ASIAN SKY

Fleet Report

ASIA-PACIFIC REGION
BUSINESS JETS

YE 2020

COVER FEATURE

THE FALCON 10X -
IN DASSAULT'S OWN WORDS

MARKET UPDATES BY
- OPERATOR
- AIRCRAFT REGISTRY
- OEM
- ENGINE

SPECIAL FEATURES
- COVID-19 IMPACT
- CABIN CONNECTIVITY

PRODUCT SPOTLIGHTS & INTERVIEWS

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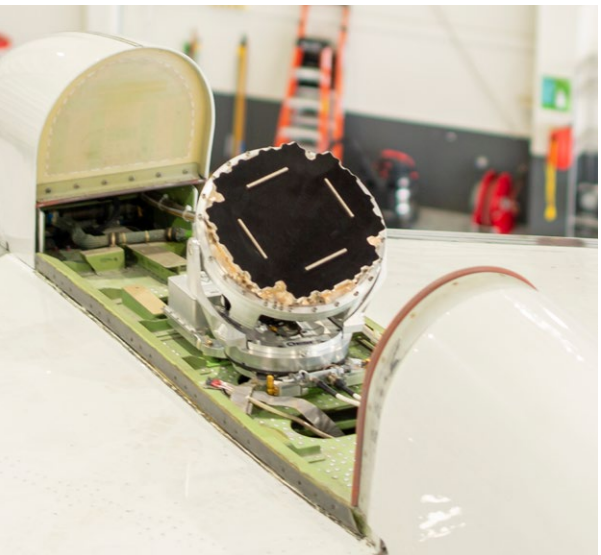

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EDITOR'S NOTE

On the surface, 1.8% of something does not seem like much. But as with most things, if you were to just look at a number without context, that number could mean anything. Take your mind back to this time last year; the COVID-19 pandemic was in the early stages of its seemingly unstoppable march across the globe. We had already seen China shut itself down, Taiwan and Hong Kong followed shortly afterwards. Flash forward six months, and the majority of the world had closed its borders in an attempt to keep the coronavirus out.

Given this context, 1.8% growth in the Asia-Pacific business jet fleet in 2020 is a remarkable achievement which caught many people, us included, a little off guard. Even as we started 2021 with fresh hope that the pandemic would soon subside, many thought that we would see a contraction in the Asia-Pacific fleet. In fact, our own prediction in our 2019 fleet report was that the fleet would contract by 0.5%. Yet 2020 beat that prediction. And that was without knowing the full extent of what was yet to come with the pandemic.

So how did it happen? It was largely due to the return of growth in Greater China. When combined, Greater China, including mainland China, Hong Kong, Macao and Taiwan, had a net addition of 14 aircraft in 2020. Compare that to a year earlier, when the combined Greater China fleet saw a net decline of 16 aircraft, and you can see why Asia-Pacific's fleet growth took us all by surprise. Part of that reason is that China is big, really big, and as we have seen all over the world, domestic flight activity has returned, and in a big way. That increase in domestic flight activity is partly being driven by new entrants – people that have never flown privately before, but can now see the health and safety benefits, not only in the air, but also on the ground by being able to avoid crowded airport terminals and lounges. Operators across the region have all told us that they have seen a big increase in the number of enquiries they are seeing from new entrants. Management companies have told us similar stories, although this time it is from first time buyers – people that have never owned a jet before.

Unfortunately, for now at least, the pandemic is still wreaking havoc around the world, with many countries still effectively closed, or having strict quarantine procedures in place that deter all but the most determined of visitors. Whilst the pace of vaccinations has increased in several parts of the world, in others it has yet to begin. The hope is that vaccine passports will be introduced and allow people to travel more freely between different countries, but speaking from my own personal experience of having been denied boarding a flight from Cairo twice within the space of a single week, even with the correct paperwork in place, things will not run as smoothly as they once did for a long time to come.

This edition of the Business Jet Fleet Report is being published a little later than normal. You may have seen our CEO Jeffrey C. Lowe's short video explaining why, but in case you did not, the answer is on the front cover – The Falcon 10X. Inside this edition you can read all about the biggest Falcon to date, in an article written by Dassault themselves.

Elsewhere, alongside the usual market analysis and trends, you will find articles on, and interviews with, Sino Jet, Metrojet, Aerion, Gulfstream, JSSI, and IADA.

Special features include a look at how COVID-19 has affected the industry, as well as a feature on the future of onboard connectivity.

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

Sincerely,
Alud Davies
Media & Communications Director, Asian Sky Group

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EXECUTIVE SUMMARY

THE ASIA-PACIFIC BUSINESS JET FLEET STOOD AT 1,232 AIRCRAFT AT YEAR END 2020, AN INCREASE OF 1.8% FROM THE END OF 2019. THE FLEET SAW NET GROWTH OF 22 AIRCRAFT IN 2020 – ATTRIBUTED TO 38 NEW DELIVERIES, 58 PRE-OWNED ADDITIONS AND 74 DEDUCTIONS. LONG-RANGE JETS CONTINUED TO BE THE MOST POPULAR OF ALL THE SIZE CATEGORIES IN THE REGION WITH A 32% MARKET SHARE. LARGE SIZE JETS CAME NEXT, WITH A MARKET SHARE OF 22%.

NET FLEET GROWTH

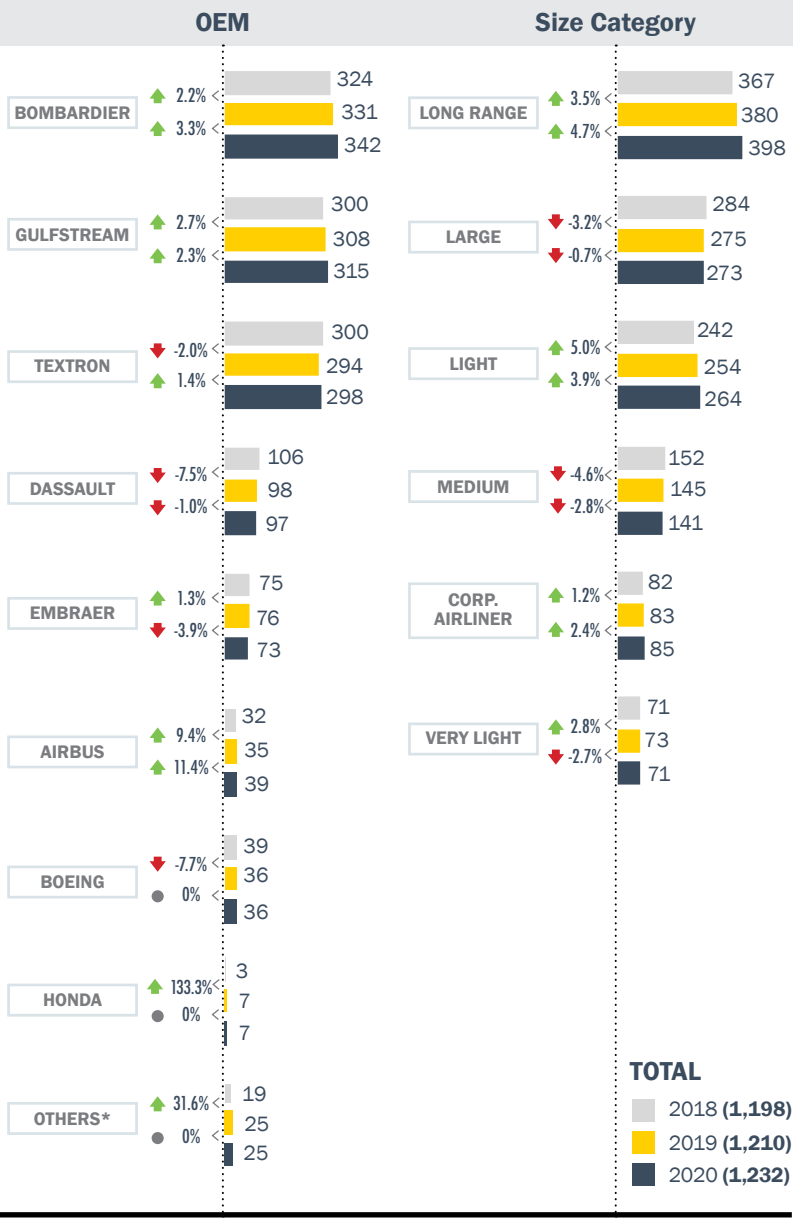
▲ Positive ▼ Negative ● No Change

Bombardier remained the most popular business jet OEM in the Asia-Pacific region in 2020. The OEM added 11 aircraft to hold its market share of 28%. The Global 6000 was the most popular Bombardier model in 2020. Gulfstream and Textron came in second and third with a fleet of 315 (26% market share) and 298 (24%) aircraft, respectively. As in previous years, the G550 remained the most popular Gulfstream type in the region.

Mainland China, with 342 operational business jets, had the largest fleet in the region. Australia, India, and Hong Kong SAR came in second, third and fourth with 211, 137 and 122 business jets, respectively. Collectively, these four regions account for 66% of the Asia Pacific's total operational business jet fleet.

Greater China and Oceania were the major regional growth drivers in 2020, both recording a net fleet increase of 14 aircraft. Australia was the country that experienced the largest fleet growth with net additions of 13 aircraft.

East Asia, which had seen a fleet increase of nine business jets in 2019, saw the steepest fleet reduction in 2020 – by six. Both South Asia and Southeast Asia were the regions that have no changes between 2019 and 2020. Malaysia witnessed a reduction of six aircraft (a decrease of 9.5%) from its business jet fleet, which was the largest decline in the Asia-Pacific region.

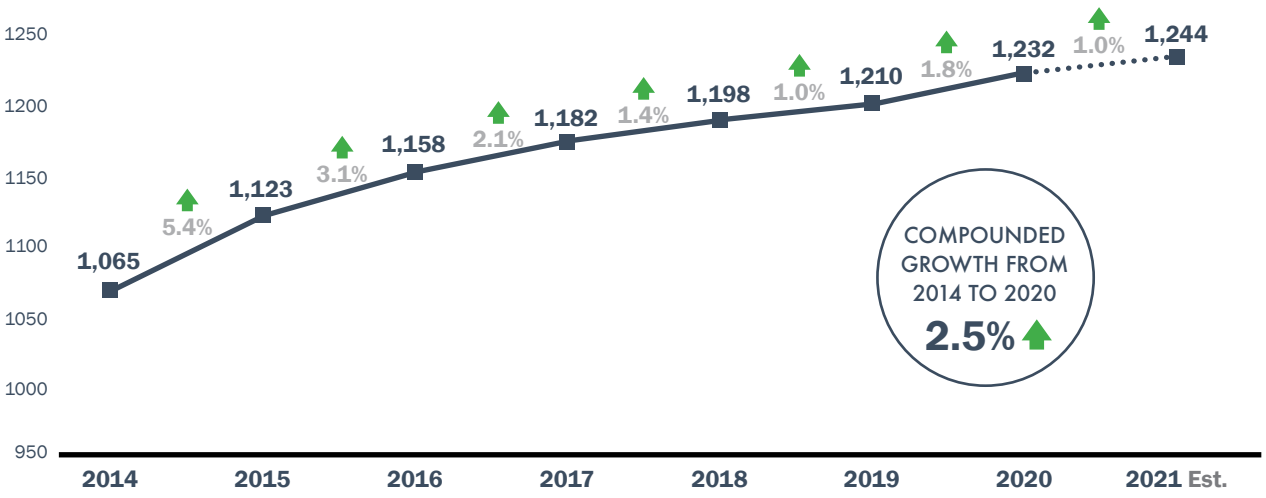


Others*: Other OEMs include British Aerospace, Cirrus, Dornier, Eclipse, Fokker, IAI, Nextant, North American and Pilatus.

ASIA PACIFIC BUSINESS JET FLEET GROWTH

Note: Historical fleet data is based on Asian Sky Group's adjusted and updated fleet numbers.

Historical & Forecast



Sino Jet, with a fleet of 47 aircraft, was the top business jet operator for the second year in a row. Notable amongst the top 20 operators in the region was BAA – which added ten jets to its Asia-Pacific fleet in 2020, the largest net addition in the region. The Top 20 operators account for 34% of the total Asia-Pacific fleet, with 14 of the 20 operating in Greater China.

The year 2020 marked the second year in a row that business jet transaction activity decreased in the Asia-Pacific region. Transactions decreased from 165 in 2019 (45 brand-new deliveries and 120 pre-owned transactions) to 159 in 2020 (38 brand-new transactions and 121 pre-owned transactions). In terms of market-value, brand-new deliveries fell from $2.46 billion to $2.10 billion while pre-owned transactions fell from $1.66 billion to $1.52 billion.

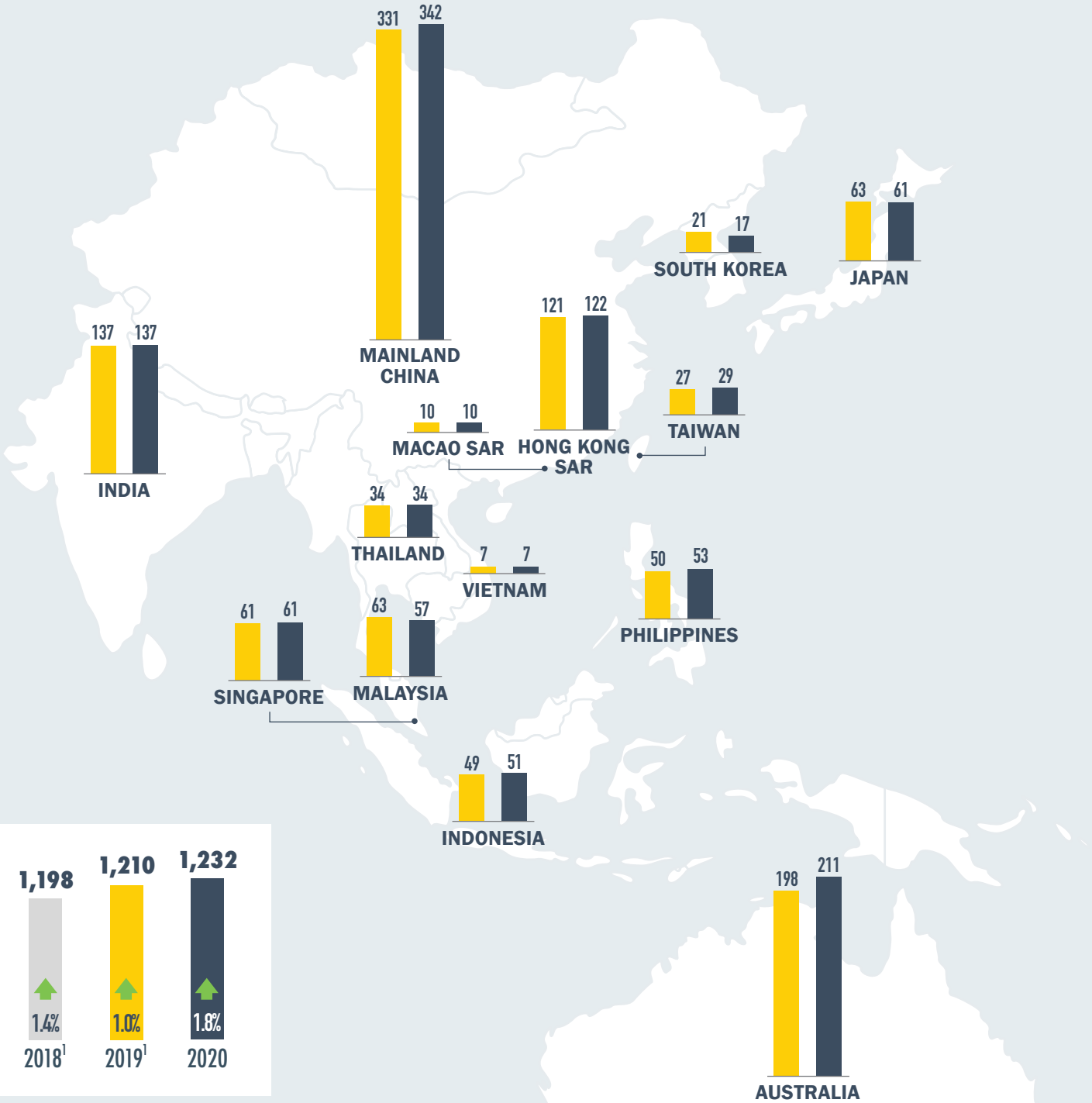
For Asia-Pacific owners and operators, offshore registries continue to increase in appeal. The offshore registered fleet grew by 22 aircraft – from 163 in 2019 to 185 in 2020. Most of the offshore registered aircraft belonged to the long-range size category, at 68%. Hong Kong SAR and mainland China had the largest number of offshore registered aircraft – 65 and 47, respectively. Amongst the top 20 operators in the region, TAG Aviation had the largest number of offshore registered aircraft (32), followed by Jet Aviation (25) and Sino Jet (11). Deer Jet was the only operator in the top 20 that did not have a single offshore registered aircraft. With a 50% market share, the Cayman Islands 'VP-C 'registry was the most popular offshore registration in the Asia-Pacific region.

There were some serious concerns regarding the performance of the Asia-Pacific business jet fleet at the beginning of 2020. The fleet, which had been growing y-o-y since 2014 at a compounded growth rate of 2.5%, had already started showing signs of slowing down. The rate of growth, that had been decreasing since 2018, had dipped to only 1.0% in 2019 – the lowest annual growth rate since 2014. The slowdown in demand, coupled with deteriorating economic conditions due to the COVID-19 pandemic, led many to believe that 2020 would be the worst year for the Asia-Pacific business jet market.

