	3,118	5
AUSTRALIA	4.75	209	44	20,874	26
MALAYSIA	2.38	50	21	712	33
INDONESIA	2.29	48	21	1,403	276
PHILIPPINES	2.27	50	22	313	111
VIETNAM	1.6	8	5	1,234	98
SINGAPORE	1.48	62	42	4,206	5
JAPAN	1.33	65	49	31,516	125
THAILAND	1.16	36	31	1,272	66
INDIA	1	140	140	13,637	1,393
CHINA	0.64	480	745	107,761	1,444
SOUTH KOREA	0.47	20	43	6,635	52

#### **GREATER CHINA**

UHNWI (US\$30m+) Population Fleet Size YoY Change



The pandemic has changed how people live and work. The demand for online shopping, home office software and online communication tools is higher than ever. According to the 35th annual Forbes list of the world's billionaires, six of the top ten billionaires are engaged in the technology sector. This was not only seen in western countries, but also in China. Taking Shenzhen as an example, it is known as the technology hub of China as tech titans BATX (Baidu, Alibaba, Tencent and Xiaomi) all have departments or headquarters based in the city. In 2021, 99% of billionaires residing in Shenzhen had created their fortune rather than inherited it.

In an article written by John Hyatt of Forbes, five of the top ten cities with the most billionaires were in greater China, namely Beijing, Hong Kong SAR, Shenzhen, Shanghai and Hangzhou. The UHNWI population in Greater China participated in a wide range of industries, enhancing both financial and real economies.

Over the years, the number of UHNWIs has increased continuously, while the fleet size fluctuated within a 10% YoY band. Like its ranking in the UHNWI population, Greater China ranked first in business jet fleet size in 2021, with mainland China having the biggest fleet in the subregion. Looking at the UHNWI per jet rate in mainland China, among approximately 207 UHNWI, one might be an owner of a business jet. Using the same methodology, one of every 50 UHNWIs in Hong Kong SAR and one of every 71 UHNWIs in Taiwan would have a business jet.

Mainland China accounted for 626 of the billionaires in Greater China, and it operates the largest fleet in the Asia-Pacific region. With a large population like India, mainland China also has a high fleet size per population ratio. There are 0.54 business jets per billionaire in mainland China and 0.6 business jets per billionaire in Taiwan. Hong Kong SAR, however, has a fleet to billionaire ratio of 1.42, which results in a higher rate than mainland China and Taiwan. Macao SAR only has one billionaire and has ten based business jets. This results in a significantly high ratio of ten jets per billionaire. Moreover, since Macao SAR is sparsely populated, it has 14 business jets per one million people.

China's zero policy towards the pandemic tightened travel restrictions and reinforced guarantine requirements in places with high or mid risk of exposure to COVID-19. The lockdown suspended businesses that did not provide essential services, and those that could not work from home. The decline in the 2021 fleet number is likely to be temporary, as the Chinese market still has potential in different areas; moreover, the projected population of UHNWIs in 2025 could exceed 100,000 in mainland China. The jet per billionaire ratio might shed some light on the potential market expansion in mainland China and Taiwan; however, additional efforts need to be made for potential users to realize their need for business jets.

#### **AUSTRALASIA**

UHNWI (US\$30m+) Population Fleet Size YoY Change



Australia dominates the economic and business activities in the Australasia subregion; however, GDP has declined since 2013. Exports decreased 1.6% YoY in 2021 on top of the 9.8% decrease seen in 2020 from the previous year.

Despite the economic downturn, Australia is home to 44 billionaires. With abundant natural resources, the mining industry has created 16 billionaires in Australia. Since New Zealand is sparsely populated, only two billionaires reside in the country. Thus, the jet per billionaire ratio is the highest in the Asia-Pacific region.

The Australasia fleet size experienced similar growth as the growth in the UHNWI population. The 7.4% increase in 2020 fleet size might arise from the positive economic and development outlook that all consumers have more confidence in the market. In 2021, although the growth rates for the UHNWI population and fleet size were positive, they had decreased from the previous year. The ratio between business jets and billionaires in Australasia does not necessarily represent an oversaturated jet market. It might indicate that UHNWI and billionaires residing in these countries are willing to spend on those services.

#### **SOUTHEAST ASIA**

#### UHNWI (US\$30m+) Population Fleet Size YoY Change



Southeast Asia is famous for its scenic attractions which has generated fortunes for people living in the subregion. COVID-19 has disrupted the tourism industry, with governments closing borders to stop the spread of the virus. Pandemic-related restrictions suspended factories during each wave.

Singapore has the smallest population in Southeast Asia yet accounted for nearly 30% of billionaires residing in the subregion. Since the number of billionaires in Singapore was twice as many when compared to Malaysia, the Philippines and Indonesia, Singapore has a lower number in terms of fleet size versus the number of billionaires. Thailand and Vietnam have a smaller fleet compared to other Southeast Asia countries, thus resulting in a low jet per billionaire ratio.

Although the number of UHNWIs is low compared to other subregions of APAC, the fleet size is relatively large. Considering the economic conditions and UHNWI population, it is reasonable to assume that Southeast Asia is a popular destination for business jet owners or users.

#### **INDIA**





Ever since 2002, India has experienced steady GDP growth over the years but saw a decline for the first time in 2020. Dr. Rumki Majumdar of Deloitte believes this applies to all emerging economies, as they are more sensitive to external factors. During the pandemic, the need for healthcare services and pharmaceutical products increased significantly. As a result, 16 of the wealthiest 100 people in India are in the pharmaceutical industry.

The jet to billionaire ratio is exactly one, as there are 140 business jets in India with 140 billionaires. This means if every Indian billionaire is a jet owner, they will have exactly one aircraft. The number may not be a perfect reflection of the real world, yet it indicates consumer willingness toward the business jet market.

Over the year, India's fleet stayed steady, whilst the number of UHNWIs almost doubled. It indicates that previous UHNWIs did not change their minds when it came to operating a business jet, and neither did any newly created billionaires. In April 2021, people who could purchase a business jet or afford charter services had flown to other places due to the concern about the inability to access healthcare services in India. This indicates that the Indian UNHWI population is willing to spend money in the jet market when they realize its unique value.



#### **JAPAN**

# UHNWI (US\$30m+) PopulationFleet Size YoY Change



Japan was one of the earliest Asian countries to industrialize, which set the foundation of the country's development. Its capital city Tokyo was home to the greatest number of headquarters of Fortune 500 companies in the late 1980s. Today, Japan continues to be the world's third-largest economy. Based on the Forbes Ranking, the wealthiest individuals in Japan come from the retail and manufacturing sectors.

There are 49 billionaires in Japan, which makes Japan the country with the third highest number of billionaires, whilst having the fourth largest business jet fleet. The number of business jets per billionaire in Japan is lower than the average among Asia-Pacific countries.

The number of UHNWIs has experienced minor growth, whilst the fleet size has a bigger fluctuation. Japan's fleet is more sensitive to changes as the installed based is relatively low. COVID-19 greatly impacted the traditional manufacturing and retailing industries, which forced consumers to change their consumption patterns, which in turn caused a slight dip in the country's fleet size in 2020.

A report published by the OECD (Organization for Economic Co-operation and Development) projected that the economy of Japan would continue to grow once its pandemic-related policies were eased or removed. "As the economy re-opened, service consumption, such as for hotels, restaurants and

entertainment, got a big boost," said Wakaba Kobayashi of the Daiwa Institute of Research. As businesses resume and border restrictions are removed, Japan still has the potential to expand its fleet. However, uncertainties brought by declining growth in its manufacturing market and issues arising from a low-birth rate may weaken fleet development in the future.

#### **SOUTH KOREA**

UHNWI (US\$30m+) Population





South Korea was one of the Four Asian Tigers. This term described the economies that underwent rapid economic growth between the 1970s and 1990s. Today, South Korea is one of the dominant players in the technology industry, with 60% of South Korea's 20 wealthiest people engaging in technology-related industries such as electronics or telecommunications, online gaming or services and biotechnology. In stark contrast to the wealth rankings in other countries, three of the top ten wealthiest people in South Korea are from the same family.

The South Korean fleet is relatively small compared to other countries, yet there are 43 billionaires residing in South Korea. This causes the country to have the lowest jet per billionaire ratio of 0.74, meaning theoretically there would only be 74 business jets when there are 100 billionaires.

The year-over-year fleet growth in South Korea was like Japan's as the former has an even smaller fleet. The Chaebol structure in South Korea produced an uncommon distribution between wealth and business jets compared to other subregions.





#### Gulfstream had a great year in 2021 with the dual launch of the G400 and G800. Can you tell us about both aircraft?

The Gulfstream G800 is the longest-range aircraft in Gulfstream's history and the business-jet industry, and the Gulfstream G400 is the first new entrant to the large-cabin class in more than a decade.

The G800 is designed to seat up to 19 passengers and offers customers the longest range with its 8,000-nautical-mile/14,816-kilometer range at Mach 0.85 and 7,000-nm/12,964-km range at Mach 0.90. Powered by high-thrust Rolls-Royce Pearl 700 engines and the Gulfstream-designed wing and winglet introduced on the Gulfstream G700, the G800 also features enhanced fuel efficiency and more city-pair capabilities.

The all-new G400 offers a combination of long-range, high-speed performance; cabin comfort; and environmental efficiency unrivaled in its class. With its 4,200-nm/7,778-km range and long-range cruise speed of Mach 0.87, the G400 continues to build on Gulfstream's goal of improving the environmental efficiency of our aircraft by reducing fuel consumption, emissions and noise through its use of Gulfstream's aerodynamic clean-wing design and advanced Pratt & Whitney PW812GA engines.

# Asia-Pacific is seen as a large cabin, long range market, do you see much success for the G400 here?

We see great opportunities for the G400 in the Asia-Pacific region. The combination of range, technology, cabin size and efficiency is something that has not been seen in the large-cabin segment until now, so the G400 really creates an aircraft category that has never been seen in Asia-Pacific.

# The G400 was designed alongside the G500 and G600, with those two aircraft launching in 2014. Why is now the right time to launch the aircraft?

There has been a void in the large-cabin market for more than a decade, and we recognized that the market was primed and ready for the G400 announcement in late 2021. The aircraft hits the sweet spot in the 4,200 nm/7,778 km range with advanced technology including the next-generation Gulfstream Symmetry Flight Deck. The large, flexible cabin has been designed with health and wellness in mind including 100%, purified air, low noise levels and low-cabin altitudes.

#### Gulfstream has more aircraft in design/ certification than at any other time in its history, what is driving this?

Gulfstream's current fleet, both the in-production aircraft and those in flight-test and development, is a fulfillment of our holistic vision of a Gulfstream for every mission. When Gulfstream introduced the G500 and G600 in 2014, we brought to the market our next generation of aircraft, with ground-breaking flight deck advancements and a new level of cabin comfort and technology. We followed that up with the introduction of the G700, Gulfstream's largest aircraft, in 2019 and, most recently, the G800 and G400, which round out this next-generation Gulfstream fleet. In combination with the G650ER and super-midsize G280, our customers can choose an aircraft specifically tailored to their needs

#### Could the launch of the G800 so close to the G700 potentially confuse buyers?

The launch of the G800 really clarified the market for the G650ER, G700 and G800, at the high end of range, cabin size and performance. The two aircraft present distinct offerings with the same powerful, efficient engines, advanced flight-deck and cabin technology - the G700 offers the largest cabin in the industry and the G800 offers the longest range.