However, as commercial flights were cancelled, not only in Asia-Pacific but all over the world, the need for safe air travel among Asia-Pacific's HNWIs proved to be a much stronger driver for business jet demand. HNWIs and corporations that were previously uncertain about the benefits of private aviation started opting for business jet travel, thus driving up demand in 2020.

As of April 2021, several countries have already developed COVID-19 vaccines and started vaccinating their populations. The global economy is expected to recover as vaccinations become more readily available and as the pandemic reaches its much-awaited end. However, a complete COVID-19 free world is not expected to be achieved any time soon. Private aviation is thus expected to continue being in high demand and the Asia-Pacific business jet fleet is forecasted to increase in 2021 – though at a slower rate of 1.0% as compared to 2020.

REGIONAL OVERVIEW



Note (1): 2018 and 2019 data is based on Asian Sky Group's adjusted and updated numbers.

Note (2): Fleet distribution is based on business jets in service and their active bases of operation.

Note (3): Others include Bangladesh, Brunei, Cambodia, Cook Islands, French Polynesia, Kiribati Marshall Islands, New Caledonia, PNG, Solomon Islands.

Note (4): Region is defined in appendix on page 68.

There were a total of 1,232 business jets in the Asia-Pacific region at year-end 2020 – an increase of 1.8% from the 1,210 units at year-end 2019.

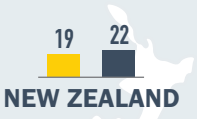
After experiencing two consecutive years of fleet reductions, mainland China finally saw a rebound in its business jet fleet in 2020 – growing by 11 units to 342 as of year-end 2020, retaining its position as the largest business jet market in the Asia-Pacific region. Combined with Hong Kong SAR, Taiwan and Macao SAR, Greater China represents 41% of the total Asia-Pacific fleet.

Australia was the second largest market with a fleet of 211 business jets – an increase of 13 from year-end 2019. India (137 jets) and Hong Kong SAR (122 jets) were the third and fourth largest markets in the Asia-Pacific region, respectively.

The only regions that managed to register business jet fleet growth in 2020 were Greater China and Oceania – with 14 net additions each. Australia and mainland China's fleet numbers grew by 13 and 11 units, respectively. It is interesting to note however, that most of the aircraft added to the mainland China fleet were long-range aircraft, whilst Australia experienced an increase mostly due to additions in the light and large aircraft size category.

East Asia, which had seen significant growth in its business jet fleet in 2019, saw a reduction of six aircraft in 2020, the largest decrease in any Asia-Pacific region. Both the South Asia and Southeast Asia fleet in 2020 stayed the same as 2019. Malaysia accounted for six of the reductions in the Southeast Asia business jet fleet, offsetting the increase in fleet in Philippines (three net additions) and Indonesia (two net additions).

The year 2020 saw the resurgence of Greater China as the main driver for growth in the Asia-Pacific business jet fleet. Health and safety concerns amongst Asia-Pacific HNWIs with regards to commercial air travel may have led to a revival of the region's private aviation demand. This demand is expected to continue into 2021 as the world continues to try and recover from the COVID-19 pandemic.



BUSINESS JET FLEET[2]

LARGEST MARKET
342
MAINLAND CHINA

MOST NET FLEET ADDITION
+13
AUSTRALIA

MOST NET FLEET DEDUCTION
-6
MALAYSIA

FLEET GROWTH FOR THE MAJOR MARKETS

	Net Fleet Growth		Growth Rate	
REGION[4]	**2019**	**2020**	**2019**	**2020**
Greater China	-16	+14	-3.2% ↓	2.9% ↑
Oceania	+9	+14	4.1% ↑	6.2% ↑
South Asia	-2	-	-1.4% ↓	-
Southeast Asia	+12	-	4.6% ↑	-
East Asia	+9	-6	12.0% ↑	-7.1% ↓
TOTAL	**+12**	**+22**	**1.0%** ↑	**1.8%** ↑

	Net Fleet Growth		Growth Rate	
COUNTRY/REGION	**2019**	**2020**	**2019**	**2020**
Australia	+9	+13	4.8% ↑	6.6% ↑
Mainland China	-14	+11	-4.1% ↓	3.3% ↑
Philippines	+3	+3	6.4% ↑	6.0% ↑
New Zealand	-	+3	-	15.8% ↑
Indonesia	+4	+2	8.9% ↑	4.1% ↑
Taiwan	-	+2	-	7.4% ↑
Hong Kong SAR	-2	+1	-1.6% ↓	0.8% ↑
Singapore	+3	-	5.2% ↑	-
Macao SAR	-	-	-	-
Vietnam	+3	-	75.0% ↑	-
India	-1	-	-0.7% ↓	-
Thailand	-5	-	-12.8% ↓	-
Japan	+8	-2	14.5% ↑	-3.2% ↓
South Korea	+1	-4	5.0% ↑	-19.0% ↓
Malaysia	+2	-6	3.3% ↑	-9.5% ↓
Others	+1	-1	5.6% ↑	-5.3% ↓
TOTAL	**+12**	**+22**	**1.0%** ↑	**1.8%** ↑

Rank by 2020 net fleet growth from the largest.

COUNTRY SNAPSHOTS

GREATER CHINA

Greater China, including mainland China and Hong Kong, Macao, and Taiwan, had a total fleet of 503 business jets as of year-end 2020, which was an increase of 14 business jets when compared to year-end 2019. Overall, Greater China saw 24 new deliveries along with 22 pre-owned additions and 32 deductions. Greater China is also home to eight of the top ten business jet operators in the Asia-Pacific region. Overall, 2020 was not a bad year for business aviation in Greater China, with the fleet increasing by 2.8% and many large operators adding aircraft to their fleets. This trend is expected to continue, as the economic recovery in Greater China outpaces other regions.

AUSTRALIA

With 211 business jets, Australia is home to the second largest fleet in the Asia-Pacific region. The fleet size increased by 13 business jets since the end of 2019, equivalent to a growth rate of 6.6%. The increase is attributed to seven new deliveries, 19 pre-owned additions, and 13 deductions. The light size category continued to be the most dominant size category in the country, serving domestic tourism and corporate use. The Australian fleet has an average age of 20 years, which makes it one of the oldest in the region.

INDIA

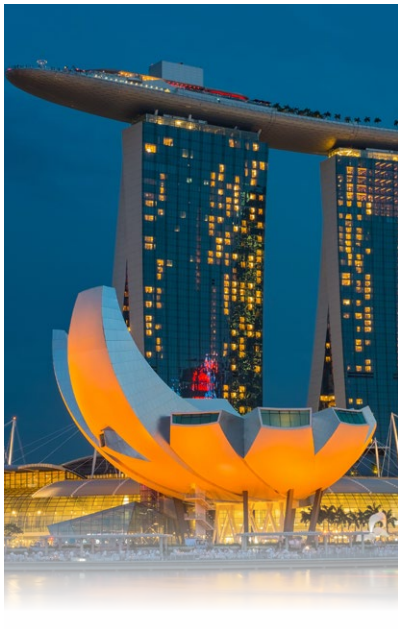
With 137 business jets, India was home to the third largest market in the Asia-Pacific region by the end of 2020 - the same as at the end of 2019. The movement of aircraft is composed of one new delivery, eight pre-owned additions and nine deductions.

MALAYSIA

Malaysia had 57 business jets at year-end 2020. The fleet size decreased by six from the previous year, which is equivalent to a reduction of 9.5% from 2019. It is attributed to four pre-owned additions and ten deductions. The large and long-range size categories were the most dominant size categories in the country, accounting for 25% and 26% of the country's total fleet.

SINGAPORE

Singapore had 61 business jets at the end of 2020 – the same as at the end of 2019. Changes during the year were one new delivery, six pre-owned additions and seven deductions. Overall, 46% of the business jets belonged to the long-range size category, followed by the large and medium size categories, which both had 15%.



FOR ALL COUNTRY PROFILES PLEASE VISIT: **WWW.ASIANSKYMEDIA.COM**

JAPAN

Japan had 61 business jets as of year-end 2020. The fleet size decreased by two since the previous year, equivalent to a deduction rate of 3.2% This is attributed to two new deliveries, five pre-owned additions, and nine deductions. 43% of the country's jets belong to the light size category, followed by the long-range (28%) and very light (11%) size categories. Textron and Gulfstream are the most popular OEMs in the country, accounting for 48% and 21% of the total fleet respectively.

PHILIPPINES

The Philippines had 53 business jets as of year end 2020. The fleet size increased by three business jets from the previous year, giving a growth rate of 6.0%. The growth is attributed to one new delivery, four pre-owned additions, and two deductions. Around 40% of the jets belong to the light category, followed by large (23%) and medium (23%) size categories.

INDONESIA

Indonesia had 51 business jets at year-end 2020. The fleet size increased by two since the year prior, equivalent to a growth rate of 4.1%. The growth is attributed to one new delivery, two pre-owned additions, and one deduction. One third of the jets belong to the large size category, followed by light (24%) and medium (20%) sized jets.

THAILAND

Thailand had 34 business jets at year-end 2020. The fleet size stayed the same as at the end of 2019. Thailand saw one new delivery and one deduction in 2020. The long-range size category continued to be the most dominant in the country, accounting for 32% of Thailand's total fleet, followed by medium (24%) sized jets.

SOUTH KOREA

South Korea had 17 business jets as of year-end 2020. The fleet size decreased by four business jets, equivalent to a reduction of 19.0%. No new deliveries or pre-owned additions entered South Korea in 2020.The long-range size category is the most dominant one in South Korea, accounting for 35% of the total fleet in South Korea.

NEW ZEALAND

New Zealand had 22 business jets at year-end 2020. The fleet size increased by three units, giving a 15.8% growth rate. The growth is comprised of three pre-owned additions. Textron is the most popular OEM in New Zealand, accounting for 45% of the total fleet in the country.

TOTAL FLEET BY COUNTRY/REGION AND OEM

1,232 in Total

	BOMBARDIER	GULFSTREAM	TEXTRON	DASSAULT	EMBRAER	AIRBUS	BOEING	HONDA	OTHERS	TOTAL	% OF TOTAL	
MAINLAND CHINA	96	124	46	33	14	15	13	1		342	28%	342
AUSTRALIA	81	12	78	11	10	3			16	211	17%	211
INDIA	31	8	54	21	21	1	1			137	11%	137
HONG KONG SAR	37	70	2	5	1	4	3			122	10%	122
SINGAPORE	28	18	4	4	4		1	1	1	61	5%	61
JAPAN	9	13	29	5			1	4		61	5%	61
MALAYSIA	21	11	8	4	2	5	4		2	57	5%	57
PHILIPPINES	8	14	25	3		1			2	53	4%	53
INDONESIA	9	8	17		13		2		2	51	4%	51
THAILAND	2	11	10	2	2	4	2	1		34	3%	34
TAIWAN	10	11	3		1	4				29	2%	29
NEW ZEALAND	4	2	10	4	1				1	22	2%	22
SOUTH KOREA	2	4	6	1		1	3			17	1%	17
MACAO SAR	4	3		1	2					10	1%	10
VIETNAM		3		1	2		1			7	1%	7
OTHERS		3	6	2		1	5		1	18	1%	18
TOTAL	342	315	298	97	73	39	36	7	25	1,232	100%	

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AIRCRAFT SPOTLIGHT

DASSAULT FALCON 10X

DASSAULT AVIATION UNVEILS THE INDUSTRY'S LARGEST BUSINESS JET

Most newly introduced aircraft are iterations of current products—stretched, re-winged, re-engined or upgraded in some other way. It is cost-effective and usually gives customers sufficient reason to move up to something new.

Dassault has taken a distinctly different approach in recent years, making the heavy investment to introduce two all-new aircraft as a means of seizing the high-ground in the high end market segments.

Its Falcon 6X mated an all-new fuselage—with the largest cabin cross section in a purpose-built business jet—to an all-new wing offering high-speed efficiency and classic Falcon short-field capabilities. Since March 10, that airplane has been in the air in a flight test program aimed at certification in 2022.

With flight testing successfully launched, Dassault decided it was time to take the wraps off its second entirely new aircraft—the just announced Falcon 10X. That airplane, unveiled by Dassault Aviation Chairman and CEO Eric Trappier on May 6 in Paris, immediately caused a stir among business jet customers around the world, and likely also in Montreal and Savannah, where Bombardier and Gulfstream aircraft are built.

That is because the 10X establishes a new standard for cabin size, as well as in many dimensions of performance. The 10X eclipses all its competitors with a cabin that is nearly eight inches (20 cm) wider than the next largest cabin, and has a cabin height of six-feet, eight inches (2.03 m)—the tallest in the industry. The 10X cabin has approximately 15 percent more cabin volume than its ultra long-range competitors, the Gulfstream G700 or Bombardier Global 7500.

What will operators do with that extra space? For starters, they will be able customize to their hearts content. Traditionally, large cabin aircraft have relatively fixed cabin zones of equal dimensions. In the 10X, each of four zones has four windows per side. From there, you could expand

a zone — say an aft stateroom with full-size queen bed, dressing area and shower — to up to eight windows. Or create an intimate media center with just three windows, a divan and large-screen TV monitor. Or expand a traditional dining/conference area. Or create a compartment with semi-private individual berths, like some airline first class sections, for better rest. Or… you get the idea.

Back to the bed for a moment — because who would not want a mega-yacht-style stateroom on their jet. Dassault notes that beds on competing jets are about 10 inches (25 cm) shy of being a true queen. The bed on the 10X certainly looks like a comfy bed at home, not like something wedged into a recreational vehicle.

Dassault also points out that cabin pressurization will be the lowest in the industry, with a 3,000 foot pressure altitude while cruising at 41,000 feet. Humidification will add to a comfortable and healthy environment, as will 100 percent pure air flow from a new filtration system that removes ozone and pollution from volatile organic compounds.

Cabin air will flow from ceiling and floor vents to provide even temperatures throughout the length of the cabin and from top to bottom as well. Each of the four zones will have individual temperature controls. The 10X windows are nearly 50 percent bigger than those on the 8X, Dassault's current flagship, and offer the most window area of any business jet and the brightest cabin, according to the company.

Like its predecessors, the 10X will be completed in Little Rock, Arkansas where old world craftsmanship happily coexists with the latest digital production techniques, so we fully expect that 10X cabins will be beautiful, functional and

quiet. Dassault says the new aircraft will be at least as quiet as the 8X , which they say is the quietest in the industry.

Some might argue that products from Boeing and Airbus are, in fact, larger business jets. So let us be clear: The Falcon 10X will be the largest purpose-built business jet. Business jets have the advantage over converted airliners in fuel efficiency and their ability to access smaller airports, including those without the specialized ground equipment or ramp space to accommodate airliners. They also fly at higher altitudes, avoiding congested air lanes and turbulence. A business jet such as the Falcon 10X would offer a far more economic operation, while providing many of the advantages of a big, big cabin.

Dassault has traditionally built aircraft with large cabins and relatively modest ramp presence, making them easier to operate at small airports. The 10X, somewhat surprisingly for its cabin size, retains these traits. From tip to tail, at 109.7 feet (33.4 m), it is actually three inches (7.6 cm) shorter than the G700 and a foot shorter than the Global 7500.

The wingspan on the Falcon 10X is about five feet (1.5 m) greater, but yields exemplary performance at both ends of the speed envelop, as well as high efficiency, even with the industry's largest cabin. Previous Falcons were optimized around a long-range cruise of Mach 0.80. The 10X, with a high-aspect-ratio wing and new aerodynamics, is optimized for 7,500 nautical miles range at Mach 0.85, with a top speed of Mach 0.925.

So even at high-speed cruise, the Falcon 10X will connect distant city pairs such as Beijing and New York or London and Singapore nonstop.

The Falcon 10X wing is made entirely of carbon fiber composites, a first in business aviation and a true technological leap forward. Dassault employs the same techniques used to build the immensely strong Rafale fighter wing. The 10X wing is equipped with high lift devices for excellent low-speed performance. In this case, each wing has two large flaps, four slats and three spoilers. Preliminary figures given for takeoff distance is less than 6,000 feet and landing distance less than 2,500 feet. The aircraft will, according to Dassault, have the best steep approach capability for access to London City Airport and other airports with non-standard approaches.

Dassault predicts a very smooth ride in turbulence thanks to a strong, yet flexible, wing combined with Dassault's advanced digital flight control system, which can make small, rapid responses to gusts.

Dassault was the first business jet company to introduce digital flight controls with the Falcon 7X, since refined on the 8X and 6X. But the 10X goes a considerable step further with technology directly drawn from the Rafale fighter safety features.

Though the 10X has two engines, it has one smart throttle to control them. It is fully integrated into the digital flight control system in order to provide a number of safety advantages. For starters, it simplifies power management in a range of conditions, from flying efficient climb and descent profiles to dealing with one-engine-inoperative scenarios. But the greatest advance is an automatic recovery mode in the event of a wake turbulence encounter or other upset scenario.

The flight deck is designed for simplicity and reduced workload. There are fewer switches plus touchscreens throughout. Dual HUDs tied to the FalconEye combined vision system will allow pilots to conduct future EVS-to-land operations with essentially zero ceiling. The flight deck is a roomy space, allowing pilot seats in the future to fully recline, so that one pilot could rest in cruise. While this is not permitted today, Dassault anticipates possible regulatory changes that would allow long-duration missions with just two crew members in a cockpit specifically designed around one-pilot management.

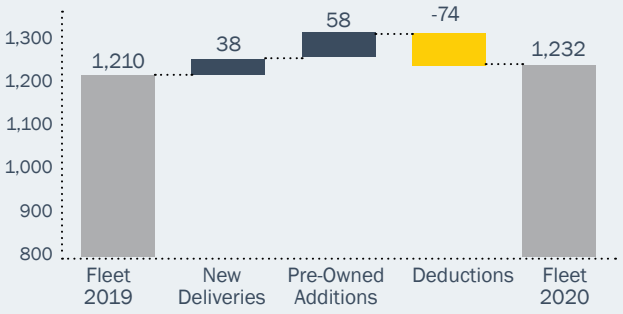
The 10X is the first Falcon to have a T-tail, which designers say emerged as the lowest drag option for a twin-engine aircraft at high cruise speeds. A pair of Rolls-Royce Pearl 10X engines — the most recent and powerful in the Pearl family of engines — supplies more than 18,000 pounds of thrust each. The engine is five percent more efficient than its predecessor, the BR725, and is designed to be able to accept 100 percent sustainable aviation fuels.

While the 10X has yet to fly, its specifications position it at the top of the market, an enviable position for any company. Dassault expects to certify it in end of 2025.

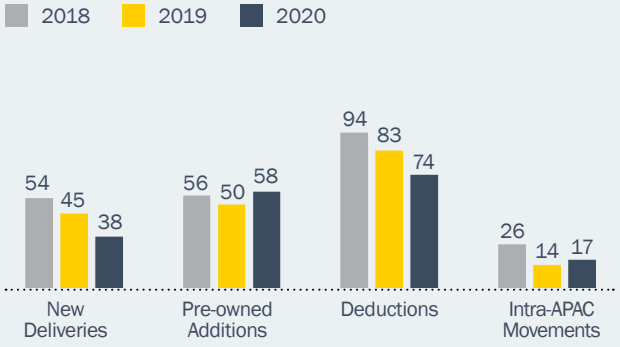
www.dassault-aviation.com

MARKET TRENDS

BUSINESS JET ADDITIONS AND DEDUCTIONS



HISTORICAL MOVEMENTS



There were a total of 1,232 business jets in operation in the Asia-Pacific region as of year-end 2020. The fleet saw a net increase of 22 units from the 1,210 aircraft at year-end 2019, attributed to 38 new deliveries, 58 pre-owned additions and 74 deductions. Overall, 2020 witnessed fewer deductions and new deliveries, but more pre-owned aircraft additions when compared to the previous year. Additionally, there were also 17 intra-regional movements in 2020 – an increase of 21.4% since 2019.

The business jet fleet in the Asia-Pacific region posted net growth of 1.8% in 2020, an increase from the 1.0% growth in 2019. The region added 96 business jets in 2020 (inclusive of both new deliveries and pre-owned additions), which were partially offset by 74 deductions attributed to retirements, transactions, and relocations out of the region – resulting in a net addition of 22 business jets.

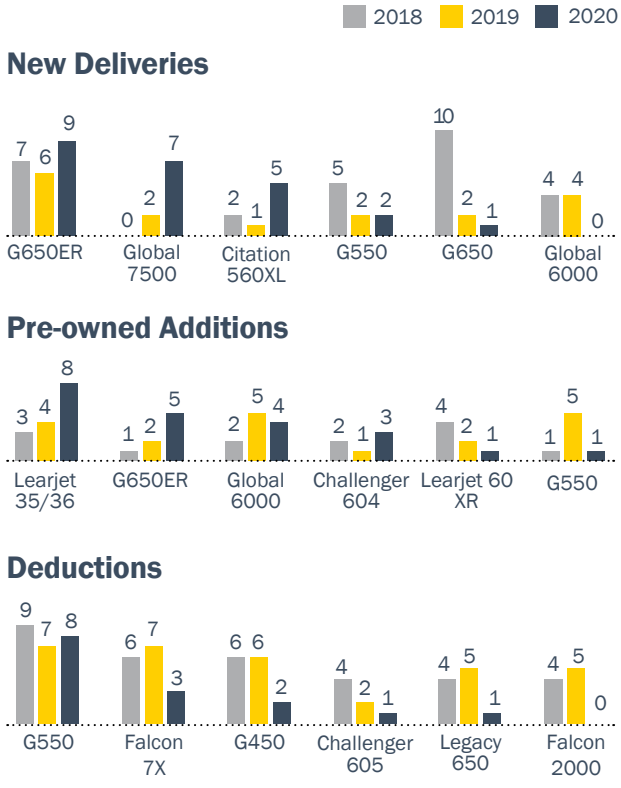
Gulfstream delivered 15 new aircraft into the region, the most of any business jet OEM and accounted for 39% of the total new deliveries in 2020. The G650/ER family remained the most popular newly delivered aircraft for the third consecutive year, accounting for ten new aircraft deliveries.

Bombardier had the highest number of pre-owned additions in the region – a total of 24 business jets, which accounted for 41% of the total pre-owned deliveries in 2020. The Learjet 35/36 was the most popular pre-owned Bombardier model, with eight pre-owned aircraft added.

Bombardier also had the highest number of deductions from the region - a total of 22 aircraft (30% of the total deductions). Gulfstream and Textron also witnessed significant deductions – 18 (24%) and 14 (19%) aircraft, respectively. The G550 saw the most fleet deductions in 2020 – eight.

Pessimism levels were high regarding the Asia-Pacific business jet performance at the start of 2020. Global economic uncertainty due to the COVID-19 pandemic led many to fear

TOP MODELS IN LAST 3 YEARS



Rank by 2020 net fleet growth from the largest.

that the Asia-Pacific business jet fleet demand, which had already started showing signs of slowing down in the previous years, would decrease. However, as commercial flights were cancelled all over the world, the need for safe air travel among Asia-Pacific's HNWIs proved to be a much stronger driver for business jet demand.

Commercial aviation is unlikely to pick-up anytime soon as the virus continues unabated in different parts of the world in the form of second and third waves. Business jets are thus expected to continue being in high demand and fill in the void left by grounded commercial flights. Business jet fleet numbers are expected to increase in 2021 – though at a slower rate of 1.0% as compared to 2020.

BUSINESS JET MOVEMENTS[1]

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

New Deliveries

NET CHANGE IN 2020	FLEET SIZE (UNITS)		AIRCRAFT VALUE ($M)[2]	NET CHANGE IN 2020 ($M)
3 ▲	15	GULFSTREAM	$1006.7	$273.8 ▲
1 ▼	9	BOMBARDIER	$623.4	$57.4 ▲
3 ▲	7	TEXTRON	$97.9	$48.7 ▲
1 ▲	2	AIRBUS	$193.0	$210.2 ▼
1 ▼	2	PILATUS	$22.3	$5.0 ▼
-	1	BOEING	$100.0	$235.0 ▼
6 ▼	1	DASSAULT	$53.8	$238.9 ▼
1 ▼	1	EMBRAER	$4.3	$31.1 ▼
7 ▼	**38**	**TOTAL**	**$2101.4**	**$361.0 ▼**

Cirrus and Honda together had 5 new deliveries (with value $20.6M) in 2019 but none in 2020.

Pre-owned Additions

NET CHANGE IN 2020	FLEET SIZE (UNITS)		AIRCRAFT VALUE ($M)	NET CHANGE IN 2020 ($M)
9 ▲	24	BOMBARDIER	$196.7	$0.7 ▼
4 ▲	11	TEXTRON	$29.5	$4.3 ▲
2 ▼	10	GULFSTREAM	$314.5	$42.4 ▲
3 ▲	5	DASSAULT	$38.2	$14.6 ▲
3 ▼	4	EMBRAER	$26.4	$35.4 ▼
1 ▼	2	AIRBUS	$55.8	$60.1 ▼
-	1	BOEING	$42.3	$40.1 ▲
-	1	IAI	$0.2	$0.1 ▼
8 ▲	**58**	**TOTAL**	**$703.5**	**$0.4 ▲**

Eclipse and Honda together had 2 pre-owned additions (with value $4.8M) in 2019 but none in 2020.

Deductions

NET CHANGE IN 2020	FLEET SIZE (UNITS)		AIRCRAFT VALUE ($M)	NET CHANGE IN 2020 ($M)
4 ▲	22	BOMBARDIER	$221.9	$23.9 ▲
2 ▲	18	GULFSTREAM	$259.9	$51.7 ▼
3 ▼	14	TEXTRON	$23.9	$41.3 ▼
-	8	EMBRAER	$84.4	$20.1 ▲
10 ▼	7	DASSAULT	$124.6	$86.8 ▼
3 ▼	2	BOEING	$71.0	$117.5 ▲
1 ▲	2	IAI	$0.7	$0.4 ▼
1 ▲	1	PILATUS	$9.5	$9.5 ▲
9 ▼	**74**	**TOTAL**	**$795.8**	**$279.3 ▼**

Airbus had 1 deduction (with value $36M) in 2019 but none in 2020.

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.
Note (2): Aircraft Value is sourced from third party valuation sources and ASG research, which are based on the aircraft's year of manufacture, with assumptions of standard equipment, configuration and average yearly utilization.

BUSINESS JET TRANSACTIONS

New Deliveries

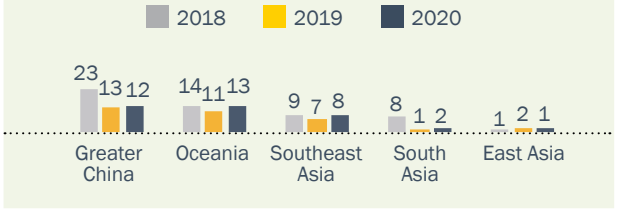
FLEET SIZE (UNITS)		AIRCRAFT VALUE ($M)
54	2018	$2,624
45	2019	$2,462
38	2020	$2,101

Pre-owned Transactions

FLEET SIZE (UNITS)		AIRCRAFT VALUE ($M)
177 (58 / 13 / 41 / 65)	2018	984 / 429 / 195 / 924 $2,532
120 (35 / 5 / 31 / 49)	2019	601 / 339 / 125 / 591 $1,656
121 (44 / 8 / 30 / 39)	2020	555 / 243 / 121 / 603 $1,522

Domestic Transactions | Regional Transactions | Into APAC | Out of APAC

DOMESTIC TRANSACTIONS



TRANSACTION:	Only include whole sale transactions. Share/lease/ internal transactions are not included.
DOMESTIC TRANSACTIONS:	Transaction takes place within same country.
REGIONAL TRANSACTIONS:	Transaction takes place within Asia-Pacific (E.g., Aircraft sold from China to buyer in Singapore)
INTO APAC:	Aircraft sold by seller based outside of Asia-Pacific; Aircraft is now based in Asia-Pacific.
OUT OF APAC:	Aircraft sold by seller based in Asia-Pacific; Aircraft is now based outside of Asia-Pacific.

In terms of market value, new deliveries declined from US$2.46 billion in 2019 to US$2.10 billion in 2020. Pre-owned transactions saw a small increase from 120 aircraft in 2019 to 121 aircraft in 2020. However, despite this increase, the market value of pre-owned transactions actually saw a significant reduction – from US$1.66 billion in 2019 to US$ 1.52 billion in 2020.

With regards to the transaction activity, light size category saw the biggest growth – from 28 (ten new deliveries and 18 pre-owned) to 37 (eight new deliveries and 29 pre-owned), giving the net addition of nine aircraft. Long-range aircraft transactions increased by five - from 57 (20 new deliveries and 37 pre-owned) in 2019 to 62 (25 brand-new and 37 pre-owned) in 2020. On the other hand, large aircraft transactions saw the largest decrease by 13 – from 42 (eight new deliveries and 34 pre-owned) in 2019 to 29 (all pre-owned) in 2020. Also notable amongst the pre-owned transactions was a decrease in corporate airliner transactions – from nine in 2019 to five in 2020, which would explain the reduction in the pre-owned transaction market value, despite the increase in transaction activity.

Despite the fact that light jets increased the most in transaction activity, long-range jets remained the most frequently transacted aircraft category in 2020, equating to a transaction value of US$0.9 billion.

TAG Aviation

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ONE TAG SPIRIT

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SINGAPORE

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Sino Jet self-owned BBJ

SINO JET NAMED THE LARGEST FLEET IN ASIA-PACIFIC FOR THE SECOND TIME

PASSENGER SAFETY REMAINS TOP PRIORITY

Sino Jet has been named by Asian Sky Media as the operator with the biggest fleet in Asia for the second time in a row, with a fleet of 47 business jets. Despite a dramatic drop in aviation activities caused by the pandemic, Sino Jet grew its fleet size steadily and continues to lead the business aviation market. Sino Jet has further strengthened its uniformity in terms of fleet composition to specialize in medium and large cabin aircraft, which account for over 90% of its fleet.

Sino Jet is committed to expanding its service scope by lifting the industry benchmark with enhanced ground handling services and capabilities, as well as the formation of several fixed base operator (FBO) partnerships.

Sino Jet is headquartered in both Beijing and Hong Kong and is supplemented by satellite offices in many other cities including Shanghai, Hangzhou, Chengdu, Guangzhou, Shenzhen, Macao and Singapore. This strategic network of offices inside and outside mainland China is the successful key to providing top-tier customized business jet services, whilst accommodating for aircraft on different registries. Other specialized services include, but are not limited to, aircraft purchase consultation, aircraft financing, maintenance, air charter, aircraft ground handling and FBO (fixed base operator) services. Sino Jet is the first operator to be awarded with IS-BAO Stage 3 certification, which denotes the highest safety standard recognized internationally.

Sino Jet headquarter in Beijing

To combat the harsh operating environment in 2020, with no compromises to safety, Sino Jet successfully completed a number of large-cabin jet deliveries from overseas through effective flight planning and utilization of international resources. At the same time, Sino Jet enhanced its maintenance capabilities to cover the latest aircraft technologies to ensure minimum maintenance downtimes for the newest aircraft types to enter service.

Incidentally, Sino Jet's exceptionally good work during this unprecedented tough time has increased its word-of-mouth advertisement. By revealing the best sides of business jet travels, particularly in terms of time efficiency, safety and privacy, Sino Jet has welcomed an ever increasing client base, contributing to a positive development in business aviation.

Sino Jet engineering team is certified on many aircraft models.

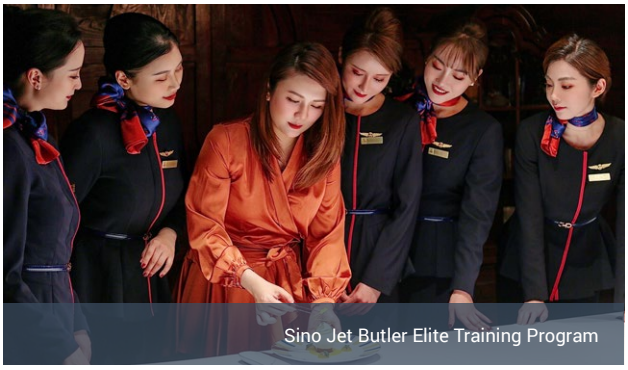
With the addition of the latest aircraft models to its fleet, Sino Jet has a strategically structured fleet composition. Sino Jet is currently the largest operator of large cabin aircraft, namely the Gulfstream G650(ER), G550, Dassault 8X, 7X, Bombardier 6500, Global 6000, ACJ, BBJ, and Embraer Lineage 1000. The scale of experience and expertise in aircraft management, together with its technical resources provides an incomparable advantage over its competitors.

Continuous elevation of service standards and quality is one of the company goals. Sino Jet aims to expand its ground services to provide a consistent premium journey experience to its clients. Sino Jet has launched its first fixed base operator (FBO) at Nanchang Changbei Airport; and it has also begun a joint operation of FBO and MRO businesses at Chengdu Shuangliu International Airport with Sichuan Province Airport Group. At the same time, Sino Jet has further expanded its footprint by being the first business jet operator to station at Hainan Free Trade Port. This expansion will bring operating costs down, benefiting clients in the Sanya, Haikou regions where business aviation is booming with increased demand.

As business grows, Sino Jet takes its corporate social responsibilities very seriously and is committed to help advance

Sino Jet FBO at Nanchang Airport

society. During the COVID-19 pandemic, Sino Jet has repeatedly shipped medical equipment and resources by its business jets across mainland China; donated multifunctional mobile medical stations to the local Hubei provincial government; provided free ground handling services to support Chinese government flight activities; partaken in industry forums and online events to share its expertise in safety and flight operations and established Sino Jet Academy to give corporate flight attendant training to aspired talents. Such efforts are well received by the society as well as the industry.



Sino Jet Butler Elite Training Program

Sino Jet was awarded with the highest recognition in 2020 - the World's Leading Private Jet Company at the World Travel Awards, which was based on fleet size, customers satisfaction and commitment towards corporate social responsibility etc.

Looking forward, Sino Jet aims to continue its development by further enhancing its operational efficiency, uplifting safety and service standards and promoting sustainable industrial growth; to be the business aviation operator held with the highest regard for safety, service quality, trust and reliability.

www.sinojet.org

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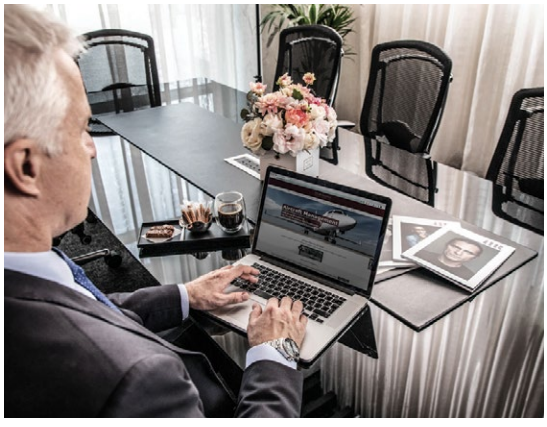

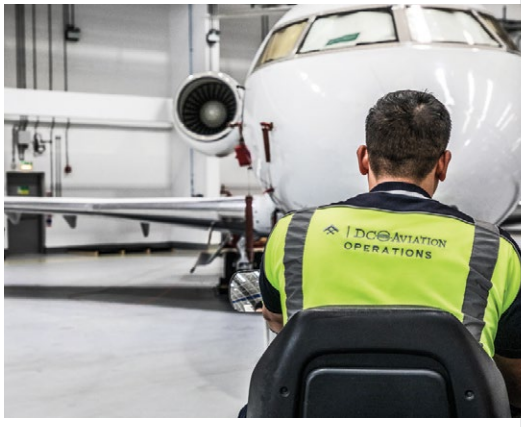

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MARKET UPDATES:
OPERATOR OVERVIEW

The top 20 Asia-Pacific business jet operators had a total of 421 business jets in operation as of year-end 2020. Together, these operators accounted for 34% of the total business jet fleet in the region. Amongst the "Big Five" operators, Sino Jet, with a fleet of 47 aircraft, was the largest business jet operator for the second year in a row. TAG Aviation and BAA came in second and third, with fleets of 43 and 41 business jets, respectively.