#### Asia loves the G650, are you expecting the G800 to have similar success in the region?

We anticipate both the G700 and G800 to be very popular in Asia-Pacific - Gulfstream established the leading market share in the region with the G650 and G650ER, and customers there have confidence in Gulfstream and our commitment to high performance standards and Customer Support. We expect that confidence to translate to broad interest in all our next-generation aircraft, including the G400, G500, G600, G700 and G800.

Gulfstream is known for having great customer support, can you talk us through the different locations and levels of support that you have in the region?

Gulfstream's service capability has always been part of who we are, and we've built this into a major strength over the past 60 years. We are firm believers that a strong service and support network is integral to the ownership experience."



#### INTERVIEW WITH GULFSTREAM

The Gulfstream Customer Support Beijing service center is a prime example of this. As we established a large fleet in the region, we identified the need to support customers in their home country and opened the business-jet industry's first company-owned service center in China in 2012 and have remained committed to the site, adding new capabilities and services through the years.

In partnership with sister company Jet Aviation, Gulfstream also offers company-authorized services in Hong Kong and Singapore.

We have seen manufacturers making MRO acquisitions in the region to expand their maintenance capabilities, is this something that Gulfstream would consider?

Gulfstream is in a unique – and strong – position when it comes to our service network because of the financial strength and support of our parent company General Dynamics and relationship with sister company Jet Aviation. General Dynamics has given us the ability to fund multiple concurrent development programs

while also investing in multiple concurrent service center expansions and acquisitions. With Jet Aviation, we already have an augmented service network with the company-authorized service centers they operate in in Basel and Geneva, Switzerland, Vienna, Dubai, Hong Kong, and Singapore.

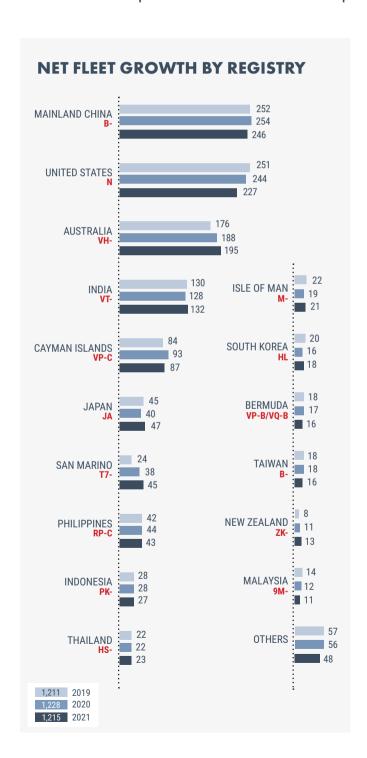
Our extensive factory-owned and operated service center network allows us to engage directly with our customers and their aircraft. This means we do not rely solely on a third-party network of service providers. Instead, we listen to and learn from our customers, and we know what their end-service experiences are first-hand. We can take this information and transform it into programs and projects that help improve the availability of both new and existing aircraft designs. As a result, no one knows the aircraft better than we do.



#### **MARKET UPDATES**

# **AIRCRAFT REGISTRY OVERVIEW**

Although it seems like choosing an aircraft registry is a simple process, the reality is that it can be a difficult decision that can impact where and how an aircraft is operated, as well as the aircraft's residual value.



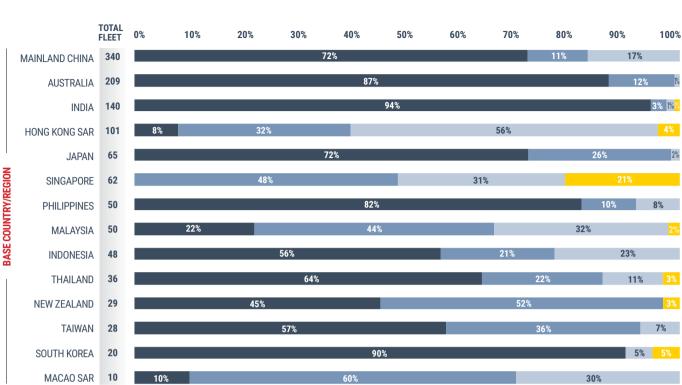
Mainland China retained its position as the most popular aircraft registry by the end of 2021. The number of mainland China B- registered jets dropped from 254 to 246 in 2021. This was followed by the United States. At the end of 2021 there were 227 N registered jets in the region, however it was the fourth consecutive year that this has declined since the end of 2018.

Australia had the third most popular registry, which, unlike mainland China and the US, has been growing for the past few years. At the end of 2021 there were 195 VH- registered business jets, which was up from 188 at the end of 2020.

When combined, the registries of mainland China, the United States, and Australia, account for 55% of the total Asia-Pacific fleet.

There are several reasons why an operator might want to register an aircraft outside of Asia-Pacific, even though the aircraft is physically based and operates in the region. As one of the oldest registries in the world, the US N registry can provide many benefits for owners, especially when it comes to disposing of the aircraft, as the US has a well-established trading system, which can be less problematic when it comes to completing a transaction. Owners and lenders can also enjoy easier and faster closing procedures, especially as US authorities now accept digital signatures.





NOTE: 1. Offshore registrations include Aruba, Bermuda, Cayman Islands, Guernsey, Isle of Man, Malta and San Marino. 2. Others indicates any registration except for Local, US and Offshore.

Mainland China topped the list as the country with the most business jets. Out of the 340 jets, 72% were locally registered, with the majority fitting into the Large / Long Range categories.

Australia retained its second position with 209 jets based in 2021. Of these, 87% were registered in-country on the local VH- registry. This may be due to the majority of the fleet being Light jets which operate almost entirely within Australia. The Indian market is similar, in that the majority of business jets are in the Light jet category, and 94% of the 140 jets in the country are registered on the local VT- registry.

Unlike Australia and India, the Hong Kong-based fleet tends to favour overseas registries. Of the 101 business jets, only 8% were registered on the B-H/B-K/B-L registry. Of the remaining aircraft, 56% were registered on offshore registries. A total of 74% of business jets based in Hong Kong fit into the Long Range category.

Japan has the fifth highest number of business jets based in Asia-Pacific. A total of 65 jets are based in the country, with 72% being locally JA registered. US N registry dominates the Long Range and Corp. Airliner size category, taking 26% of the total fleet.

Singapore was ranked 6th with 62 business jets, of which 47% were in the Long Range category. It is the only Asia-Pacific country that has no aircraft registered locally. Instead, 48% of the total jets were registered in the US (N).

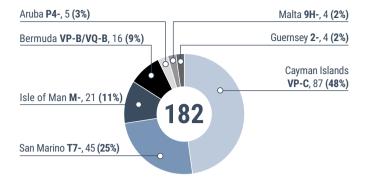
Local United States Offshore<sup>1</sup>

#### **OFFSHORE REGISTRY MARKET**

Offshore registries are favoured by an increasing number of jet owners. There are three main advantages to use an offshore registry: The first is ease of flight operations – some countries do not allow aircraft registered in certain countries to visit, however offshore registries remain neutral places to register. Offshore registries also often offer a flexible tax structure. In addition, there is a certain level of privacy offered with offshore registries. Some offshore CAAs even provide local support in the aircraft owner's country, such as Bermuda Aircraft Registry hiring a full-time member of staff based in Shanghai to offer timely response to Chinese clients.

After a dramatic increase in offshore registered aircraft, from 164 in 2019 to 185 in 2020; there was a slight decrease in 2021 to 182 aircraft. The Cayman Islands (VP-C) remained the most popular,

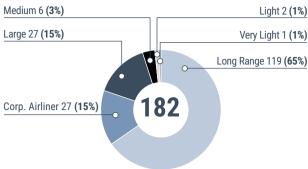
#### **Offshore Registry**



holding a 48% market share of all offshore registries in Asia-Pacific, although it saw a decline of six aircraft in 2021.

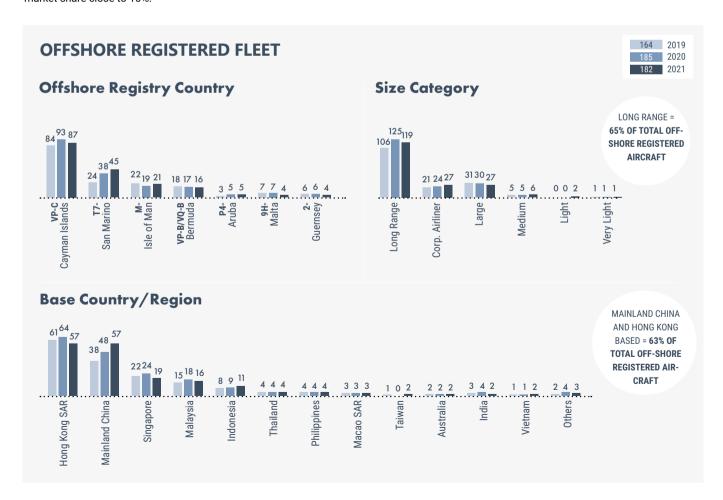
San Marino's T7- registry was one of the most recent to be set up, and has been making good progress in the Asia-Pacific market. At the end of 2021 there were 45 T7- business jets in Asia-Pacific, equivalent to a market share of 25%. This was an increase of seven aircraft in 2021, the biggest gain seen across all offshore registries during the year. The Isle of Man's M-registry remained the third most popular offshore registry with 21 aircraft and a 12% market share, with the Registry of Bermuda (VP-B/VQ-B) following closely behind with 16 aircraft and a market share close to 10%.

#### **Size Category**



Mainland China saw the biggest growth in its offshore registered business jet fleet during 2021 by adding a further nine aircraft. The additional aircraft took mainland China's total offshore registered fleet to 57 business jets, raising it to join Hong Kong as the subregion with the most offshore registered aircraft. The growth of offshore registries in mainland China could be due to aircraft owners seeking a more tax advantageous country to register their jets in.

Singapore came next with 19 aircraft, which was followed closely by its neighbouring country Malaysia, with 16 offshore registered aircraft in 2021.





As interest rates rise, supply chain issues persist, and the geo-political landscape demonstrates ongoing instability, certainty is a precious commodity. Unfortunately, many business aircraft users tolerate a high level of uncertainty to obtain an aircraft with traditional financing. Even with a meticulously planned approach to buying and selling these highly-regulated assets, it's impossible to foresee all events that could potentially impact the aircraft's value—or your balance sheet.

Now may be the right time to consider building more certainty into your approach to business aviation with an operating lease. Here are the top five advantages unique to an operating lease for individuals and organizations, with insights from Alex Tang, Global Jet Capital Sales Director Asia, Asia Pacific.

#### **Preservation of capital**

Rather than investing in a depreciating asset, you can save your capital to invest in your business or other more lucrative investment options.

For example: Typically, a traditional loan is limited to no more than 70% of the total cost of the aircraft—which means a significant down payment for a constantly depreciating, non-core asset. With an Operating Lease, up to 100% of the cost can be financed. More importantly, the large down payment of a loan scenario is replaced by a smaller security deposit along with other closing costs.