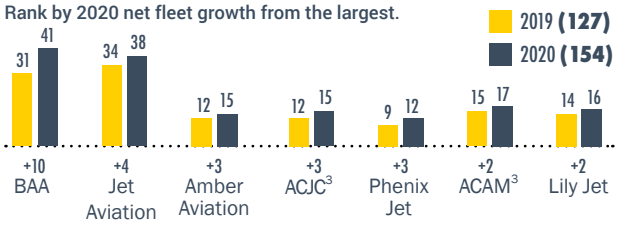
In 2020, BAA experienced the largest increase in its fleet (by ten aircraft), followed by Jet Aviation (four). Amber Aviation, Australian Corporate Jet Centres (ACJC) and Phenix Jet also saw notable increases – all growing by three units in 2020. Although this change did not have any effect on Amber and ACJC's rank, it did help Phenix Jet jump seven ranks - the largest ranking change of any Asia-Pacific operator.

There are six operators among the top 20 operators that are seeing continued year-on-year growth, with their fleets increasing for three consecutive years. They are Sino Jet, Asian Corporate Aviation Management (ACAM), ACJC, Amber Aviation, Phenix Jet and Brilliant Jet - while Sino Jet is the only "Big Five" operator to see consecutive fleet growth. Amber Aviation, with a fleet of 15 business jets, has also seen solid growth since its launch, successfully expanding its fleet every year.

The total fleet operated by the top 20 operators increased by 18 aircraft in the past year - from 403 in 2019 to 421 in 2020, an increase of nearly 4%. Of the top 20 operators in the region, 14 were based, or primarily operated, in Greater China.

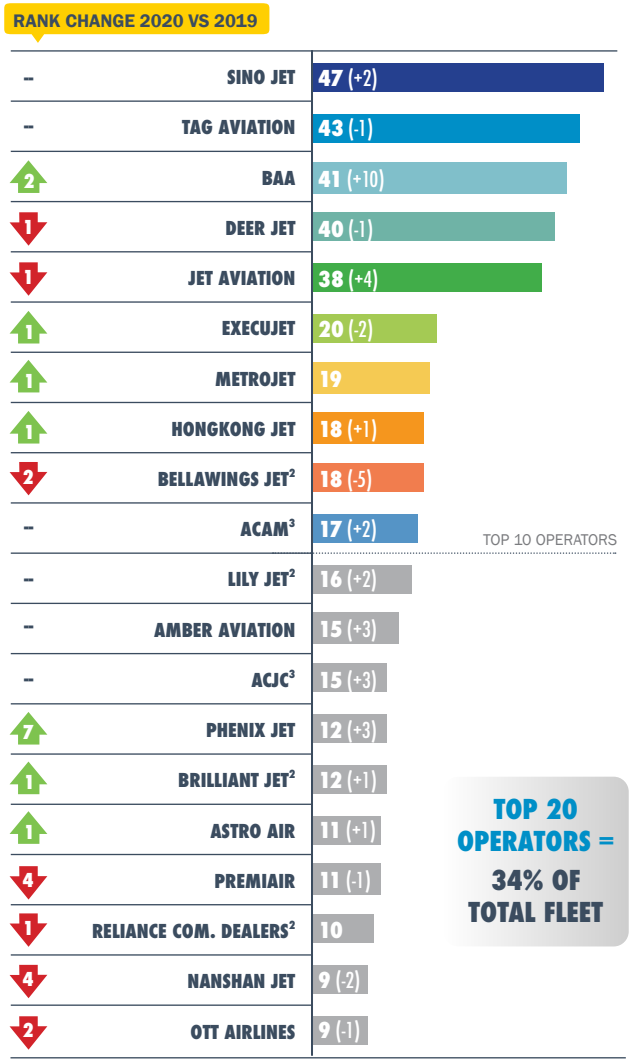
FASTEST GROWING OPERATORS

Rank by 2020 net fleet growth from the largest.



Only operators that added two more aircraft and had a growth rate of above 5% are shown in the graph

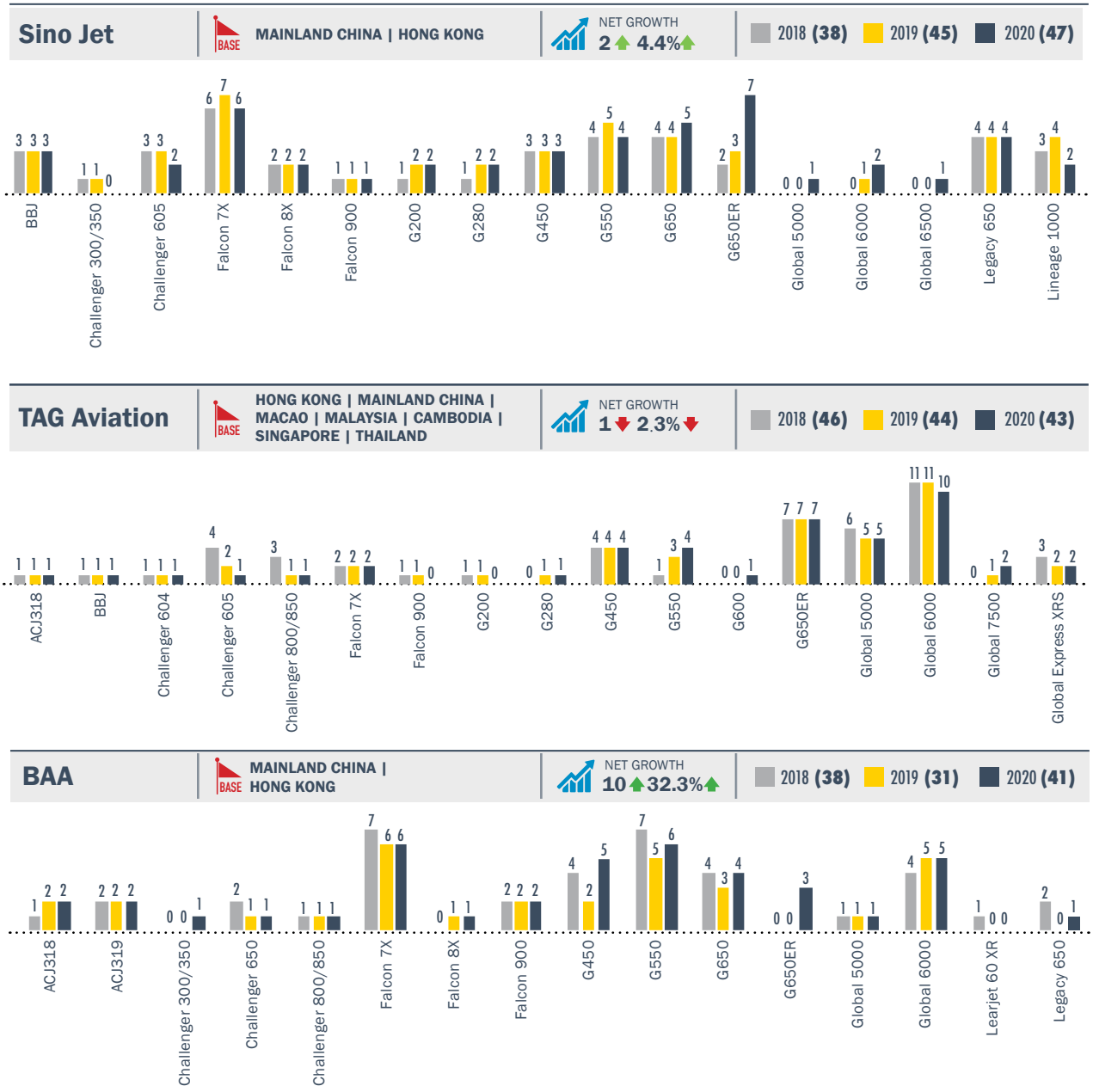
TOP 20 OPERATORS BY FLEET[1]



TOP 20 OPERATORS = 34% OF TOTAL FLEET

Note(1): Special mission and government operators are not included.
Note(2): The figures are only based on ASG's internal research and not verified by the operators.
Note(3): ACAM - Asian Corporate Aviation Management; ACJC - Australian Corporate Jet Centres

FLEET BY OPERATOR AND MODEL



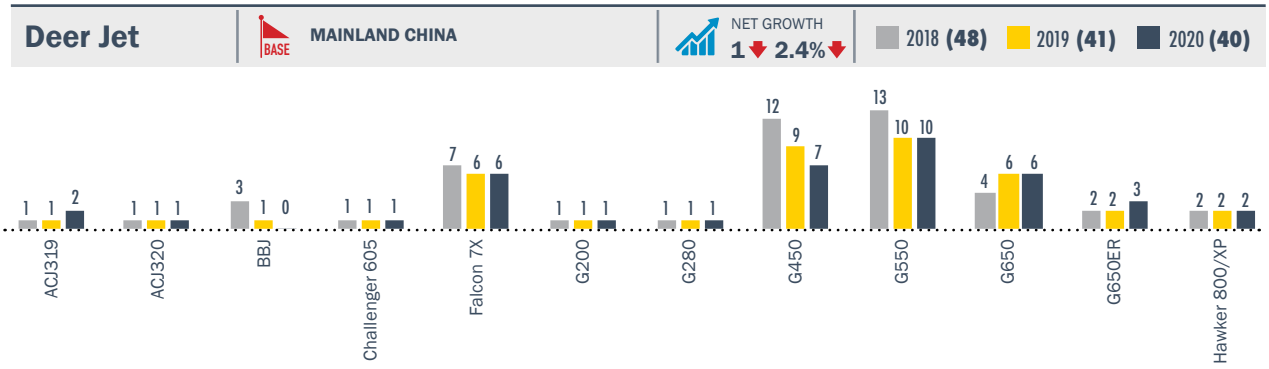
TOP OPERATORS IN EACH COUNTRY

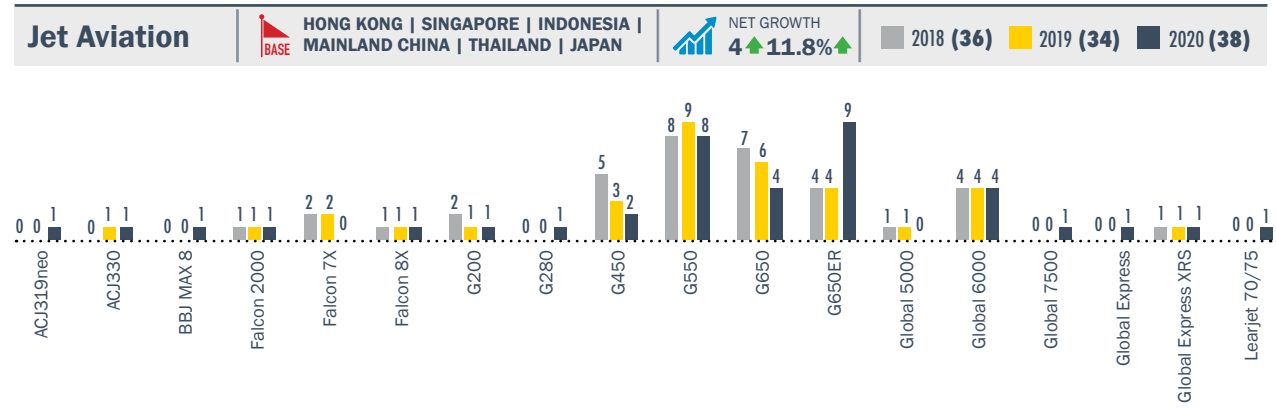
Australia, with 211 business jets, had the second largest fleet in the Asia-Pacific region in 2020. With the acquisition of JetCity's fleet, Australian Corporate Jet Centres operated the largest business jet fleet in Australia – 15, in 2020.

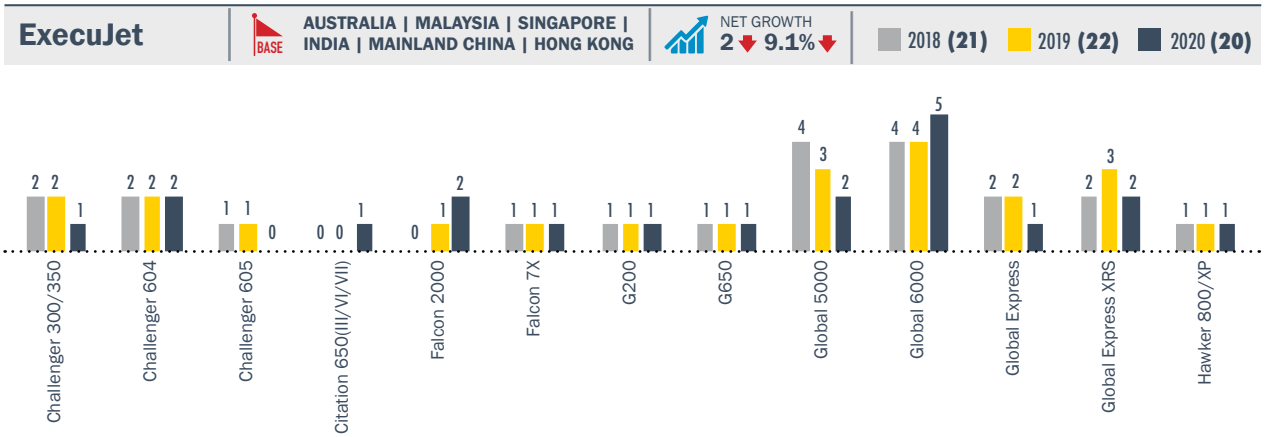
Reliance Commercial Dealers was the largest operator in India – operating a fleet of ten aircraft. Club One Air, which was the joint largest operator in India along with Reliance Commercial Dealers till 2019, saw a reduction in its fleet by two units. It is currently the second largest operator in the country, with a fleet of eight aircraft.

Phenix Jet, with a fleet of 12 jets, remained the largest business jet operator in Japan in 2020. Aero Asahi and Noevir Aviation were the joint-second biggest non-government operators, each with a fleet of three business jets at year-end 2020.

Philippine operators did not witness any major changes in fleet size during 2020, with the fleet of the top 10 operators remaining unchanged. Asian Aerospace and Challenger Aero Air remained the largest operators in the Philippines, each operating a fleet of six business jets.







With a fleet of seven aircraft, Malaysian operator Redland Aviation remained the largest non-government operator in the country in 2020. ExecuJet came next with a fleet of five based in Malaysia, up by one since year-end 2019. Smooth Route, with a fleet of four, dropped one rank in 2020 and was the third largest non-government operator.

South Korean operator Korean Air's fleet reduced by four aircraft in 2020 with the permanent removal from service of four Cessna Citation 560 Ultras. The four Citations had been used as training aircraft by Korean Air's flight academy but fell out of favour when a pair of Citation CJ1s were delivered several years ago. Despite the decrease in fleet numbers, Korean Air remained the largest operator in South Korea with a fleet of five aircraft. SK Telecom was the second largest operator in the country – with a fleet of three aircraft.

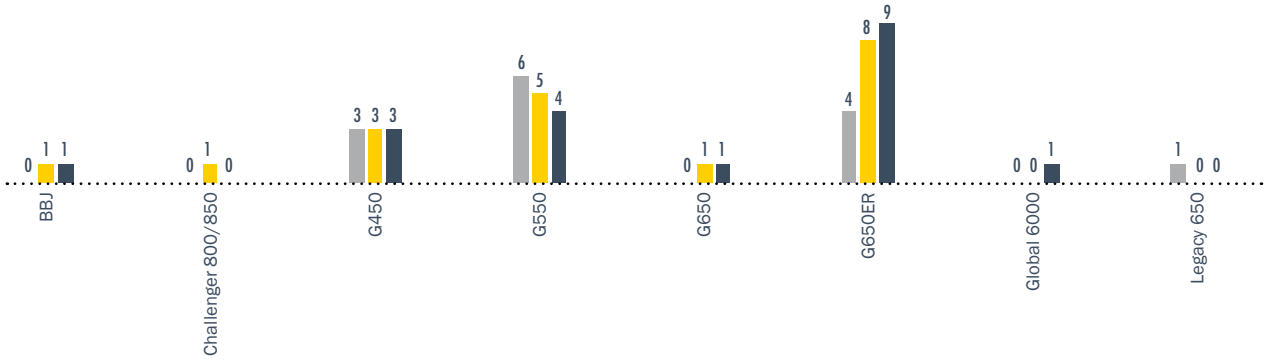
Thai operator MJets operated a fleet of six aircraft in 2020, unchanged from the previous year, and was the largest non-government operator in Thailand.

Metrojet

BASE: HONG KONG | VIETNAM | MAINLAND CHINA

NET GROWTH: 0 ● 0.0% ●

2018 (14) 2019 (19) 2020 (19)

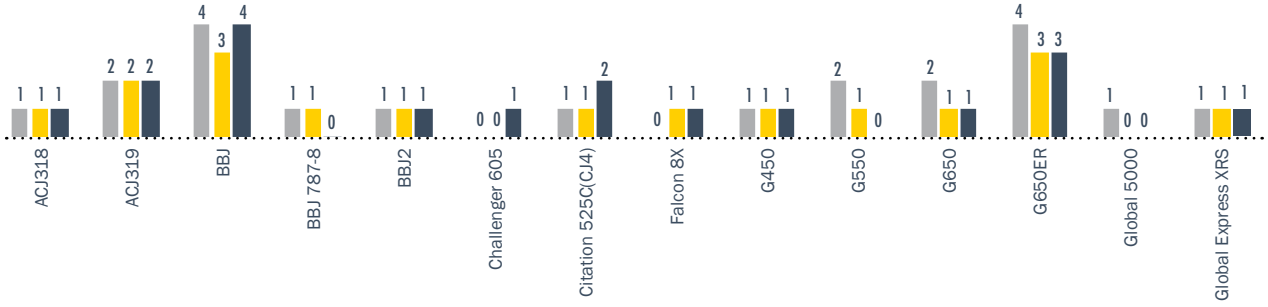


Hongkong Jet

BASE: MAINLAND CHINA | HONG KONG | MALAYSIA | THAILAND

NET GROWTH: 1 ▲ 5.9% ▲

2018 (21) 2019 (17) 2020 (18)

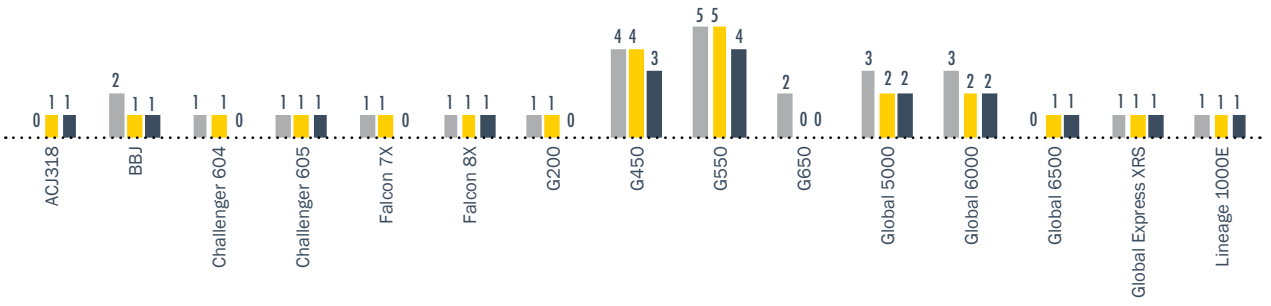


Bellawings Jet

BASE: HONG KONG | MAINLAND CHINA

NET GROWTH: 5 ▼ 21.7% ▼

2018 (26) 2019 (23) 2020 (18)

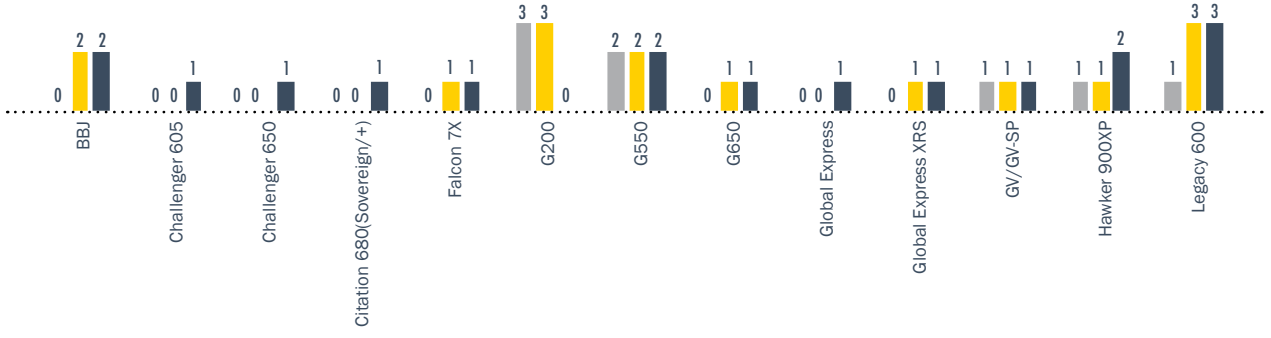


ACAM

BASE: SINGAPORE | INDONESIA

NET GROWTH: 2 ▲ 13.3% ▲

2018 (8) 2019 (15) 2020 (17)



METROJET

New Aviation Hangar Parking and Maintenance Facility Operational in Clark, 2021 Q2

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METROJET ENGINEERING CLARK

INTERVIEW WITH **SARITH VAIKUNTAN**, GENERAL MANAGER

Having secured a 25+25-year lease on a plot of land at Clark Airport in the Philippines, Hong Kong-based Metrojet broke ground on a new $25 million facility in early 2019. With the new hangar and maintenance facility complete and on the cusp of becoming operational, Asian Sky Media caught up with Sarith Vaikuntun, Metrojet Clark's general manager, to find out more about the facility as well as the country and OEM approvals that it currently has in place.

WHEN WILL THE NEW FACILITIES BECOME OPERATIONAL?

Our FAA audit was completed and passed on 22 April with upgraded Ops Specs and we will be accepting aircraft later in May.

HOW MUCH EXTRA SPACE WILL BE AVAILABLE IN THE HANGAR?

7,100 m² business aviation hangar floor space

11,000 m² apron and private taxiway

2,000 m² office and back shops

HOW MANY AIRCRAFT WILL YOU BE ABLE TO WORK ON AT THE SAME TIME?

With present manpower and skillset, we are now able to support up to 6C on Gulfstream G-450/550/650 and 4C on Bombardier BD-700 simultaneously.

YOU HAVE ADDED EXTRA PARKING SPACES AS WELL, HOW MANY AIRCRAFT WILL NOW BE ABLE TO PARK AT THE FACILITY?

With the new facility we can park up to ten long range business jets in the hangar. One of either a Boeing BBJ or Airbus ACJ can also be parked in the hangar.

WHAT APPROVALS DO YOU HAVE IN PLACE AT CLARK?

We currently have US FAA, Philippines CAAP, Cayman CAACI, Qatar QCAA, Isle of Man IOM and San Marino SMAR on Gulfstream and Bombardier Global series aircraft and intend to maintain the same in the new facility.

WILL YOU LOOK TO EXPAND ON THE APPROVALS THAT YOU CURRENTLY HAVE?

Yes, we are planning on applying for China CAAC and Hong Kong CAD approvals by early next year.

DO YOU HAVE A PROGRAM IN PLACE TO TRAIN LOCAL TALENT?

Yes, we do. Apart from the international team we already have here, we are looking to hire skilled and experienced Filipinos who left home for work and economic betterment that are now open to returning home to be with their families. The value they bring is to mentor and transfer skills to their local compatriots in order to attain world class standards. We have already been successful in attracting five talented individuals from OEMs.

ARE CLARK AND SUBIC BAY BOTH SUSTAINABLE? DO YOU SEE A TIME IN THE FUTURE ONE IS MORE POPULAR THAN THE OTHER?

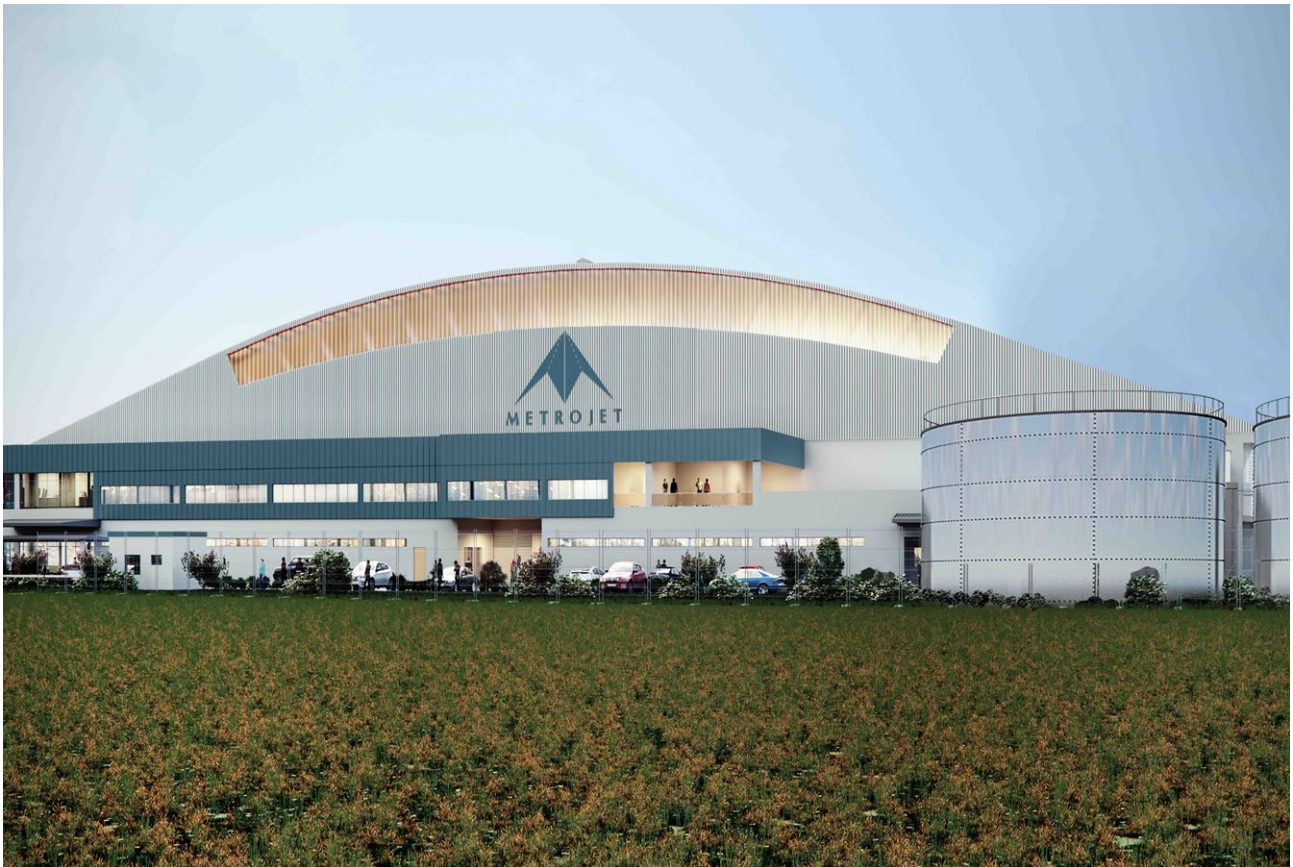
Yes, we think so. As the Philippines government is planning to move the private jet hub from Manila to elsewhere in Philippines, Clark and Subic are both good locations.

Clark is very sustainable because of its excellent infrastructure development plan and the new international airport that will open in Q2 2021. In pre-pandemic times, we had very frequent and direct flights from major cities in the region every week. This creates extra convenience for our operations and to the crew members. There is also a duty-free zone and a high-speed link to Manila.

WHAT ARE YOUR PLANS FOR 2021 AND BEYOND?

- Receive the additional approvals as listed earlier.
- Hire and train local talent.
- Identified in our 3-year plan the possibility of a helicopter link as well as an FBO.

www.metrojet.com

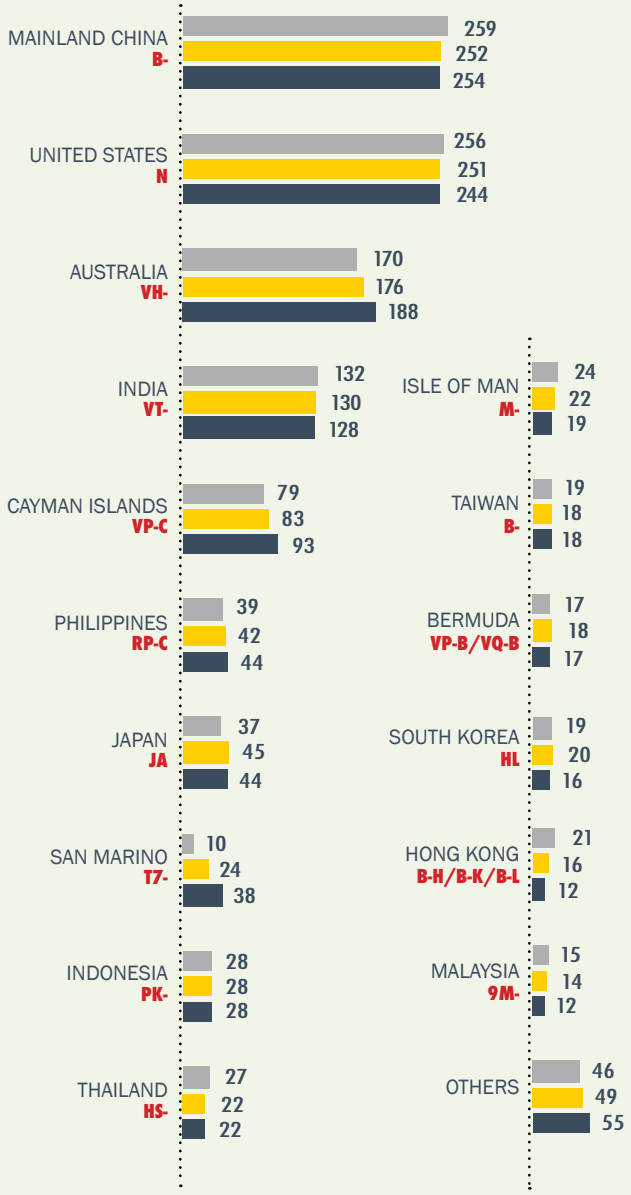


MARKET UPDATE:

AIRCRAFT REGISTRY OVERVIEW

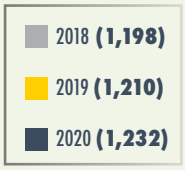
CHINA'S 'B- 'REGISTRY WAS THE MOST POPULAR AIRCRAFT REGISTRY IN THE ASIA-PACIFIC REGION AS OF YEAR-END 2020 – 254 JETS (21% OF THE FLEET). THE UNITED STATES 'N' REGISTRY WAS NEXT, WITH 244 JETS (20%), FOLLOWED BY AUSTRALIA'S 'VH-' AND INDIA'S 'VT-' REGISTRIES - WITH 188 (15%) AND 128 (10%) JESTS, RESPECTIVELY. TOGETHER, THE TOP FOUR REGISTRIES ACCOUNTED FOR AROUND 66% OF THE TOTAL FLEET IN THE ASIA-PACIFIC REGION.

NET FLEET GROWTH BY REGISTRY



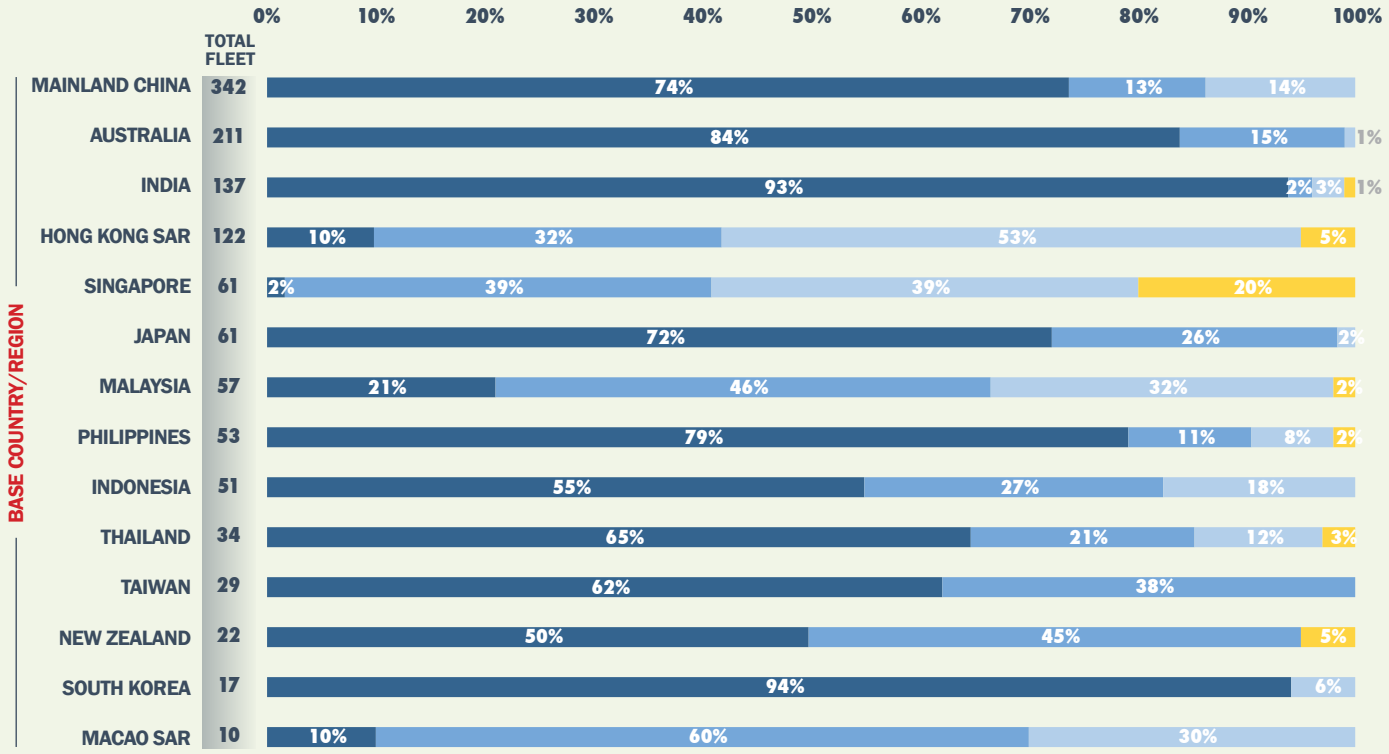
The majority of aircraft in the top three business jet markets in the Asia-Pacific region were registered on local registries - 74% of mainland China's 342 jets were B- registered, 84% of Australia's 211 jets were VH- registered, and 93% of India's 137 jets were VT- registered at the end of 2020. The popularity of the local registries can be attributed to the fact that the majority of aircraft owners in these regions are based and operate locally. Additionally, for countries like mainland China, aircraft registered with foreign registrations are subject to significant restrictions while operating in the country.