#### Flexibility without sacrifice

Yes, operating leases are contractual arrangements. The right lessor, however, can structure a lease that can adjust to changes in your

mission. Depending on your needs, a lease can permit extensions, provide an early termination opportunity, or facilitate a move into a larger or smaller aircraft. In this framework, it's easy to pivot to suit your unique situation.

A lack of flexibility is where the risk of traditional ownership far exceeds any perceived limitations of a operating lease. Business aircraft are meant to be a boon to operations, but changes to your mission can turn a previously useful asset into a major liability. For example, if you experience an uptick in international business, but have recently purchased a midrange aircraft that can't make the trip to your new clients, your capital will be tied up in an asset that no longer supports your business goals. An operating lease can assist with an upgrade at ease.



Operating leases also provide you with exclusive access to your aircraft for the duration of the lease. This means consistently using your crew, leaving your personal effects on board, and enjoying the many other benefits of ownership while preserving liquidity. You may face restrictions on alterations to the aircraft that could potentially impact residual value, as well as other usual lease terms, but these limitations fall within normal patterns of ownership. A knowledgeable lessor can offer flexible terms that suit your needs without stifling your choices.

#### **Built-in Certainty**

The predictable term of an operating lease provides you with more flexibility than traditional ownership. When the lease ends, you simply turn the aircraft back over to the lessor—no additional planning or contingencies needed. In contrast, going through the process to sell an aircraft when it's time to upgrade or make changes to your operations is anything but predictable. From hiring a broker, to waiting for months (or even years, in extreme cases) to find a buyer, to paying the costs of maintenance, insurance, and storage in the meantime, you may be looking at lost time-and millions in unbudgeted expenses. We will take back the aircraft at the end of lease to let you focus on running your business.

#### Coverage for a surprisingly wide range of aircraft

You may think that traditional financing confers the best coverage for your choice of aircraft, but that's not always true. The right operating lease provider has experience with a broad variety of manufacturers and models, putting few limits on your selection of aircraft. Whether you are looking for a new or pre-owned aircraft, operating leases can accommodate either route you choose to take. In fact, at times, operating leases may open more possibilities for you than traditional aircraft financing.

Specialists in business aviation financing like Global Jet Capital look to spread risk across a large portfolio, encompassing aircraft from every major manufacturer, global market, and a variety of age ranges.

#### Versatility in both low- and high-interest rate environments

In a low interest rate environment or hot resale market, you may ask yourself "Why choose an operating lease?" The first reason is simple: current conditions are no guarantee of future conditions. A strong resale market may or may not be around when you choose to sell. The low interest rate environment may be transient as well, which may reduce demand for your pre-owned aircraft from the buyers of tomorrow. In the meantime, you will have paid more for a depreciating asset.

The second reason is applicable regardless of interest rates: large down payments are part and parcel of traditional financing. That substantial capital outlay may not prove to be such a good investment, after giving effect to a volatile geo-political situation, emerging technology, and the unavoidable risk of market fluctuation.

These risks are eliminated when you choose an operating lease. You do not have any risk relating to the spot market value of the aircraft at the end of the lease and costs remain predictable for the duration of the lease.

#### Privacy and anonymity during travel

When you're the registered owner of an aircraft, public records may identify the owner/operator during normal flight operations. An operating lease reduces visibility to the aircraft's end user since the owner of the aircraft is the lessor—not you or your organization. This translates to a higher level of anonymity with no extra effort required.

Wondering which aviation financing option would best suit your unique situation or interested in learning more about the benefits of an operating lease? Connect with one of Global Jet Capital's business aviation experts.

Global Jet Capital's financial products are designed to help you optimize your private aviation experience across the lifetime of the asset-from acquisition to disposition and upgrade. Whether freeing up capital or enjoying the flexibility to transition between aircraft, we work tirelessly to understand your needs and provide straightforward and highly responsive solutions.





#### How did you start the company?

I was with Michael Page, the recruitment agency, for many years and then just by chance I came across the business aviation industry, and I ended up working for Metrojet for five and a half years, where I was last the head of sales and marketing. I found that business aviation is very fascinating and very fast moving, but on the talent side it lacked a bit of support from external sources.

So I came up with the idea for the company. I had just had my child, and I thought 'Why not? Why don't I launch my own business focusing on this sector?'. I thought that I might be able to leverage my past in-house experience with Metrojet, and with having a network built up, and being a bit of an expert in the subject matter, I realized that I could add value to my aviation network and could tell candidates outside of the industry what it's like to work inside the industry.

# Is it just business aviation that you specialize your work in?

On the executive search side, mostly yes, because it's a very niche practice, especially in Hong Kong. However, I do branch into commercial aviation as well. But on the executive coaching side, it can be anybody. Coaching doesn't have any boundaries.

# Has the pandemic had much effect on the business?

Some companies have taken the opportunity to evaluate the talent that is available in the market. There has also been some natural attrition, and people leaving the industry need to be replaced as well. There's not a huge volume of people coming in, but for key positions, there's recruitment activity still going on, especially for mid-level positions, both technical and non-technical.

# Are there any parts of the region that are particularly active at the moment?

Southeast Asia is one region that is reviving. Hong Kong might be quite a small place, but it is still important as a lot of activities are here and it is a financial center. If it wasn't for all of the COVID-19 restrictions, I don't think people would be leaving so quickly. But I think that once things have settled down people will start to come back, especially when the borders with China opens up again. I think that once Hong Kong can get back to its old position, people will come back.

#### Are there any unusual contract clauses or conditions that people have been asking about during the pandemic?

Specifically, no, but some hiring managers want to have discussions about lengthening the contract period of people coming into the region, just for protection. It has mostly just been talk about it though, with very little actually put in place, so I haven't really come across many contract clauses in that regard.

#### Has COVID-19 affected salary expectations in the region?

Yes and no. As I mentioned before, some talent has left the region, so they need to be replaced at the right level. But there is also a lack of talent in the region, which means that people can generally demand a higher salary. Last year, for example, I was looking at bringing some external candidates into the industry and they were generally asking for a 25 - 30% increase on the base salary. This year, things are slightly different, with people generally falling into one of two categories. The first category are people that are happy in their current positions, so would need a higher salary as an incentive to move positions. The second group are those people that are ready to leave their current role, and would be happy to move for the right position, even if it is for the same, or an even slightly lower salary. But for both groups of people there is still a risk involved when it comes to changing positions, so therefore they think they can ask for a higher salary.

#### In 2021 we saw Amber Aviation announce a tie-up with NetJets. Do you see a fundamental shift in the way people will use private jets in Asia-Pacific?

I do see a need for people to travel privately, especially those with pets. But leisure and business travelers can both benefit from flying privately as well. I've been hearing that the demand is crazy right now. But this has been hampered by less supply because aircraft and pilots cannot fly due to border restrictions, quarantines, and visa issues. Which is a shame, as I have heard that the amount of enquires that the charter companies have been getting have been phenomenal.

#### Are there any types of positions that you find it harder to fill?

Generally speaking, business development and sales are highly sought after. In the business aviation industry, it's even harder to find the right candidates, and speaking with CEOs tells me that companies are struggling to find mid to senior level people - general managers, directors, head of sales or clients services. There is succession planning, but somewhere along the line it became broken.



Because of COVID-19 many people at senior level either went home, left their position, or even started up their own company."



#### SPONSORED CONTENT

So, even if you talk about musical chairs, where one person moves from one company to another. There needs to be a very compelling reason or package to convince them to join, so it's very hard. That's why I always encourage my clients to look at candidates outside the industry for non-subject-matter roles, from hospitality or luxury for example.

# How do you pitch business aviation to people outside of the industry?

When people outside of our industry hear about aviation right now, it's not an industry that they want to go into. But then I will give them examples of exactly what we are doing during COVID-19, and how flying privately is currently the only option for some people. In a smaller jet people feel more safe and more secure, and everything is just much simpler and quicker. One thing to come out of COVID-19 is that I think charter could be more commoditized. More commoditized, so that it becomes more affordable. That way we can entice more people to come into the industry.

Overall, I would say that business aviation is still a very good industry to be in and I'm confident that it will be thriving again post COVID-19. I'm sad to see some people leaving the industry completely because it is a real loss for the industry. In the long term, I hope that we can groom our own talent here locally in Asia, not just in Hong Kong.





CHOOSE AN ACCREDITED AIRCRAFT DEALER

Asian Sky Group is an International Aircraft Dealers Association (IADA) Accredited Dealer, regulated by independent accreditation, ensuring strict compliance with IADA's 14-point Code of Ethics. With headquarters in Hong Kong and offices around Asia, we are uniquely qualified to advise & manage aircraft transactions in Asia.

CHOOSE A TEAM OF CERTIFIED IRCRAFT BROKERS

Asian Sky Group's team of IADA Certified Brokers each passed a written test administered by an independent consulting firm. IADA Certified Brokers are required to participate in regular continuing education and be re-certified every 5 years.

CHOOSE A PARTNER WITH A PROVEN HISTORY OF SUCCESS

IADA aircraft dealers are responsible for 40% of the world's pre-owned sales. IADA Accredited Dealers buy and sell more aircraft by dollar volume than the rest of the world's dealers combined, averaging over 700 transactions and \$6 Billion in volume per year. Asian Sky Group is the only IADA member in Asia.

CHOOSE A PARTNER THAT CAN ACCESS THE MOST EXCLUSIVE AND TRUSTED GLOBAL MARKETPLACE

Asian Sky Group lists and sources aircraft from an exclusive global online marketplace. AircraftExchange.com is the exclusive online marketplace of IADA and is the industry's most trusted source for the sale or lease of aircraft. IADA's robust listing verification process ensures aircraft advertised are truly available for sale.

CHOOSE A PARTNER THAT CAN ACCESS BEST-IN-CLASS PRODUCTS AND SERVICE PROVIDERS

Asian Sky Group has exclusive access to IADA-verified products and service members. These members are industry leaders in their respective fields, including escrow, legal, financial services, maintenance and refurbishment, aircraft management and operation, and over 15 other specialties.

- DISCRETION
- EXPERIENCE
- TRANSPARENCY
- PROFESSIONALISM
- ACCESS
- GLOBAL NETWORK



# What are the key advantages an ACJ TwoTwenty has over its competition?

The ACJ TwoTwenty is a new value proposition to business aviation, opening up a new market segment, the Xtra large bizjet, at the same price point of an ultra-long-rang aircraft. The innovative solution combines an intercontinental range of 5,650 nm (over 12 flight hours or Hong Kong-London for example) and unmatched personal space providing comfort for each passenger with 6 VIP areas and 73m² of floor surface area. The aircraft will offer three times more cabin space, yet with a third less operating costs as well as double residual value retention over its competition.

# How do the operating economics stack up against purpose-built business jets?

The ACJ TwoTwenty offers unbeatable reliability and economics resulting in 33% savings on key operating costs including maintenance, parts and training compared to ULRs (Ultra Long Range). Over 10 years, future owners will save 66% in maintenance costs alone thanks to its airline reliability, 50% lower maintenance man hours (equivalent to 60 days higher availability) and cheaper

spares. A flight crew recurrent annual training costs 6 times less than its competitors. It is clearly a better investment as ACJs typically depreciate at 2-4% a year compared to 6-9% for traditional business jets.