Macao SAR, Malaysia, New Zealand, Singapore, and Taiwan had the largest number of 'N' registered aircraft (on a percentage basis). A possible reason why operators in these regions prefer to opt for the United States 'N' registry is because it provides operational flexibility and cost effectiveness in maintaining validations and approvals.



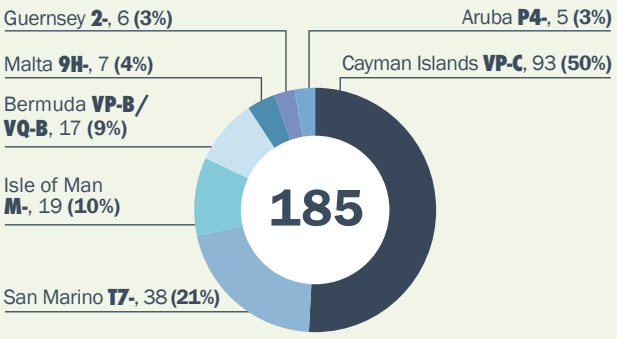
OFFSHORE registrations include Cayman Islands, Isle of Man, Bermuda, San Marino, Aruba, Guernsey.
OTHERS indicates any registration except for Local, US and Offshore.

REGISTRY COMPOSITION

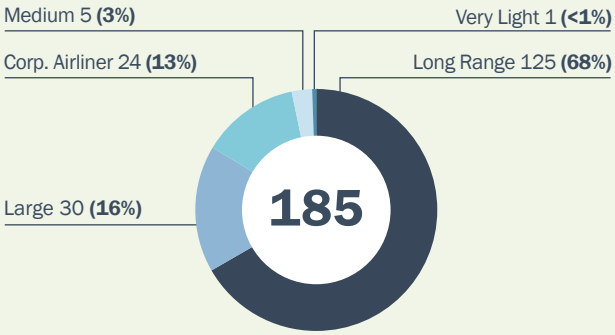


OFFSHORE REGISTRY MARKET

Offshore Registry



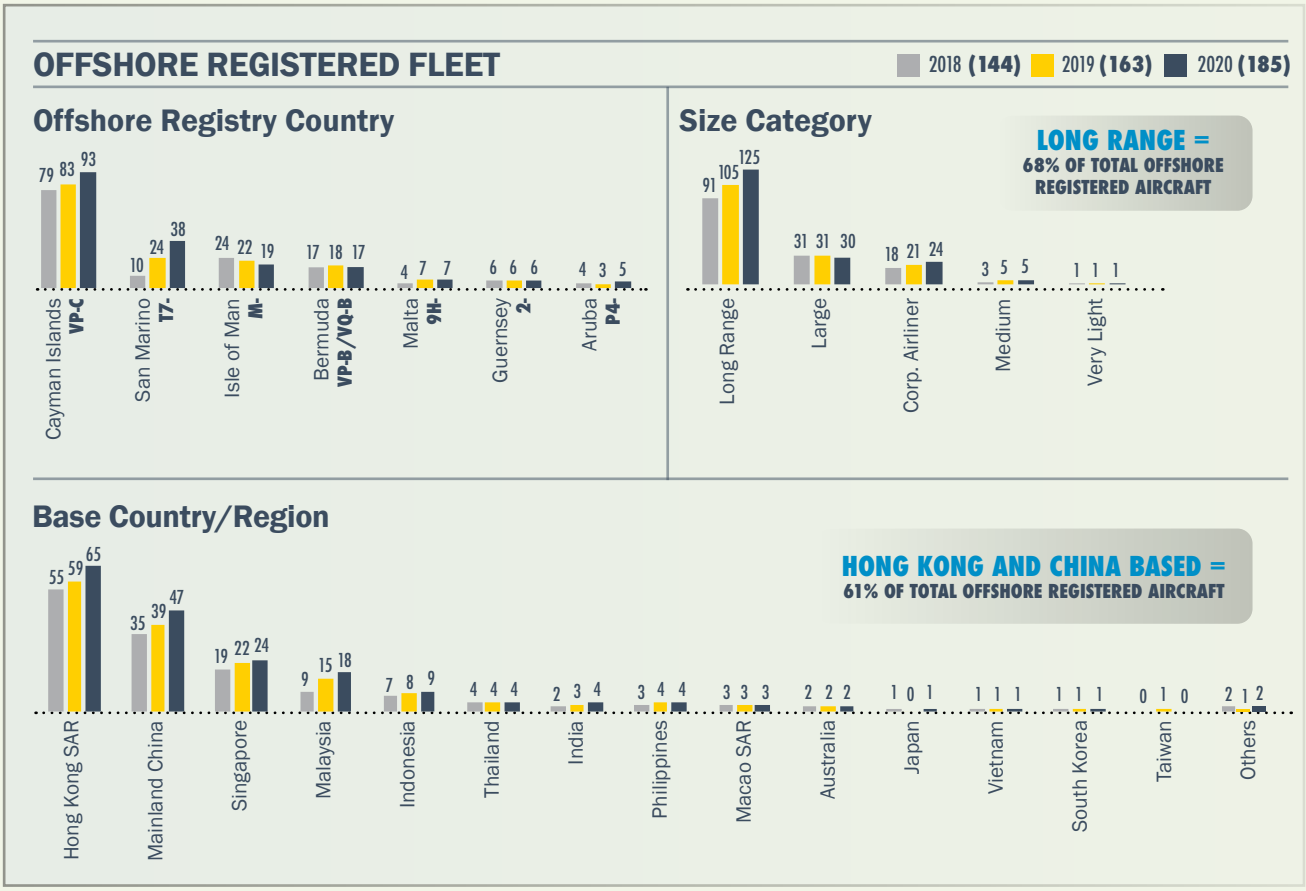
Size Category



The number of business jets that are registered offshore has been increasing over the past two years – from 144 in 2018 to 185 in 2020. The key benefits provided by offshore registries over onshore registries include the tax free/advantaged structures and increased privacy due to ownership data on offshore registries being kept confidential and not easily obtainable. Additionally, offshore registries often require less paperwork for the installation and replacement of aircraft parts, thus saving on time and expenses. The number of offshore registered aircraft is expected to continue growing as more aircraft owners and operators in the Asia-Pacific region become aware of these advantages.

Hong Kong SAR has the largest offshore registered fleet in the Asia-Pacific region – 65 jets as of year-end 2020, followed by mainland

OFFSHORE REGISTERED FLEET



mainland China and Singapore with a fleet of 47 and 24 business jets, respectively. Mainland China saw an increase of 21% in its offshore registered fleet over year-end 2020. The increasing popularity of offshore registries in the region is due to the heavy tax imposed on aircraft being imported into mainland China, whereas offshore registries allow tax free/advantageous structures.

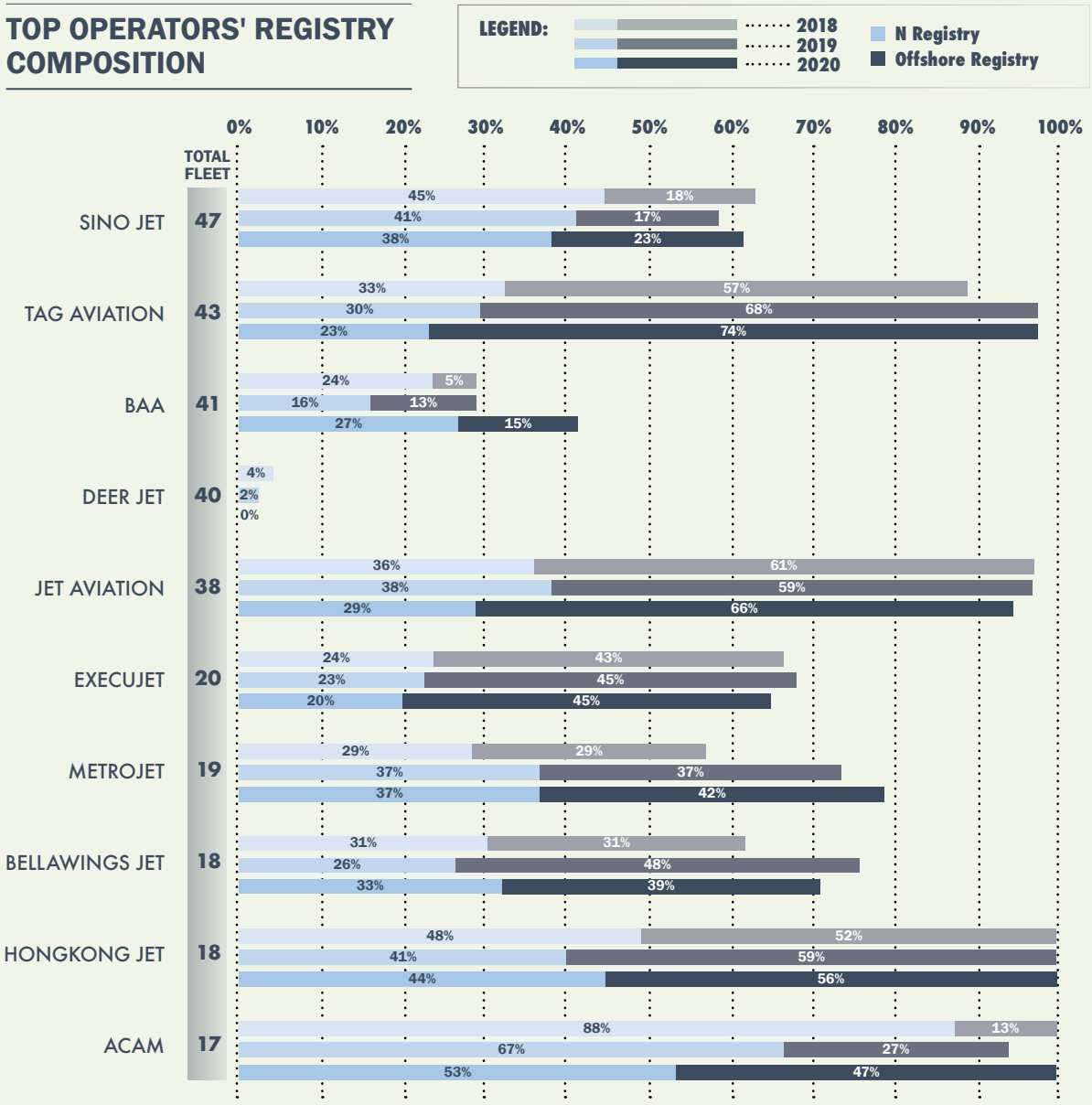
The Cayman Islands 'VP-C' register remained the most popular offshore registry in 2020, holding a 50% market share amongst the offshore registries. The San Marino 'T7-' registry came in second, up by one rank since 2019, with a market share of 21%. Dropping by one rank since last year, the Isle of Man was the next most popular registry, accounting for 10% of the offshore registered fleet. The Bermuda registry came in fourth with a market share of 9%.

San Marino's 'T7-' registry witnessed the largest growth in the offshore registered fleet in 2019 – growing by 14 aircraft, from 24 in 2020 to 38 in 2020. The Cayman Islands 'VP-C' registry came in second in terms of registered fleet growth – growing by ten, from 83 in 2019 to 93 in 2020.

TAG Aviation had the largest offshore registered fleet in 2020 – 32 business jets (a growth of two business jets since 2019). The operator also has the largest offshore registered fleet (74%) among any of the top ten operators in the Asia-Pacific region.

Jet Aviation and Sino Jet had the second and third largest offshore registered fleet in 2020 – 25 and 11, respectively. Deer Jet was the only Asia-Pacific operator in the top ten that did not have any offshore registered business jet in its fleet.

TOP OPERATORS' REGISTRY COMPOSITION



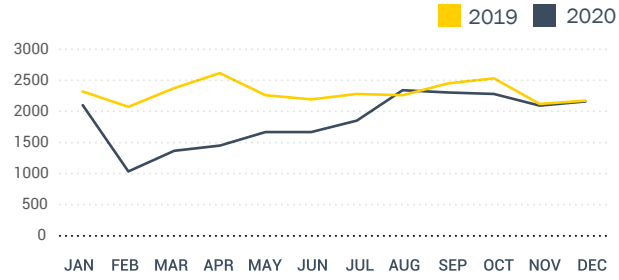
SPECIAL FEATURE:

COVID-19 IMPACT ON BUSINESS JET MARKET

The outbreak of the COVID-19 pandemic had a massive effect on the aviation industry, including the business jet market, which saw both orders and deliveries decline in 2020. The business jet market suffered from the COVID-19 pandemic due to lockdowns occurring in a number of countries, the introduction of quarantines, the economic collapse resulting from the COVID-19 pandemic, as well as the cash flow issues impacting buyers, financial institutions, and manufacturers.

Mainland China was the main growth driver of the business jet market in the Asia-Pacific region. However, the business jet market in mainland China was also impacted by COVID-19. The graph shows the business jet flight activities of main cities in mainland China were fewer in 2020 than in 2019, slowing by an average of 24%. Since April 2020 that has been a big shift towards domestic flight activity in mainland China, which now accounts for around 85% of all flights

Business Jet Flight Activities in Mainland China



Asian Sky Media invited several business jet operators in the Asia-Pacific region to give an overview of the market conditions they faced to better understand the changes that COVID-19 brought to the Asia-Pacific business jet market.

A total of five operators answered our survey. One is Sino Jet, the largest operator in Asia-Pacific, with dual headquarters in mainland China and Hong Kong SAR. Another is Amber Aviation based in mainland China with its main markets in greater China. Most aircraft in the fleets of both operators are large and long-range aircraft. Australian Corporate Jet Centres headquartered in Australia, which mainly operates light and large sized jets. MJets in Thailand also answered. It has two aircraft in each of the light, medium, and long-range size categories. Last, but not least was Metrojet, which has its headquarters in Hong Kong and a big operation in the Philippines. Most aircraft in Metrojet's aircraft fleet are long-range business jets.

All the operators mentioned that their businesses were more or less impacted by the outbreak of coronavirus. Australian Corporate Jet

Centres experienced a drop of both international and domestic flight activities, whilst Sino Jet and Amber Aviation also saw a decrease in international flights.

> **In 2020, we saw a significant reduction in daily operations, achieving only 20% of the planned flight activities.**
>
> ***Gary Dolski,*** *CEO of Metrojet*

However, when compared to the first half of 2020, there was an obvious increase in domestic flights for Sino Jet and Amber Aviation in the second half of the year.

Many people decided during the peak of the COVID-19 pandemic that they would fly privately for the first time. This was partly due to a reduction in scheduled airline flights, but travelers also began to realize the safety, privacy, and convenience of flying on a private jet. This brought many new users into flying on business jets, both by charter, as well as looking into becoming first time buyers.

> **Compared to 2019, the flight activities of our charter services in 2020 substantially increased, equivalent to an 80% growth rate.**
>
> ***Michelle Lv,*** *Sales Director of Amber Aviation*

Aside from the overall impact on flight activities, each operator encountered specific problems.

With slower growth than in previous years, Sino Jet expanded its business by creating an FBO to integrate operations, established Sino Jet Academy to cultivate new talent for the industry, and set up a new branch in Hainan, China in the Hainan Free Trade Port.

To overcome the difficulties from the decline in flight activities, Australian Corporate Jet Centres provided diversified services aside from its usual charter services. Metrojet provided improved service packages to its clients and digitalized many procedures through technological advancements. Sam Iliades, the CEO of Australian

Corporate Jet Centres said, " We acquired and merged JetCity and Australian Aircraft Engineering during the COVID-19 pandemic to increase the fleet size, enter the Aeromedical market and conduct in-house maintenance."

MJets also diversified its operations, by taking advantage of new opportunities. "We are more likely open to new business opportunities that we might have not explored even if it means that we have to think differently." said Sapmanee Jantajit, the Marketing Manager of MJets.

On the other hand, to solve the issue of cabin crew abroad training and the lack of domestic MRO institutions, Amber Aviation negotiated with the CAAC and training institutions to allow pilots with Chinese Pilot Certificate's to take practical flight training in mainland China and completed some maintenance programs with its own technicians.

In addition, all operators followed the policies set up by the governments to curb the spread of the COVID-19 pandemic. They took measures such as imposing quarantines, acquiring disinfection goods, and screening temperatures to minimize the infection risks of the virus.

Although all operators saw a decrease in flight operations, they all expect demand to rebound in the future.

Sino Jet, Australian Corporate Jet Centres, and MJets are relatively optimistic about the future development of the industry at the end of the sentence.

> **With the economic recovery, entrepreneurs' need of purchasing and using business jets will dramatically increase. I believe the business jet market will have a strong rebound in the coming years.**
>
> ***Jenny Lau,*** *Group President of Sino Jet*

Sam Iliades said, "With flights returning to full domestic capacity and "travel bubbles" opening between Australia and paired countries, we see a strong recovery in the market." Furthermore, Sapmanee told ASM "COVID-19 has closed borders across the region yet we strongly believe that private usage is still in its infancy with lots of room for growth. Besides, infrastructure is where MJets sees opportunities. Ideally, we want to expand our current operations in southeast Asia."

Comparatively speaking, Amber Aviation and Metrojet both have a more cautious attitude toward its expectation of market. "Our clients are more conservative in purchasing business jets after the outbreak of COVID-19." said Michelle. Amber Aviation says that it is dedicated to developing diversified charter services for its clients. "We predict that the need of using business jets will continue to increase. As the hour card and charter sharing services are still under development, Amber Aviation will dive deeper into these fields and endeavor to offer new products which cater to the market demands." said Michelle.

"We anticipate seeing an increase in both our flight operations and MRO lines of business. However, it will continue to take some time before we get back to 2019 levels of flying." said Gary. Similarly, Gary mentioned his perspectives towards the future development in Metrojet's business. "JetCard, fractional, and joint ownership are all additional avenues of growth in the business jet market." Eventually, he predicts a bright future for the business jet market. "Not only will the physical number of business jets increase, so will aircraft infrastructure see an expansion in southern parts of the region enhancing aspects of globalization." said Gary.

The COVID-19 pandemic heavily affected the business jet market in the short term. However, no long-term shock has been seen. Furthermore, due to an increase in charter operations attributed to the COVID-19 pandemic, the demand for business jets is expected to grow in the coming years. This is because flying privately is one of the only ways to guarantee that a flight will take place, as well as the relative safety it offers, both in the air and on the ground. By combining the information above from operators along with our market forecast, we can see the business jet market is set to expand in the near term, especially as operators explore new opportunities and offer new services.

星雅航空
Astro Air

星雅航空筹建于2011年，2012年正式成立，总部注册在深圳市前海自贸区，主运营基地设在深圳市宝安国际机场，在北京首都机场、上海虹桥机场、上海浦东机场、广州白云机场、香港赤鱲角国际机场等全国主要城市空港设有分公司或运行保障基地。公司主要开展航空器托管、商务包机、航空器销售、航空基础设施建设及运营、医疗转运、航空培训等业务，也是国内中央商务区直升机FBO开创者。星雅航空致力于为客户提供极致的低密度出行体验。

Astro Air was prepared in 2011 and formally established in 2012. Its headquarter is registered in Shenzhen Qianhai Free Trade Zone. The main operating base is located at Shenzhen Bao'an International Airport, and at Beijing Capital Airport, Shanghai Hongqiao Airport, Shanghai Pudong Airport, Guangzhou Baiyun Airports, Hong Kong Chek Lap Kok International Airport and other major cities across the country have branch offices or operation support bases. The company mainly engages in aircraft custody, business charter, aircraft sales, aviation infrastructure construction and operation, medical transport, aviation training, etc., and is the pioneer of helicopter FBO in the domestic central business district.

星雅航空集团　ASTRO AIR GROUP

总部丨深圳宝安国际机场信息大楼4层
4F,Xinxi Building,Baoan International Airport,Shenzhen,China
营销中心丨深圳市福田区卓越世纪中心1号楼25层
Shenzhen Futian Excellence Group Building 25th FL

星雅航空小程序

星雅航空公众号

AERION SUPERSONIC

INTERVIEW WITH **MATT CRAM**, CHIEF COMMERCIAL OFFICER AND EVP, SALES & MARKETING

ASIDE FROM TIME SAVINGS, ARE THERE ANY OTHER BENEFITS OF SUPERSONIC JETS OVER NORMAL BUSINESS JETS?

For our part, the bigger target is to see some of the technologies that we pioneer in delivering a new era in supersonic flight make their way into widespread adoption. The AS2 will incorporate the first propulsion system capable of operating on 100% Synthetic Aviation Fuels (SAFs) and with the wider adoption of SAF's throughout the industry, supersonic aircraft will lead the way in offering a new, environmentally sustainable means of powering flight.

We think this is essential for the future of the aviation industry. As a relative start-up in the space, we have the advantage of starting with a blank sheet of paper where we can question everything and look at our impact on the environment holistically – not just the fuel source for the aircraft. We will build the AS2 in a new manufacturing facility powered by clean energy, incorporate recycled materials in the construction of the aircraft wherever possible, work with suppliers who have an environmental approach that mirrors our own and even consider what happens to the aircraft when it comes, many years from now, to the end of its time in service.

WITH CURRENT BUSINESS JETS ALREADY REACHING MAXIMUM SPEEDS OF JUST OVER MACH 0.9, IS THERE REALLY A NEED FOR SUPERSONIC JETS?

We believe so, because supersonic flight that is done sustainably can overtake standard commercial flights in the future by not only reducing travel time but doing so in a way that is better for the planet. Equally, we see an opportunity to rethink the entire journey, from the point of departure to the point of destination, not just the core flight where any time saved can be lost by other inefficiencies in the total journey. Through Aerion Connect we will bring together the currently fragmented elements of the journey into a singular experience that integrates with our customers' needs and lifestyles in an ecosystem that is optimized for speed.

Our plans are supported by the market - we see a growing appetite for sustainable supersonic flight – following a recent agreement with NetJets our order backlog now stands at $11bn+ which gives us great confidence in the market demand. Our expectation is a continued growth in private aviation and increased desire for people to spend less time traveling and more time doing the things they love. The AS2 will be the first in a family of supersonic aircraft that

will enable humanity to significantly reduce travel time and spend more time doing the things they enjoy.

WHAT ARE THE MAJOR OPERATIONAL DIFFICULTIES FACED BY SUPERSONIC JETS AS OPPOSED TO NORMAL BUSINESS JETS?

The AS2 will be consistent with the operational requirements of other ULR business aircraft. The AS2 will require a BFL of 7,500, having industry-leading reliability and warranty commitments and offer DOC's that are in line with other ULR aircraft when you consider the reduced flight times on a trip-by-trip basis.

WHAT ARE THE ATTITUDES OF DIFFERENT GOVERNMENT BODIES ON SUPERSONIC JET TRAVEL?

We support any regulatory advancements that enable supersonic flight. The FAA's recent Final Rule marks a significant milestone in the development of a new era in civil supersonic flight. We are encouraged that the U.S. Department of Transportation and the Federal Aviation Administration issued a final rule that streamlines and clarifies procedures to obtain FAA approval for supersonic flight testing in the United States. As we approach production and flight testing of the AS2, this rule provides our company the ability to test the AS2 aircraft over land in addition to the overwater testing currently planned.

The AS2 will be the first aircraft to operate at Mach speeds overland without a sonic boom striking the ground using our Boomless Cruise technology. Aerion supports permitting supersonic flight over land so long as no sonic boom is perceptible on the ground.

We have been and will continue working with the relevant authorities, including the FAA and EASA, as we continue to advance the AS2 and remain hopeful on further modifications in global regulatory standards for civil supersonic flight.

WHEN DO YOU THINK SUPERSONIC BUSINESS JET TRAVEL WILL BECOME A REALITY?

It is closer than ever. In the 50+ years since the birth of the jet age we have gone backwards in terms of speed. People are ready for change and for change that is possible in a sustainable way. In parallel there is a convergence of technologies that enable sustainable supersonic flight in a way that was not possible before such as the viability of SAFs and the first new supersonic engine in 55 years – the Affinity Supersonic turbofan by GE – which has been developed to power the AS2. First flight of the AS2 is scheduled for 2025.

WHEN WILL WE SEE THE FIRST FLIGHT OF THE AS2?

We made significant progress last year having finalized our design, completed wind tunnel validation and selected a site for our future global headquarters and manufacturing base (Aerion Park).

Our timeline is to start production of the AS2 at Aerion Park in Melbourne, FL in 2023 with first flight in 2025.

HOW DO YOU SOLVE THE PROBLEM OF THE SONIC BOOM?

Our core belief is that the only acceptable supersonic boom is no boom at all so rather than focus our energies on trying to quieten or soften the boom, our intent is to remove it, as far as those in the flight path on the ground are concerned.

Boomless Cruise takes advantage of an atmospheric phenomenology known as Mach Cut Off where the sonic boom, when created, refracts off denser, warmer layers of air. To use this phenomenology, you need the right combination of key ingredients – speed, aerodynamics, mass, the avionics suite available on the aircraft to name a few. Then, crucially, we need incredibly accurate atmospheric tracking and predictability. Traditionally this would have come from weather balloons, but we are working with Spire Global and their proprietary constellation of satellites that will provide high fidelity weather models in real time from space and allow us to compute an optimized flight plan on board the AS2.

www.aerionsupersonic.com

MARKET UPDATE: OEM OVERVIEW

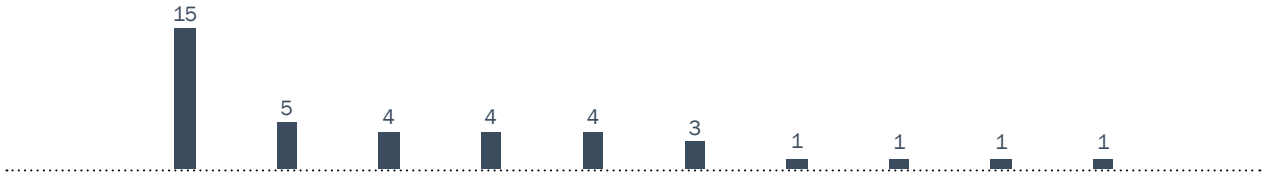
AIRBUS

NET GROWTH
4 ▲ 11.4% ▲

MOST POPULAR
ACJ319

LARGEST FLEET
Mainland China

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	35	1	2
2020	39	2	2



	MAINLAND CHINA	MALAYSIA	TAIWAN	HONG KONG SAR	THAILAND	AUSTRALIA	SOUTH KOREA	INDIA	PHILIPPINES	BRUNEI	TOTAL
A319ER	3										3
A340					1					1	2
ACJ318	4	1	2						1		8
ACJ319	6	3	2	1	1	3	1	1			18
ACJ319neo				1							1
ACJ320	1	1			2						4
ACJ330	1			2							3
Total	**15**	**5**	**4**	**4**	**4**	**3**	**1**	**1**	**1**	**1**	**39**

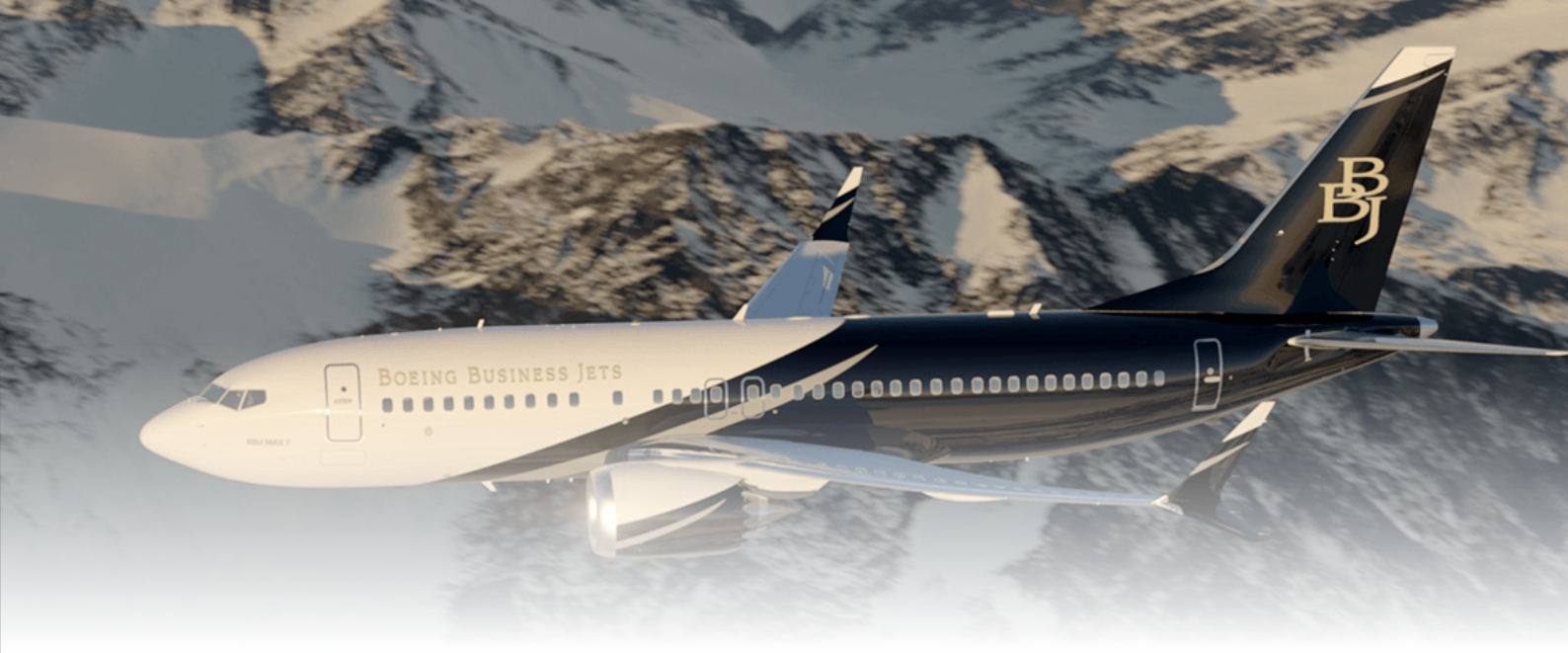
ADDITIONS AND DEDUCTIONS

Deductions (-) | Pre-owned (+2) | New Deliveries (+2)

By Country/Region

By Model

Note: Exclude movements between countries in APAC



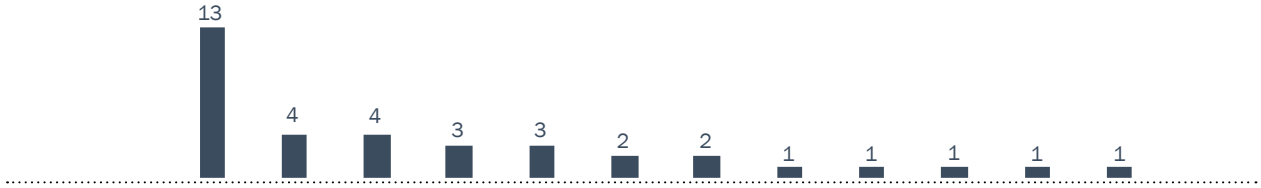
BOEING

NET GROWTH
0 • 0% •

MOST POPULAR
BBJ

LARGEST FLEET
Mainland China

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	36	1	-4
2020	36	1	-1



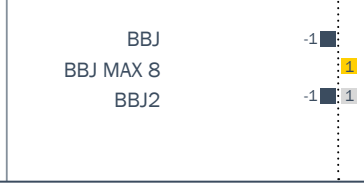
	MAINLAND CHINA	MALAYSIA	BRUNEI	HONG KONG SAR	SOUTH KOREA	INDONESIA	THAILAND	SINGAPORE	VIETNAM	INDIA	CAMBODIA	JAPAN	TOTAL
BBJ	10			2	3	2	1	1	1	1	1	1	23
BBJ 787-8	1		1										2
BBJ MAX 8				1									1
BBJ2	2	1											3
Boeing 727		1											1
Boeing 737		1					1						2
Boeing 747			2										2
Boeing 767		1	1										2
Total	**13**	**4**	**4**	**3**	**3**	**2**	**2**	**1**	**1**	**1**	**1**	**1**	**36**

ADDITIONS AND DEDUCTIONS

Deductions (-2) Pre-owned (+1) New Deliveries (+1)

By Country/Region

By Model



Note: Exclude movements between countries in APAC

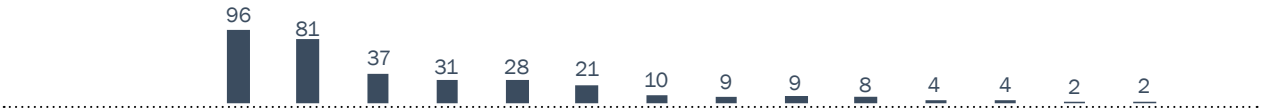
BOMBARDIER

NET GROWTH
11 ▲ 3.3% ▲

MOST POPULAR
Global 6000

LARGEST FLEET
Mainland China

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	331	10	-3
2020	342	9	2

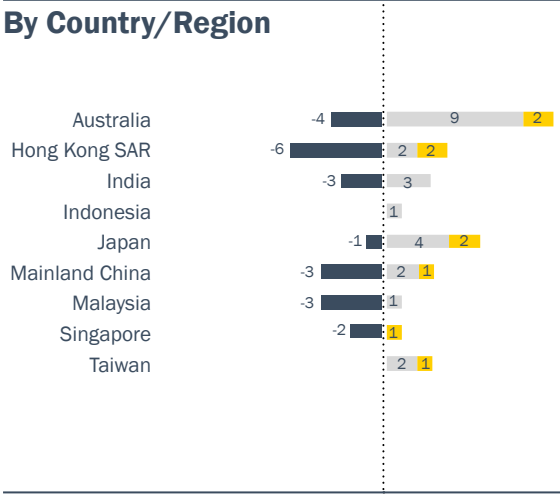


	MAINLAND CHINA	AUSTRALIA	HONG KONG SAR	INDIA	SINGAPORE	MALAYSIA	TAIWAN	INDONESIA	JAPAN	PHILIPPINES	NEW ZEALAND	MACAO SAR	THAILAND	SOUTH KOREA	TOTAL
Challenger 300/350	4			4		1	1			2	1				13
Challenger 600/601		4			2	3				1				1	11
Challenger 604	2	14	1	1	1			1			2				22
Challenger 605	11		3	3	2	3	1	1				2			26
Challenger 650	2	1		1	1			1							6
Challenger 800/850	27		2	1								1			31
Challenger 870	12														12
CRJ100/200	1									1					2
Global 5000	6	1	8	8	8	4	2	1				1			39
Global 6000	16	4	17	6	6	2	2	1	3				1		58
Global 6500	2														2
Global 7500		2	2			1	2		2						9
Global Express	1	8	1	1	2	1									14
Global Express XRS	4	11	3	3		2	2	2					1	1	29
Learjet 24		1			1										2
Learjet 31		2						2		3					7
Learjet 35/36	5	24			1				4						34
Learjet 40 XR										1					1
Learjet 45 XR		4		2	1										7
Learjet 60 XR	3	5		1	2	4					1				16
Learjet 70/75					1										1
Total	**96**	**81**	**37**	**31**	**28**	**21**	**10**	**9**	**9**	**8**	**4**	**4**	**2**	**2**	**342**