# When compared to a purpose-built business jet, how much more runway length does an ACJ TwoTwenty need to take-off / land?

You'll be surprised! The ACJ TwoTwenty has the ability to take off on shorter runways than its competitors. It has an impressive short takeoff performance of 1,637m/5,370ft at Maximum Takeoff Weight. That's almost 1000ft less than a G650ER for example. The ACJ TwoTwenty can access more than 90% of the top 100 busiest business aviation airports in the world. It can depart from Singapore Seletar at max weight, operate on a short runway in Borneo or land at challenging airports like London City thanks to its certified steep approach capability up to 5.5° glideslope. Lastly, it occupies the same parking space as a ULR (just 4 feet longer than a Global 7500) and has integrated airstairs for autonomous operation at small airports.

#### What is the price difference between the **ACJ Two Twenty and its competition?**

The ACJ TwoTwenty is at the same price point as ultra-long-range business jets (i.e. G700, Global 7500 and Falcon 10X) and will offer three times more cabin space, yet with a third less operating costs and two times better value retention.

#### Do you see Asia as a big market for the ACJ **TwoTwenty?**

Today there are 2,200 heavy, long-range and ultra-long-range business jets worldwide which will be due for replacement in the next few years for latest technology, intercontinental range & more cabin space. With more than 600 aircraft in this segment, the Asia-Pacific region is no exception to that trend. I believe our products and the ACJ TwoTwenty in particular will compete for a good share in this market. Business aviation needs will definitely continue to develop together with the growth of Asian economies.

#### What makes the ACJ TwoTwenty different to other business jets?

This is the latest aircraft generation that meets modern design for the highest comfort. The ACJ TwoTwenty is a clean sheet designed aircraft with advanced materials, fly-by-wire and stateof-the-art technologies, combined with an inspiring cabin, created with unrivalled knowledge and skills, as well as leading edge connectivity. The distinctive cabin features, no other business

jets can offer, are notably: 6 wide living areas of 12m<sup>2</sup> each, 2.1m height and over 3.3m cabin cross-section, cuisine/bar separate and dedicated area, a US-size king bed, stand tall rainshower, table for 8, double door allowing simultaneous crossing, 2.7m width and 1.3m long meridienne, 55inch 4K TV screen and more. It can have up to 10 full flat sleeping positions plus one full flat isolated crew rest area. It is a whole new experience or the difference between flying and living in an airplane!

#### How would you pitch the ACJ TwoTwenty against its competition?

It's a game changer, no more compromises on Cost, Range and Space.



#### When can we expect to see the first ACJ TwoTwenty in the air?

The first ACJ TwoTwenty will enter into service next year and it will benefit from the outstanding maturity of the program with already more than 500,000 hours flown to date.



## ARKET UPDATES

# **AIRBUS**





1111110





NEW DELIVERY 2

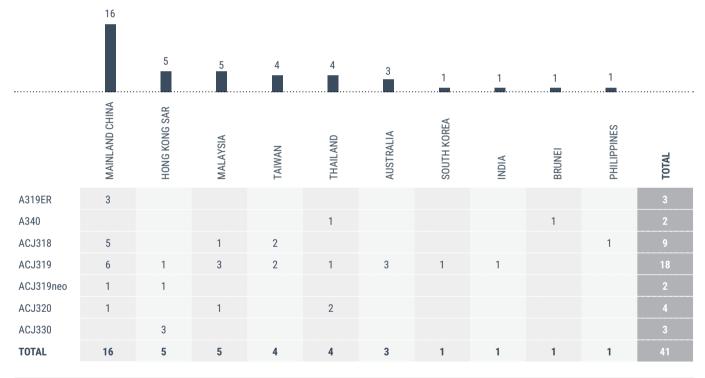
NET PRE-OWNED

×	LARGEST FLEET
N. N	Mainland China

2021 41

1

2 1







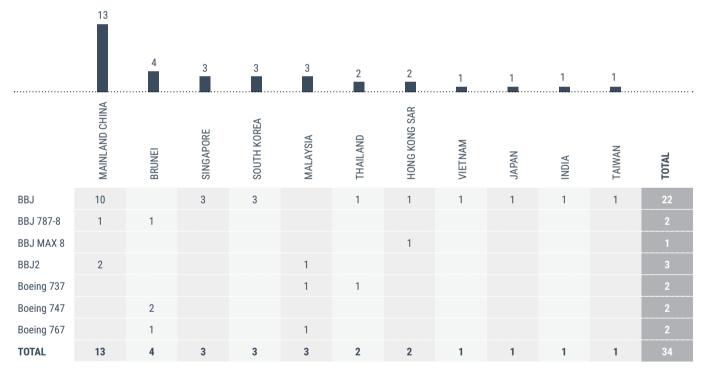






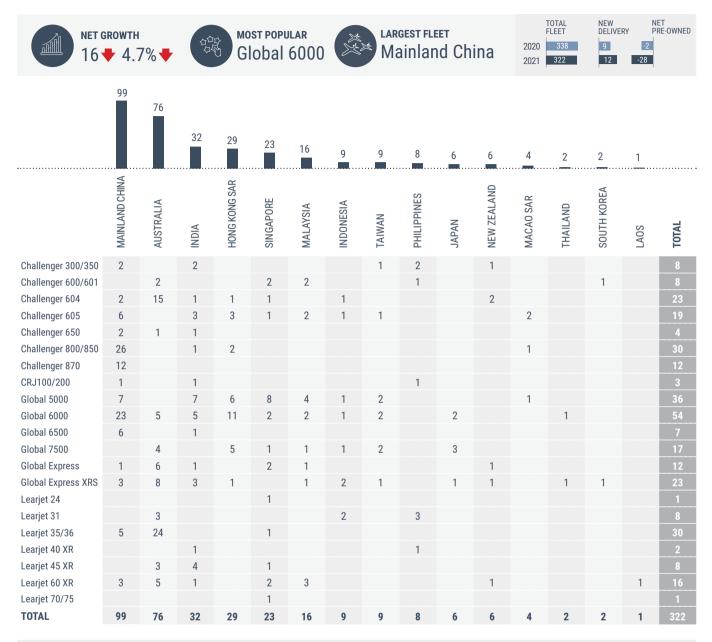
TOTAL FLEET NEW DELIVERY 1 2020 36 2021 34 0

-1 -2



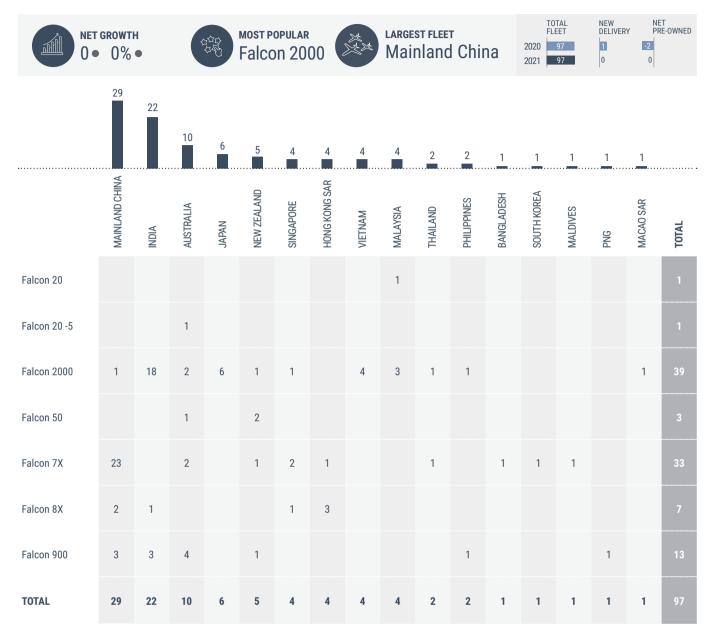


## **BOMBARDIER**



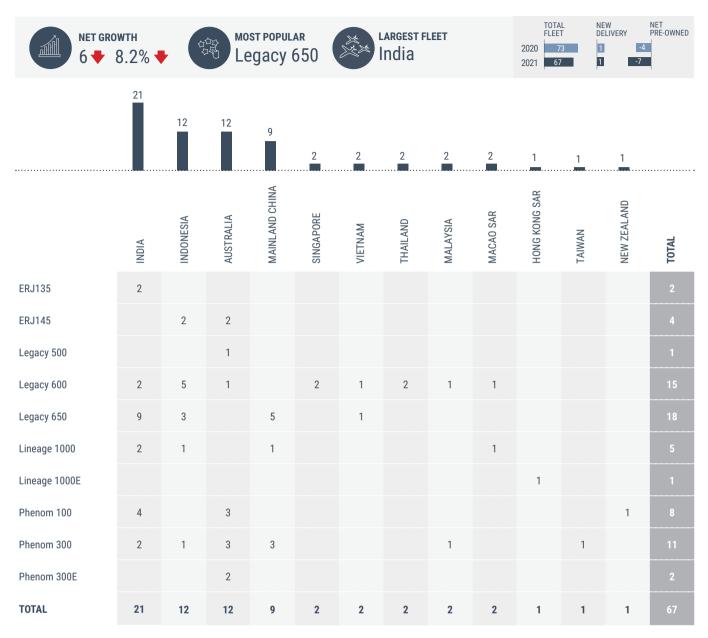


## **DASSAULT AVIATION**



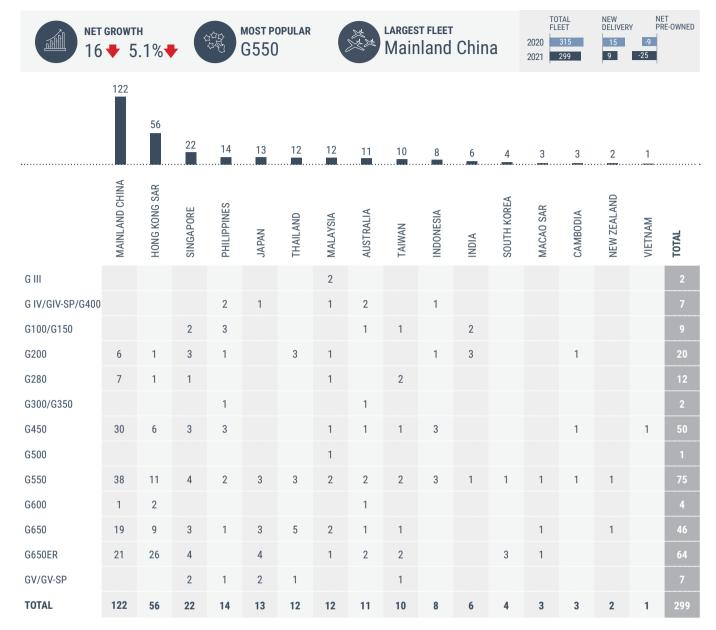


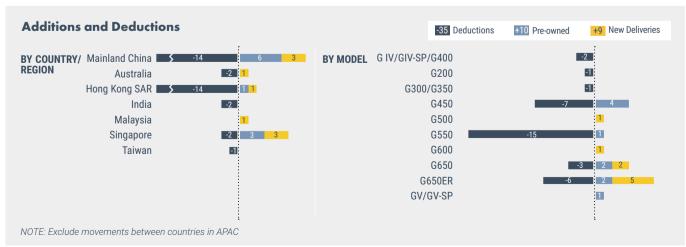
## **EMBRAER**





## **GULFSTREAM**





# **TEXTRON**







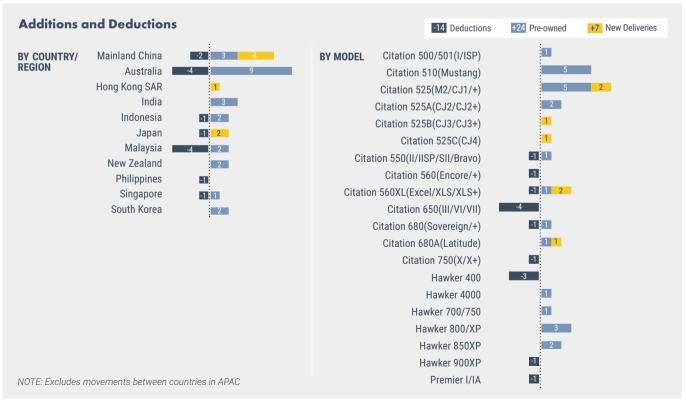






	80	57	51	30	24	17	14	10	8	6	6	3	3	2	2	1	<u>1</u>	
	AUSTRALIA	INDIA	MAINLAND CHINA	JAPAN	PHILIPPINES	INDONESIA	NEW ZEALAND	THAILAND	SOUTH KOREA	SINGAPORE	MALAYSIA	HONG KONG SAR	TAIWAN	NEW CALEDONIA	PNG	BANGLADESH	COOK ISLANDS	TOTAL
Citation 500/501(I/ISP)	7				1		1											9
Citation 510(Mustang)	12	1	1	2	1		5	2										24
Citation 525(M2/CJ1/+)	13	2	16	5	2				5									43
Citation 525A(CJ2/CJ2+)	6	10		6			1							1				24
Citation 525B(CJ3/CJ3+)	3						1					1			1			6
Citation 525C(CJ4)				7	4							2		1				14
Citation 550(II/IISP/SII/Bravo)	15	6	4		3		1	3	1		1				1		1	36
Citation 560(Encore/+)	2			2														4
Citation 560(V/Ultra)	5			2			2											9
Citation 560XL(Excel/XLS/XLS+)	1	12	21		4	2	1											41
Citation 650(III/VI/VII)	4	1				1	1				1							8
Citation 680(Sovereign/+)	4		4	4			1			2	2							17
Citation 680A(Latitude)				1	2	1												4
Citation 750(X/X+)	2		1					1										4
Hawker 400		4	1	1		6				1			3					16
Hawker 4000						1					1							2
Hawker 700/750		2			3				1		1							7
Hawker 800/XP	3	6	2		3	1		2	1	1						1		20
Hawker 850XP	3	4			1	1		2		1								12
Hawker 900XP		7	1			4				1								13
Premier I/IA		2																2
TOTAL	80	57	51	30	24	17	14	10	8	6	6	3	3	2	2	1	1	315







#### How was 2021 for Textron Aviation?

There was a lot of positive news for Textron Aviation in 2021. We announced the new M2 Gen2 and XLS Gen2 jets and welcomed the CJ4 Gen2 to the lineup. We also announced the 75th anniversary special edition Beechcraft Bonanza G36. And we continued our place as a leader in the industry.

According to the General Aviation Manufacturers Association (GAMA), Textron Aviation led the industry in 2021 in the following deliveries:

- Multi-Engine Business Turboprop (Beechcraft King Air 260 and King Air 360)
- Utility Turboprop (Cessna Caravan 675 and Grand Caravan EX)
- Single Pilot Jet (Cessna Citation M2, Citation CJ3+ and Citation CJ4 Gen2)
- Midsize Jet (Cessna Citation Latitude and Citation XLS+)

At the end of 2021, the new single-engine turboprop Beechcraft Denali took its successful first flight. It was a major milestone for this clean-sheet design aircraft.

# Will 2022 also be a great year for Textron Aviation?

So far in 2022 we celebrated the delivery of our 8,000th Cessna Citation, which was a Citation Longitude that joined the Scotts Miracle-Gro fleet of Citations.

We also celebrated the first production rollout and certification of the Cessna SkyCourier, our clean-sheet twin engine utility turboprop, and we also celebrated certification and first delivery of the M2 Gen2 that was announced the NBAA the past autumn.

There is more to come this year as we look to first delivery of the SkyCourier, certification and first delivery of the XLS Gen2, and much more. We will have a presence at upcoming shows, including EBACE.

Also this year, the Cessna Turbo Skylane returns to our piston product line. It now has the latest avionics and technology available, making it a great aircraft for first-time owners.

#### Throughout the pandemic, have you seen much interest from first time buyers?

We have seen an increase in concept customers - meaning customers who have not previously had their own aircraft. In addition, customers are taking time to customize their aircraft they want to make it their own and many want to be part of the design process.

The pandemic obviously reshaped people's minds in many regards including traveling. People value health and space more than ever when they travel. We see a big increase in aircraft selling, charter operations and private aviation.

#### Is there anything different that you had to do during the pandemic that you will continue to do once the pandemic is finished?

During the pandemic we had quite a few online events, and we see that as a good change. It gives access to more people and saves logistic arrangements. Meanwhile, we can also interact with our visitors online, to make it more interesting.

Also, we put a lot more attention on social media development - posting pictures, news about Textron Aviation and our products, and those who fly with our products.

#### China is seen a large cabin market, are there any signs that it might be maturing?

At present, the public's demand for general aviation keeps growing, as aviation culture and consumption enthusiasm are still budding in a small number of people and regions.

The concept of business jets and business travel needs to be popularized to let the public know that private aviation is affordable. Making the choice of business jets focusses on the purchase. Take cars for example, you can buy cars worth millions or hundreds of thousands of dollars. The same goes for business jets. Customers can choose from large cabin, as well as small and medium-sized business jets based on their mission. The general aviation market will develop in a more sustainable way only when such awareness is spread among the public.

The good news is that we do see that happening. From the government side, more and more general aviation airports constructed. The airspace is opening. Provincial governments are helping operators in terms of infrastructure, financing, operation, and management.

#### Textron Aviation has done very well with flight schools and government agencies in China, why do you think that is?

Many pilots begin their training in Textron Aviation products. It's a trusted and reliable brand. In addition, the product lineup allows for pilots to move up into other products as they receive additional training. Textron Aviation has the broadest product line in the industry.



#### SPONSORED CONTENT

The Cessna 172 is recognized as the most iconic aircraft for flight training worldwide. Speaking of flight training, the Cessna Citation M2 Gen2 is the perfect aircraft for advanced training as we delivered couple of the aircraft in China market. In regards to turboprop aircraft, the Beechcraft King Air B300 series is very suitable for missions like weather modification, medevac, commuter services in high altitude airfield and remote area where commercial doesn't have access.

We also have two Joint Ventures in China which play an important role when we do business with local customers. They can do transactions in RMB, and provide local aircraft maintenance services. Due to COVID-19, it is very difficult to deliver aircraft in China. But our JV means that we can perform ferry flights, clear customs, arrange crew quarantine, perform aircraft inspections and acceptance. Customers have nothing to worry about, we always manage to deliver on time.

#### Which Citation is perfect for China?

One of the great things about Citations is that there is an entire product lineup.

The Citation series of business jets has evolved to offer an unmatched range of capabilities, systems and options that allow customers to expand their business reach."

Renowned for their ability to combine reliability, efficiency and comfort with advanced technology and class-leading performance, no other family of business jets offers such a seamless progression of aircraft with extraordinary capabilities.

Since Cessna delivered its first Citation in 1972, Citation jets have been the number one business jet by annual delivery volume for 40 years: from 1972-1974, 1979-1981, 1984-2012, and 2016-2020. Owners and operators have made Citations the most popular business jet line in the world, with more than 41 million flight hours

More than 30 Citation models have been certificated over the 50-year history of the Citation line. There are currently six Citation models in production: Citation M2 Gen2, Citation CJ3+, Citation CJ4 Gen2, Citation XLS Gen2, Citation Latitude and Citation Longitude.

As per our observation in China, Citation's are the best for the midsize and light segments including charter business, commuter, flight inspection, weather modification, air medical service and advanced training.



#### Travel confidently in your personal travel bubble with private aviation.

More certainty. More protection. More peace of mind. Our diverse jet portfolio lets you move with comfort and security. Put your worries to rest and let our aircraft carry you forward.

A SOLUTION FOR EVERY SKY. txtav.com/jets





# FIND CALM ABOVE THE STORM.







M2 GEN2

CJ3+

CJ4 GEN2

XLS GEN2

LATITUDE

LONGITUDE

# MARKET UPDATES ENGINE OVERWIEW

As of 2021, there was a total of 2,486 turbine engines installed on 1,215 business jets in the Asia-Pacific region. The number of installed engines dropped by 1.2% in 2021, falling from 2,516 at the end of 2020.

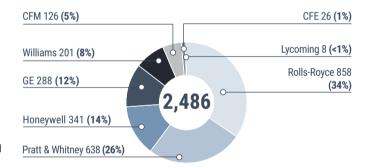
Despite a decline of 66 engines during the year, Rolls-Royce retained its position as the top engine OEM in the region, with its 858 total engines giving the manufacturer a market share of 34%.

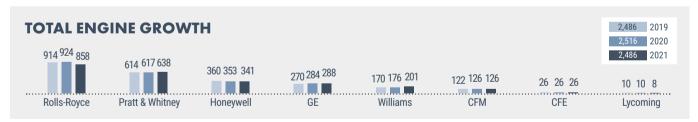
Pratt & Whitney came second with 638 engines and a 26% market share, whilst Honeywell made up 14% of the market thanks to 341 installed engines. When combined, Rolls-Royce and Pratt & Whitney accounted for 60% of all installed engines in the Asia-Pacific business jet fleet.

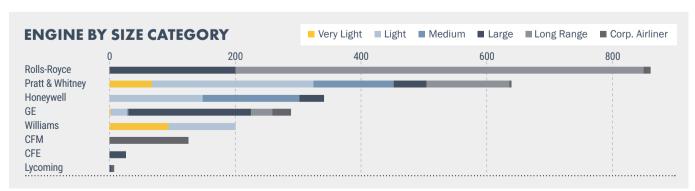
Williams saw the biggest growth in 2021, with its total installed engines jumping from 176 at the end of 2020 to 201 at the end of 2021. The increase was mainly due to growth in the Citation series, which use the FJ44 engine family.

Almost 99% of Rolls-Royce's were installed on Long Range and Large jets, with 648 and 200, respectively. Rolls-Royce's BR700 family retained its position as the most popular engine family, and was installed on many popular Long Range business jets including Bombardier's Global Express series and Gulfstream's G550 and G650/ER.

Over 60% of Pratt & Whitney engines were used on Light and Long Range jets, with 256 and 130 engines installed, respectively. The PW300 is Pratt & Whitney's most favored engine family, and is widely installed on Long Range, Medium and Large cabin aircraft including the Falcon 7X/8X, G200 and Falcon 2000.











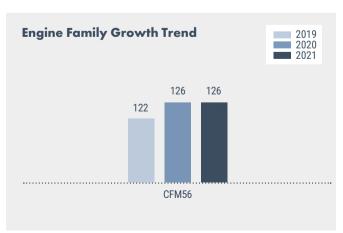




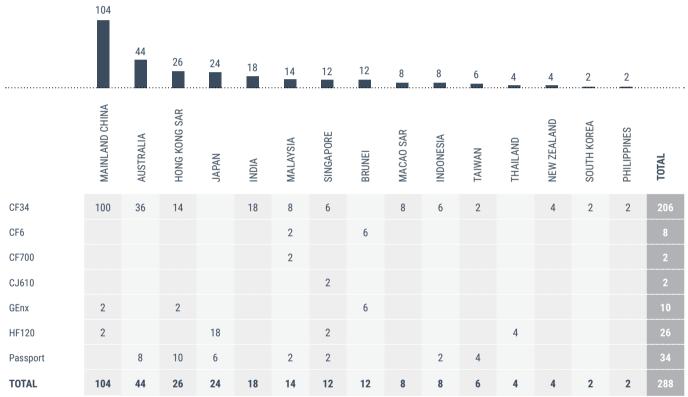


	54	14	10	10	8	6	6	4	4	4	2	2	2	
	MAINLAND CHINA	MALAYSIA	TAIWAN	THAILAND	SOUTH KOREA	SINGAPORE	AUSTRALIA	HONG KONG SAR	BRUNEI	INDIA	VIETNAM	JAPAN	PHILIPPINES	TOTAL
CFM56	54	14	10	10	8	6	6	4	4	4	2	2	2	126
TOTAL	54	14	10	10	8	6	6	4	4	4	2	2	2	126

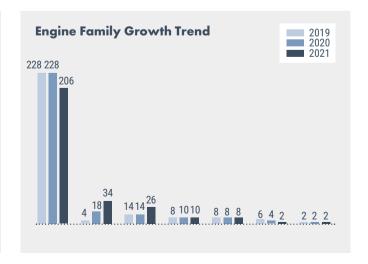
Engine Installed in	Top Aircraft Models
MODEL	CFM56
BBJ	44
ACJ319	36
ACJ318	18
ACJ320	8
BBJ2	6
A319ER	6
Boeing 737	4
A340	4
TOTAL	126







MODEL	CF34	PASSPORT	HF120
Challenger 800/850	60		
Challenger 604	46		
Challenger 605	38		
Global 7500		34	
Challenger 870	24		
HondaJet ELITE			16
Challenger 600/601	12		
Lineage 1000	10		
HondaJet			10
Challenger 650	8		
TOTAL	198	34	26





# We know your engine better because we designed it

#### OnPoint<sup>™</sup> engine maintenance program

GE's OnPoint program provides the most comprehensive business jet engine coverage, including full risk transfer of your engine maintenance, support and diagnostics. Beginning on day one with 100% coverage,

OnPoint ensures your aircraft retains the highest level of performance and residual value. No matter where you are in the world GE can tailor a solution to best suit your operating needs.



geaviation.com/bga



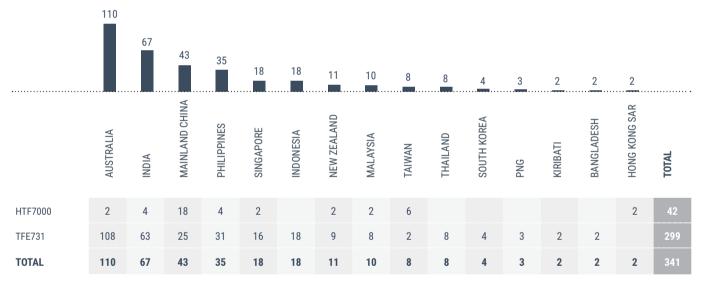
# HONEYWELL



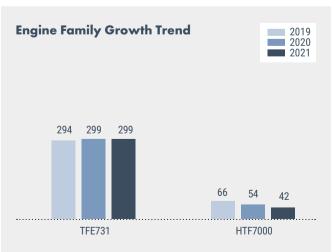








MODEL	TFE731	HTF7000
Learjet 35/36	60	
Hawker 800/XP	40	
Falcon 900	39	
Hawker 900XP	26	
Hawker 850XP	24	
G280		24
G100/G150	18	
Learjet 31	16	
Citation 650(III/VI/VII)	16	
Challenger 300/350		16
TOTAL	239	40



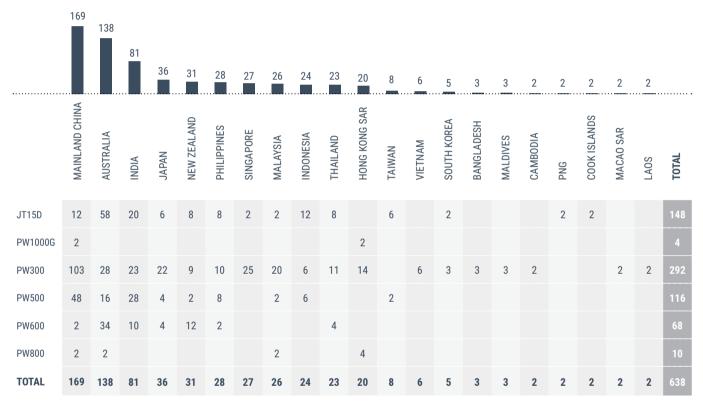
# **PRATT & WHIT**



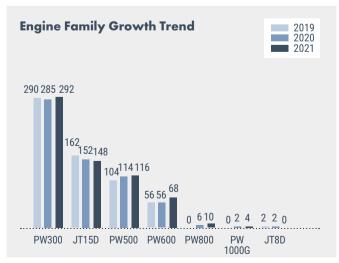








MODEL	PW300	JT15D	PW500	PW600
Falcon 7X	99			
Citation 560XL(Excel/XLS/XLS+)			82	
Citation 550(II/IISP/SII/Bravo)		72		
Falcon 2000	52			
Citation 510(Mustang)				48
G200	40			
Citation 680(Sovereign/+)	34			
Learjet 60 XR	32			
Hawker 400		32		
Phenom 300			22	
TOTAL	257	104	104	48



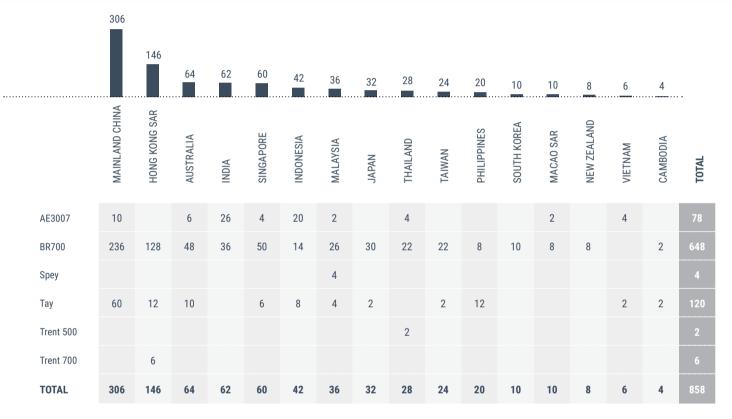
# **ROLLS-ROYCE**



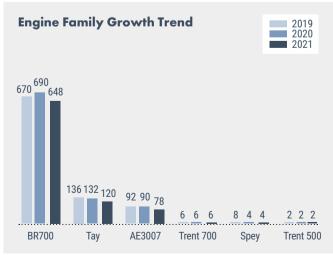




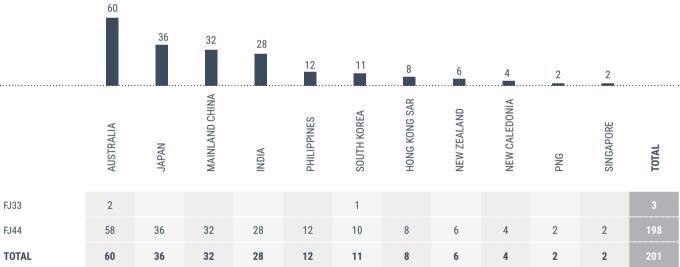




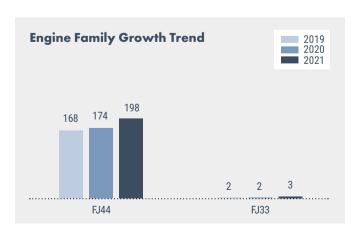
MODEL	BR700	TAY	AE3007
G550	150		
G650ER	128		
Global 6000	108		
G450		100	
G650	92		
Global 5000	72		
Global Express XRS	46		
Legacy 650			36
Legacy 600			30
Global Express	24		
TOTAL	620	100	66







MAREL	=144	E100
MODEL	FJ44	FJ33
Citation 525(M2/CJ1/+)	86	
Citation 525A(CJ2/CJ2+)	48	
Citation 525C(CJ4)	28	
Pilatus PC-24	14	
Citation 525B(CJ3/CJ3+)	12	
Nextant 400XT/XTi	6	
Premier I/IA	4	
VISION SF50		3
TOTAL	198	3





Business jets are often described by owners as today's time machines. Time is often at a premium for the influential customers that use the aircraft, so availability and reliability is essential.

With more than 3,600 Rolls-Royce powered business jets in service worldwide, the company is the leading engine supplier in business aviation. Its top priority is to provide an extraordinary level of service that exceeds their customers' expectations.

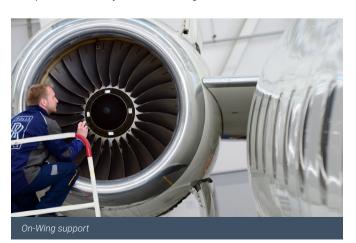
More than half of Rolls-Royce's Business Aviation clients have a fleet of one aircraft, which means they typically do not have a comprehensive department to perform maintenance on the engines themselves. "One key differentiator for Rolls-Royce is that we have a separate and dedicated Business Aviation unit." says Megha Bhatia, VP Sales & Marketing, Business Aviation. "This unit includes its own services organization - purposely set up to assist the distinct needs of our clients, which differ from those in commercial aviation."

It goes without saying that all the moving parts within this services organization - from the Business Aviation Availability Centre, logistics and spare parts to On-Wing services - must work like a perfectly tuned machine.

Rolls-Royce's Business Aviation Availability Centre looks after over 8,000 engines in service worldwide, and it operates 24 hours a day 7 days a week. All Engine Health Monitoring data is assessed at the Availability Centre and from here the company deploys teams of service engineers, logistics specialists, fleet and maintenance planners and operations specialists to ensure the smooth operation of the worldwide fleet. In the rare case where an issue with the engine prevents the customer from flying, these experts aim to solve a routine issue anywhere in the world in under 24 hours.

While there is no problem for predictable, routine tasks, which can be managed at any of our 75 Authorised Service Centres globally, it gets more challenging if a customer needs help in a remote location. Fortunately, Rolls-Royce created the On-Wing Services team to resolve such problems for their unique cliental. These technicians, who rank among the best in their profession, travel to the respective aircraft to perform special and complex maintenance tasks, often to rescue customers from an aircraft-on-ground situation and ensure clients make their next planned flight.

The On-Wing Services team, which forms the spearhead of the organization for quick responses and special missions, is a vital part of Rolls Royce's dedicated global service network.





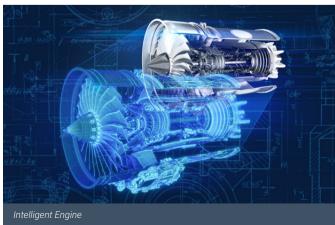
The On-Wing Services team, which forms the spearhead which forms the spearhead of the organization for quick responses and special missions, is a vital part of Rolls-Royce's dedicated global service network."

The team is composed of 65 highly qualified technicians, which are strategically placed around the globe. This ensures faster response times and minimizes AOG downtime wherever our customers are in the world.

And with Rolls-Royce's pioneering CorporateCare Enhanced service programme these activities are already covered at no additional cost. The programme offers substantial financial and operational value to customers, such as increased asset value and liquidity, mitigating maintenance cost risk and protection against unforeseen costs and unscheduled events anywhere in the world. Increased aircraft availability, reduced management burden, full risk transfer, direct priority access to the Rolls-Royce services infrastructure and remote site assistance are further benefits for the customers.

"This outstanding service is recognized by Rolls-Royce customers all over the world. We are really proud of having been ranked number one in AIN's Product Support Surveys for two consecutive years now. This is really important for us, as the feedback comes directly from our customers. We want to ensure we're continually striving to better our customers' experience and exceeding their expectations" Megha adds.

### www.rolls-royce.com





There are certain things in life that, no matter how much data and technology we have at hand, will always remain uncertain. Forecasting is one of those things.

Take the dark art of weather forecasting as an example. The days when we used to have to observe cats to see if they were cleaning behind their ears to find out if it will rain have thankfully given way to something a little more modern. But, although the introduction of new technology has helped to deepen our understanding of how global weather patterns work, and helped us patch together how something happening somewhere has some effect on something happening somewhere else, we will never be able to account for every variable and come up with a 100% accurate forecast all of the time. Often it's easier to just stick your hand out of the window to see if it's raining. Unless of course you own a cat.

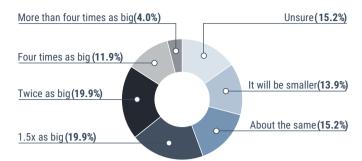
The same is true when it comes to forecasting how big the Asia-Pacific business jet fleet will be in ten years' time. In recent years

we have seen several events that, no matter how good somebody's crystal ball is, were impossible to predict. The emergence of the Coronavirus is a good example of this; It suddenly came from nowhere, and is still, two years after its first discovery, causing lockdowns, quarantines and border closures. All of which have had a big effect on the business aviation industry.

So instead of coming up with a forecast we ran a quick survey to ask you, the business aviation professionals, one simple question; 'How much bigger will the Asia-Pacific business jet fleet be in ten years?'.

To make answering the question easier, and analysing the results simpler, respondents were only asked the one question, and given seven different possible answers. These ranged from 'I don't know'

### How much will the Asia-Pacific business jet fleet grow over the next ten years?



to '4x as big'. We were also able to capture the country or region that the respondents were answering from, which allowed us to see a break down in answers by region, which effectively let us see which regions were the most optimistic.

Unusually there was a tie for the top spot, with twice as big or one and a half times as big both garnering 19% of responses. Only 13.9% of respondents thought that the fleet might be smaller than it is now, whilst 15.2% of people were unsure.

Overall, 55.6% of people believe that the fleet will be 1.5x or more larger than it is today, whilst only 13.9% said that it will be smaller. The remaining respondents either said that they were unsure (15.2%), or that the fleet will be around the same size as today (15.2%).

The results are broadly in line with our thinking. Following a period of rapid growth, mainland China, the region's biggest business aviation market, has tempered, with the fleet declining in 2021 for the first time. This is in no small part due to the Coronavirus, which although some parts of the world have begun to learn to live with, China and other parts of Asia-Pacific are yet to do. This does however mean that the effects of the pandemic on the mainland China / Asia-Pacific fleet are likely to be temporary, with most experts believing that the region's fleet will return to growth mode in several years' time, once the pandemic has fully subsided.

There was however an interesting divide in the responses from Greater China, which covers the mainland, Hong Kong SAR, Macau SAR and Taiwan. Whilst the majority (31.8%) of respondents answered that the fleet will be twice as big as now, the second most popular answer was that it will be smaller (20.5%).

This was by far the most pessimistic answer from respondents within the region and is in stark contrast to the 6.7% Southeast and Northeast Asia that chose this. The Greater China pessimism could partly be due to how long it has been taking the region to open up when compared to other countries and regions around the world.



With the survey being inconclusive and telling us that the fleet will either be one and a half times or twice as big as it is now, we went directly to some of the biggest names in Asia-Pacific business aviation and asked for their opinions.

The general feeling was that the fleet is likely to double in ten years' time. Out of the four different people we asked, three said twice as big, whilst one said 1.5x as big. However, the person saying 1.5x as big did so by prefacing his prediction by saying that he was likely being pessimistic.

Of those that answered, Jason Liao of the China Business Aviation Group, Janny Lau of Sino Jet and Gary Dolski of Metrojet all said twice as big, whilst David Dixon of Jetcraft said 1.5x as big.

For Gary Dolski the CEO of Hong Kong-based Metrojet, one of the main considerations behind his prediction is that 2022 sees the Asia-Pacific fleet at a low point, and as such, the fleet doesn't have to grow as much to double as it would have done a few years ago. This, says Dolski has been due to pandemic related border closures and quarantines which have stifled the fleets in both mainland China and Hong Kong to such an extent that owners have either elected to sell their aircraft, or move them outside of the region. However, Dolski believes that this is likely to be



#### 10 YEAR FORECAST

temporary, and buyers will return once mainland China and Hong Kong start opening up to the rest of the world again.

Jenny Lau, Group President of Sino Jet Management – Asia-Pacific's biggest operator, agrees that APAC's fleet will double in ten years, although cautions that it will likely be towards the middle to end of the period that most of the growth comes. Despite this, Lau believes that the current slowdown in the Greater China region is only temporary. "I remain very confident with business aviation in the Greater China region, where demand for business travel is still exceedingly strong. I think the market slowdown is temporary and I am very positive about the future of the business jet market." Said Lau.

Lau also believes that we will see growth coming from Southeast Asia – an area long tipped for growth. "the Southeast Asian market will experience similar growth in the same period as we are seeing more trades of short to medium-ranged, mid-sized aircraft in the region." Said Lau.

China however remained the biggest theme. China has the biggest fleet in region so this should not be surprising, however several felt that the re-election of President Xi, due in the autumn could have an impact on the business jet fleet in the region. "His

'common prosperity' policy could dampen our region's business jet fleet significantly." Said David Dixon, President, JetCraft Asia.

First introduced by Xi during a speech in August 2021, China's Common Prosperity concept seeks to lessen the gap between the rich and poor by raising the wages of the low paid and conversely capping the wages of those with excessively high incomes.

Perhaps more importantly, it also encourages individuals and companies to return more to society.

To what level this will happen is uncertain, however in 2013 Xi introduced austerity measures which overnight had a huge impact on business aviation in the country. Charter companies, which for years had survived by ferrying regional and provincial officials around, shuttered their businesses as nobody wanted to be seen indulging in the luxury of a private jet flight. The austerity campaign was such a success that it managed to cut US\$8.4 billion in public spending in just 15 months.

What is certain though is that Greater China's fortunes will continue to play a big part in the development of the region's business jet fleet. The largest fleet in the region is likely to stay as the biggest fleet in the region despite its slight decline this year. And from there, as Gary Dolski points out, the fleet doesn't have to grow as much to double.





Asian Sky Media readers are business decision-makers in the business jet and general aviation industry from Asia and across the world. Our market intelligence helps them drive strategies for achieving their business goals in Asia. Through Asian Sky Media, you can connect with your target audience.

Contact us to find out how we can help you.

**PUBLICATION ADVERTISING** 

**DIGITAL ADVERTISING** 

**CONTENT MARKETING** 

**EVENT MANAGEMENT** 





# Congratulations for being promoted to MD of the MRO business. Can your promotion be viewed as Metrojet placing more emphasis on the MRO side of the business going forward?

During COVID-19, flying activity has definitely decreased, and the aircraft parking and maintenance business has understandably gained more attention and momentum. Our focus remains on both the AMC (Aircraft Management & Charter) and MRO (Maintenance, Repair and Overhaul) business pillars, as they remain intrinsically interdependent.

The consolidation of our current HK and Clark operations and planned expansion under a single MRO leadership allows us to better utilise and optimise all of our maintenance resources within the Company and to provide an improved level of performance and flexibility to the benefit of our customers and the OEM's. Clark is in a good strategic location and we see great potential there. We have a long-term vision reinforced by our 25 years plus 25 years option period lease. Our new state-of-the-art hangar and extended ramp

space keeps us well-positioned for future growth opportunities. I very much look forward to working closely with Sarith Vaikuntan, our Clark facility General Manager to collectively offer an extended level of service to the highest standards in the industry.

# Metrojet is celebrating its 25th anniversary this year. How long have you been with the company?

I was with Metrojet from 2006 through to 2011 working as an Engineering Support Manager. From 2011 to 2019, I worked at Hongkong Jet and my last position with them was the Chief Operating Officer, overseeing all aircraft management and maintenance functions. I re-joined Metrojet in 2019, responsible for Aircraft Management business development. I moved back to the MRO in 2020.

In total, I have been with Metrojet for more than 8 years. I am fortunate to have worked on both the AMC and MRO side of our business giving me a full picture view with the ability to make decisions that transcends both lines of our service offerings.



### How was 2021 for Metrojet?

Well, like the rest of our competition and in particular in the HK/ PRC region, it was not an easy year for Metrojet. The travel restrictions/quarantine/flight bans and constant changing of the rules during the past COVID-19 years have been challenging to say the least with the flight operations side, in particular, being hit hard.

We have seen a significant reduction of aircraft based in HK/ PRC as a direct result of the pandemic with the majority of these aircraft being sold or repositioned elsewhere and where the restrictions are somewhat more relaxed. We have been fortunate, however, in that many of our management clients have elected to repair their jets at our MRO facilities, which I believe is a solid testament to our capabilities and the Metrojet brand as a whole.

Our maintenance and aircraft cleaning business is improving as we are making inroads and gaining other business from third-party clients. We are taking this time to focus on improving our processes and procedures and preparing for when the next growth spurt will come - and it will come, and we will be ready.

### 2021 was a busy year for MRO businesses around the world, but did you see much work that was originally scheduled for 2022 get moved forward into 2021?

We worked very hard with our managed fleet clients, crews and CAMO team to review the current and future maintenance requirements for each aircraft and to move work forward that made sense and in accordance with the maintenance manual. If we could split up maintenance checks around our clients'

flight schedule and benefit from an extended downtime to ensure that the aircraft was ready on short notice, we did just that

The need for calendar and yearly heavy checks remains and we benefitted by performing a fair number of these inspections in Hong Kong where in the past the aircraft may have gone to either the USA or Europe. As many parts of the world open up and governments relax the COVID-19 restrictions we will see more flying and I am optimistic that the maintenance needs will gradually resume in the latter half of the year.

### Aside from fewer flights, did COVID-19 have much of an impact on the business?

COVID-19 has caused us to rethink many of the things that we may have taken for granted previously and has further enhanced our concerns regarding safety at work and how we deal with and resolve these issues. We implemented a work-from-home policy and it accelerated the use of technology both internally and externally. We are very used to utilising different online meeting platforms now. COVID-19 also "encourages" us to explore additional solutions to better protect our employees, clients and their valuable assets. Throughout these past two years, I am very proud to say that we were able to keep all of our staff employed and we worked hard to ensure their safety at work and extended assistance to them and their families at home.

Numerous aircraft have remained on the ground for extended periods of time. We now provide tailor-made cleaning and sanitizing packages to protect the aircraft from the corrosive environment that exists in our region.



Our new hangar in Clark provides a very affordable parking option to Hong Kong — less than ninety minutes flight time. The facility offers an excellent protected environment for either short or extended stay parking with full-service offerings available."

## Metrojet opened a facility in Clark, the Philippines last year, is there still room to grow the MRO business in Hong Kong?

Hong Kong remains a major economic hub and gateway into and out of China. A number of management clientele remain based in HK and aircraft continue to arrive bringing in people and business. These aircraft sometimes break and we are here to help them get on their way.

As mentioned previously, many of our management clients continue to choose to repair their jets at our MRO and our third-party business is expanding on both the MRO and cleaning sides of the business. The third runway in the HKIA will soon be ready, and we anticipate that this will result in a boost in flight

and maintenance activities. The HK Airport business aviation community is small and it is important that we all help each other. I am very happy to say that we work well with our competition and though my preference is obviously to ensure my operation is kept busy and ideally full, my team and I will always remain available to help the other maintenance operators as we all will benefit long term.

# How will the two facilities work – will potential clients need to use a different facility based in the work that they need done?

At least in the short term not necessarily, as both of our facilities have similar maintenance capabilities. We are looking at expanding our Clark capabilities as the skies open up further and as the number of aircraft in the region grows.

The above being said, we will take into consideration our client's preferences and requirements to provide them with the best options to consider. Our operation in Clark, the Philippines, provides a one-stop-shop solution for private jet owners and operators which can be especially attractive for those aircraft that are not doing a significant amount of flying and would benefit from a cost-effective and convenient alternative to the significantly more expensive parking arrangements in the major cities in Asia region.

I do not see our facilities as being competitive with each other but rather complimentary. We give our clients a choice and provide them with options – all with their best interests in mind.





### How did the idea behind AmberNet come about?

Aircraft management has always been Amber Aviation's core focus. At the same time, we always realized the need to introduce other innovative products. After the advent of COVID-19, we saw the needs of the market: clients have less desire to own an aircraft but have more demand for using business jets. Therefore, we hope to bridge the gap with our Shared Lease, Jet Card, and Membership programs, which could help make flying private more affordable.

NetJets and Amber Aviation have entered a partnership that includes NetJets' investment in the company and support in building Amber's business jet fleet with the transfer of a number of G450s that Amber Aviation will operate. With the G450s operated under our AOC, it also provides the opportunity to offer long-term service in the Asian market to NetJets Owners.

With new aircraft and new products in the works, we wanted to distinguish this from the main Amber Aviation brand which mainly focuses on aircraft management, flight operations support, and aircraft maintenance services. With its unique products, a separate brand identity was needed, and this is how AmberNet, the new sub-brand of Amber Aviation, was created. The name comes from a combination of Amber Aviation and Net, with the Net coming from the global aircraft network that our clients can now benefit from.

### The Shared Lease Program is the first of its kind in China, can you tell us all about it, please?

We saw the need to introduce something unique to the Asian market, a product that filled a gap between charter and aircraft ownership.

Clients joining the shared lease program will enjoy the same status as if they owned the whole aircraft themselves but without the high costs associated with aircraft ownership. They also do not have to worry about asset depreciation risks, nor get involved with all the details like finding suitable aircraft parking, maintenance, crew, etc.

### What are the key selling points of the program?

Clients can purchase hours based on their travel needs, with the shared lease program starting as few as 50 hours per year.

Availability on our Gulfstream G450 fleet is guaranteed, and we only require a minimum notice period of 24 hours. We also do not charge ferry fees provided certain conditions are met.

No operator in the region has a fleet of charter aircraft based on the same aircraft type which is as large as Amber's. There is also no operator in the region offering this shared lease product which is a first in Asia. This is Amber's unique selling point and could be the right solution for aircraft owners who are selling or have sold their aircraft but still require the convenience, flexibility, or status that comes with aircraft ownership.



Our shared lease program is not restrictive in that clients are not bound by lengthy contract terms. It's a 1-year contract based on utilization of as low as 50 hours per year."

### Why is now the right time to launch the new program?

The COVID-19 pandemic has had a significant impact on the region's business jet industry. Other economic factors have also contributed to an outflow of aircraft from the Greater China region. However, the industry's long-term outlook remains very positive with robust growth expected as the market recalibrates itself and continues to evolve and mature.

With the gradual re-opening of international borders around the region, we anticipate there is significant pent-up demand for business jet use, both for business and leisure. The pandemic also served as a catalyst for unlocking a new group of clients; those who could afford to fly private but previously didn't. We expect this group, which now puts safety, privacy, and comfort as a top priority, to make the switch from flying first or business class to flying private. Our new fleet of aircraft will enable us to capture this demand once all border and quarantine restrictions are fully lifted.

Looking to the medium and long term, we see a lot of potential. In mainland China, there are roughly 5 million millionaires and this is projected to double in the coming five years. The current number of UHNWIs is also expected to roughly double by 2025. The increase in wealth will correlate to an increase in spending on high-end services, so our products will be the perfect solution as flying private becomes more popular. Add to this our aircraft





management service which complements well with the new products on offer. This allows us to capture the market on every part of the spectrum, from on-demand chartering to fractional leasing to aircraft management.

We understand that it takes time for clients to become familiarized with the concept of fractional leasing so we're laying the foundation now at the tail end of the pandemic in preparation for future market growth.

### Why is the Gulfstream G450 the right aircraft for the program?

Our focus is Asia Pacific and the Gulfstream G450 is perfectly suited to cover this region while offering a large-cabin solution to clients and their families and/or business associates.

### How has the reception to the new program been?

Feedback from clients has been very positive and they are looking forward to experiencing the AmberNet product now that our aircraft have arrived with more on the way.

The new products have quickly filled the gap in the current business jet market. Our shared lease program provides clients with all

the benefits of aircraft ownership without significant capital investment.

Aircraft owners traditionally have had to deal with various fixed and variable costs, such as parking, handling, maintenance, crew, etc. The shared lease program is now an excellent solution for clients looking to simplify the whole process.

The sharing economy is becoming more popular and accepted. The shift in consumer behavior means that the fractional leasing model is one that a certain group of potential aircraft owners would be drawn to as it makes the most economic sense.

The simplicity and transparency of our jet card program are ideal for clients who fly less than 50 hours per year but still want the best in terms of service and convenience.

AmberNet's membership program, which allows its members to take advantage of complimentary ferry flights, makes it stand out among other products on the market and could be an attractive option for clients looking to fly private for the first time.

There is very little uniformity when it comes to service standards in Asia. The same could be said for safety. Clients are already aware that we put service and safety as a top priority. With our company's latest developments, this gives our clients a further sense of reassurance and lets them know that we adhere to the highest standards.

### What we did to set up the core fleet of AmberNet?

Since August 2021, Amber has spent a great deal of time developing products that suit the Asian market.

We had many meaningful conversations with our potential clients to understand how they travel and what they want. We understand that it is difficult to have only one product to meet the diverse needs of the market, so we introduced three products that cater to different clients and needs. In addition to this, we have combined our 20 years of experience in the business jet industry to further localize our products.

In addition to providing our clients with the largest charter fleet in Asia, we wanted them to benefit from a truly global network, ensuring that they can enjoy seamless business jet travel to other parts of the world.

Through our research, we have learned that aircraft cleanliness has always been an important factor in our clients' travel experience. Standards of on-demand charter services in the region vary greatly, and cabin hygiene and cleanliness are not always

guaranteed. To ensure we consistently offer the best experience to our clients, we have further strengthened this aspect by establishing our own dedicated in-house aircraft cleaning team, meeting world-class standards.

With its sub-brand, this meant that the crew and customer service team would be separated from the Amber Aviation side and would service customers under AmberNet only.

### How can AmberNet benefit Amber's existing clients?

Amber's existing clients can benefit from having guaranteed aircraft availability through AmberNet's growing fleet. When our management clients' aircraft are unavailable due to maintenance or AOG, AmberNet's fleet will be available to support them as needed.

When overseas, Amber Aviation's management clients can gain access to an expansive FBO network in the U.S. and Europe.

Amber Aviation's management clients will also be entitled to a special pilot training rate.



### **APPENDIX**

### SUBREGION BREAKDOWN

#### **EAST ASIA**

#### **OCEANIA**

#### SOUTHEAST ASIA

Japan South Korea Australia Cook Islands French Polynesia Marshall Islands

New Caledonia New Zealand Papua New Guinea Solomon Islands

Brunei Cambodia Indonesia Malaysia

**Philippines** Singapore Thailand Vietnam

### **GREATER CHINA**

Hong Kong SAR Macao SAR

Mainland China

Taiwan

### **SOUTH ASIA**

Bangladesh India

### **SIZE CATEGORIES**

### CORP. AIRLINER

### A319ER A340 ACJ318 ACJ319 ACJ319neo ACJ320 ACJ330 BAe 146 BBJ BBJ 787-8 **BBJ MAX 8** BBJ2 Boeing 727 Boeing 737 Boeing 747 Boeing 767 Fokker 100

#### **LONG RANGE**

Falcon 7X

Falcon 8X G500 G550 G600 G650 G650ER Global 5000 Global 6000 Global 6500 Global 7500 **Global Express** Global Express XRS GV/GV-SP

### **LARGE**

Challenger 600/601 Challenger 604 Challenger 605 Challenger 650 Challenger 800/850 Challenger 870 CRJ100/200 Dornier 328JET **ERJ135** FRJ145 Falcon 2000 Falcon 900 G II/IIB G III G IV/GIV-SP/G400 G300/G350 G450

### **MEDIUM**

Challenger 300/350

Citation 680(Sovereign/+) Citation 680A(Latitude) Citation 750(X/X+) Falcon 20 Falcon 20 -5 Falcon 50 G200 G280 Hawker 4000 Hawker 700/750 Hawker 800/XP Hawker 850XP Hawker 900XP Learjet 60 XR Legacy 500

#### LIGHT

Lineage 1000

Lineage 1000E

Citation 500/501(I/ISP) Citation 525A(CJ2/CJ2+) Citation 525B(CJ3/CJ3+) Citation 525C(CJ4) Citation 550(II/IISP/SII/Bravo) Citation 560(Encore/+) Citation 560(V/Ultra) Citation 560XL(Excel/XLS/XLS+) Citation 650(III/VI/VII)

G100/G150 Hawker 400 HondaJet HondaJet ELITE Learjet 31 Learjet 35/36 Learjet 40 XR Learjet 45 XR

Learjet 70/75

Nextant 400XT/XTi Phenom 300 Phenom 300E Pilatus PC-24 Sabreliner Westwind 1/2

Legacy 600

Legacy 650

### VERY LIGHT

Citation 510(Mustang) Citation 525(M2/CJ1/+) Eclipse 500 Leariet 24 Phenom 100 Premier I/IA VISION SF50





2022