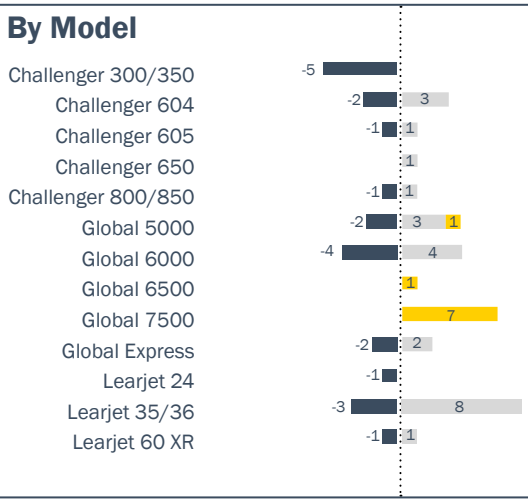
ADDITIONS AND DEDUCTIONS

Deductions (-22) | Pre-owned (+24) | New Deliveries (+9)

By Country/Region



By Model



Note: Exclude movements between countries in APAC

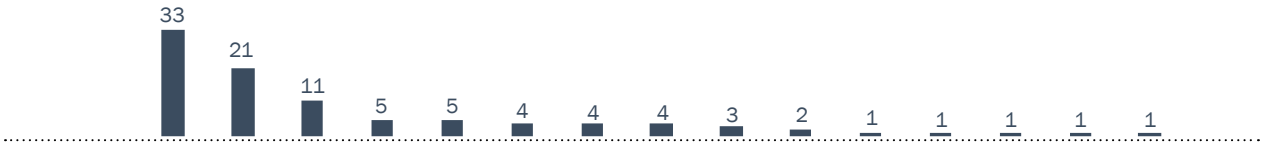
DASSAULT

NET GROWTH
1 ▼ 1.0% ▼

MOST POPULAR
Falcon 2000

LARGEST FLEET
Mainland China

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	98	7	-15
2020	97	1	-2

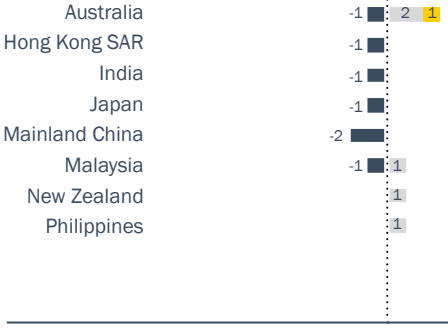


	MAINLAND CHINA	INDIA	AUSTRALIA	HONG KONG SAR	JAPAN	NEW ZEALAND	SINGAPORE	MALAYSIA	PHILIPPINES	THAILAND	BANGLADESH	SOUTH KOREA	VIETNAM	PNG	MACAO SAR	TOTAL
Falcon 20								1								1
Falcon 20 -5			1													1
Falcon 2000	1	18	3		5	1	1	3	1	1			1		1	36
Falcon 50			1			2										3
Falcon 7X	26		2	2			2			1	1	1				35
Falcon 8X	2			3			1									6
Falcon 900	4	3	4			1			2					1		15
Total	**33**	**21**	**11**	**5**	**5**	**4**	**4**	**4**	**3**	**2**	**1**	**1**	**1**	**1**	**1**	**97**

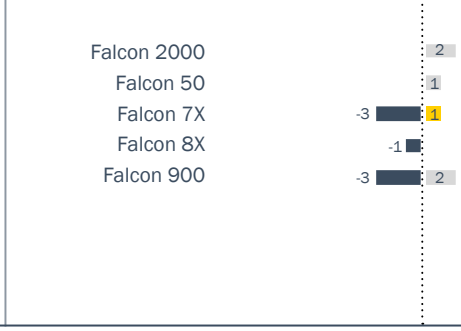
ADDITIONS AND DEDUCTIONS

Deductions (-7) Pre-owned (+5) New Deliveries (+1)

By Country/Region



By Model



Note: Exclude movements between countries in APAC

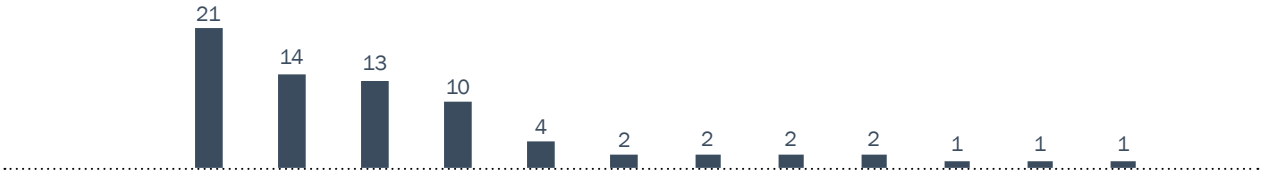
EMBRAER

NET GROWTH
3 ↓ 3.9% ↓

MOST POPULAR
Legacy 650

LARGEST FLEET
India

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	76	2	-1
2020	73	1	-4

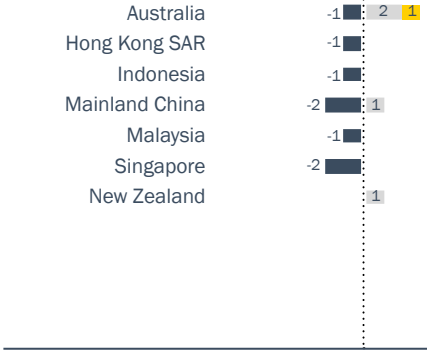


	INDIA	MAINLAND CHINA	INDONESIA	AUSTRALIA	SINGAPORE	THAILAND	VIETNAM	MACAO SAR	MALAYSIA	TAIWAN	HONG KONG SAR	NEW ZEALAND	TOTAL
ERJ135	2												2
ERJ145			2	1									3
Legacy 500			1	1									2
Legacy 600	2		5	1	4	2	1	1	1				17
Legacy 650	9	9	3				1						22
Lineage 1000	2	2	1					1					6
Lineage 1000E											1		1
Phenom 100	4			2								1	7
Phenom 300	2	3	1	3					1	1			11
Phenom 300E				2									2
Total	**21**	**14**	**13**	**10**	**4**	**2**	**2**	**2**	**2**	**1**	**1**	**1**	**73**

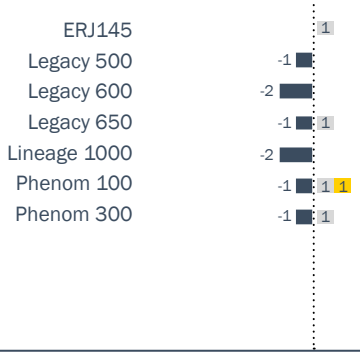
ADDITIONS AND DEDUCTIONS

Deductions (-8) | Pre-owned (+4) | New Deliveries (+1)

By Country/Region



By Model



Note: Exclude movements between countries in APAC

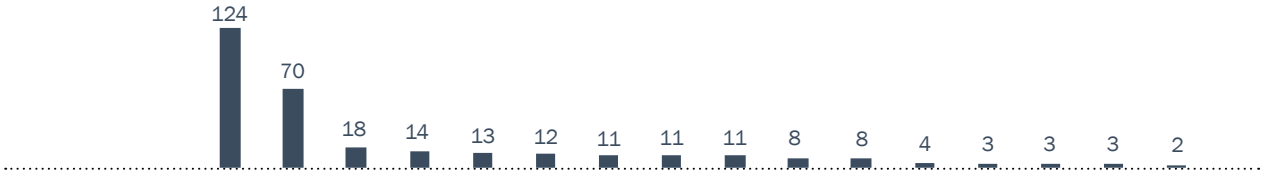
GULFSTREAM

NET GROWTH
7 ▲ 2.3% ▲

MOST POPULAR
G550

LARGEST FLEET
Mainland China

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	308	12	-4
2020	315	15	-8

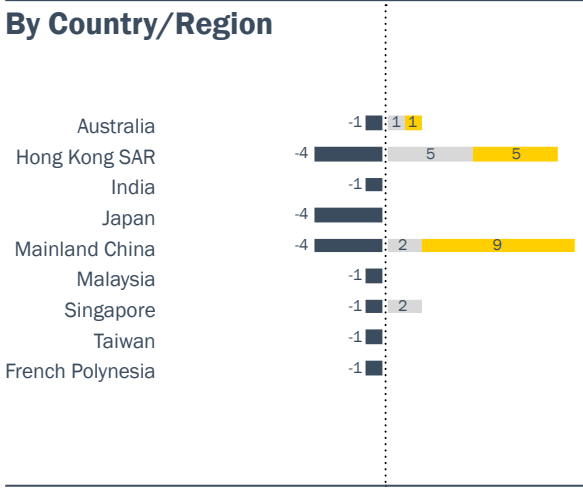


	MAINLAND CHINA	HONG KONG SAR	SINGAPORE	PHILIPPINES	JAPAN	AUSTRALIA	TAIWAN	THAILAND	MALAYSIA	INDIA	INDONESIA	SOUTH KOREA	CAMBODIA	VIETNAM	MACAO SAR	NEW ZEALAND	TOTAL
G III									2								2
G IV/GIV-SP/G400			1	2	1	3			1		1						9
G100/G150			2	3		1	1			2							9
G200	6	1	3	1				3	1	4	1		1				21
G280	7	1	1				2		1								12
G300/G350		1		1		1											3
G450	30	9	2	3		1	1		1		3		1	2			53
G550	43	20	4	2	3	3	2	2	2	2	3	1	1		1	1	90
G600	1	1				1											3
G650	18	10	3	1	3	1	1	5	2						1	1	46
G650ER	19	27	1		4	1	3		1			3		1	1		61
GV/GV-SP			1	1	2		1	1									6
Total	**124**	**70**	**18**	**14**	**13**	**12**	**11**	**11**	**11**	**8**	**8**	**4**	**3**	**3**	**3**	**2**	**315**

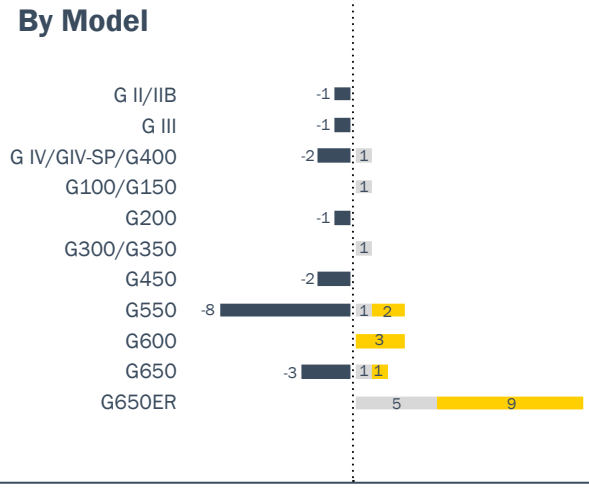
ADDITIONS AND DEDUCTIONS

Deductions (-18) Pre-owned (+10) New Deliveries (+15)

By Country/Region



By Model



Note: Exclude movements between countries in APAC

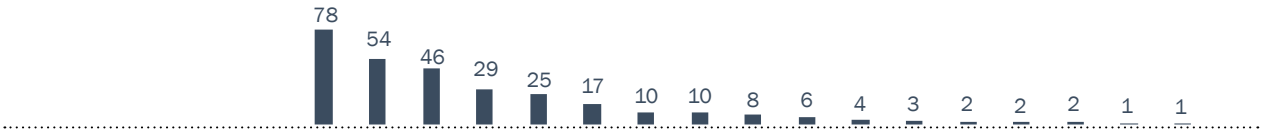
TEXTRON

NET GROWTH
4 ▲ 1.4% ▲

MOST POPULAR
Citation 560XL

LARGEST FLEET
Australia

	TOTAL FLEET	NEW DELIVERY	NET PRE-OWNED
2019	294	4	-10
2020	298	7	-3

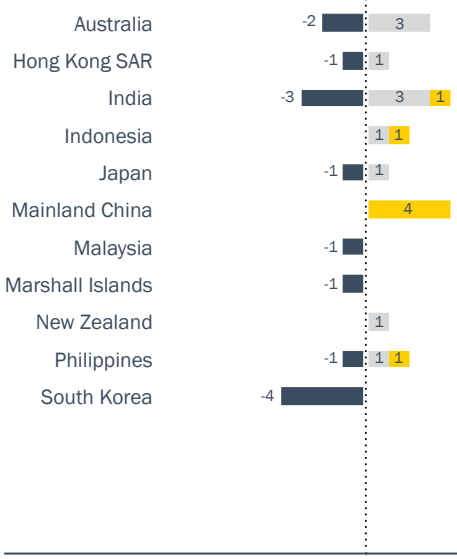


	AUSTRALIA	INDIA	MAINLAND CHINA	JAPAN	PHILIPPINES	INDONESIA	NEW ZEALAND	THAILAND	MALAYSIA	SOUTH KOREA	SINGAPORE	TAIWAN	HONG KONG SAR	NEW CALEDONIA	PNG	COOK ISLANDS	BANGLADESH	TOTAL
Citation 500/501(I/ISP)	6				1		1											8
Citation 510(Mustang)	8	1	1	2	1		4	2										19
Citation 525(M2/CJ1/+)	12	2	11	5	2					4								36
Citation 525A(CJ2/CJ2+)	5	9		6			1							1				22
Citation 525B(CJ3/CJ3+)	3						1								1			5
Citation 525C(CJ4)				6	4								2	1				13
Citation 550(II/IISP/SII/Bravo)	14	6	4		3		1	3	2	1					1	1		36
Citation 560(Encore/+)	3			2														5
Citation 560(V/Ultra)	7			2														9
Citation 560XL(Excel/XLS/XLS+)	1	12	19		5	2												39
Citation 650(III/VI/VII)	5	1	1			1	1		3									12
Citation 680(Sovereign/+)	3		4	4		1	1		3		1							17
Citation 680A(Latitude)					2													2
Citation 750(X/X+)	2		1					1			1							5
Hawker 400	2	4	1	2		6					1	3						19
Hawker 4000						1												1
Hawker 700/750		2			3					1								6
Hawker 800/XP	4	4	2		3	1		2									1	17
Hawker 850XP	3	4			1			2										10
Hawker 900XP		7	1			5					1							14
Premier I/IA		2	1															3
Total	**78**	**54**	**46**	**29**	**25**	**17**	**10**	**10**	**8**	**6**	**4**	**3**	**2**	**2**	**2**	**1**	**1**	**298**

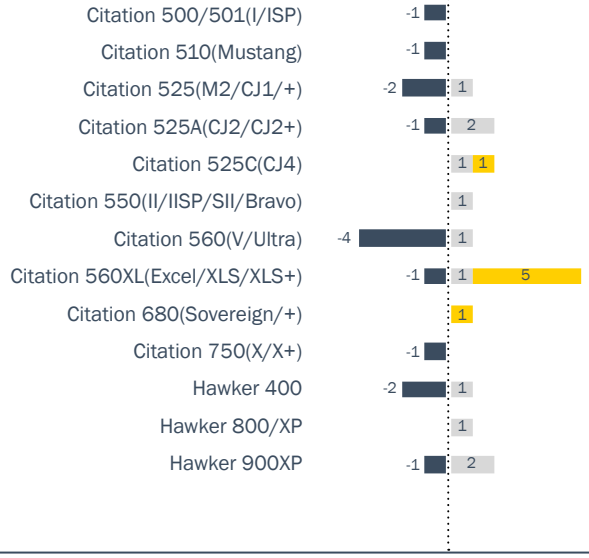
ADDITIONS AND DEDUCTIONS

Deductions (-14) | Pre-owned (+11) | New Deliveries (+7)

By Country/Region



By Model



Note: Exclude movements between countries in APAC

AIRCRAFT SPOTLIGHT

THE GULFSTREAM G650ER

PROVEN COMPETITIVE ADVANTAGE CONTINUES TO BUILD

The Gulfstream G650ER has given customers in Asia-Pacific a competitive edge since its certification. With the longest range at the fastest speeds, award-winning cabin design and proven reliability, more than 400 G650 and G650ER aircraft are in service around the world. Gulfstream did not stop there, however. Thanks to continuing investments to further increase the value, performance and productivity of the G650ER, the company has made additional advances, both on the aircraft and in Gulfstream's Customer Support facility in Beijing.

Safety Upgrades

In the flight deck, Gulfstream leads the business-aviation industry with safety upgrades that will greatly benefit both pilots and passengers, especially in rough weather. Gulfstream's Enhanced Flight Vision System (EFVS) is now approved for touchdown and rollout for the G650ER and all other Gulfstream in-service aircraft. The combination of a cooled forward-looking infrared camera, also called an enhanced vision system (EVS), and Head-Up Display (HUD), which work in tandem, composes an EFVS.

Operators that qualify and have the equipment, can land by using the EFVS imagery on the HUD without needing natural vision to see the runway. EFVS enhances safety by allowing pilots to land at airports in limited visibility because of haze, smog, smoke, fog or darkness, helping to minimize delays and rerouting. EFVS also provides great efficiency for operators, as it can decrease excess flying time and fuel burn.

Gulfstream Cabin Experience

Passengers in the cabin and the pilots in the flight deck all benefit from the Gulfstream Cabin Experience, which is enhanced on the G650 and G650ER and featured on all Gulfstream large-cabin aircraft. The Gulfstream Cabin Experience fosters the health and wellness of all on board through a number of innovations developed by Gulfstream that includes 100% fresh, never recirculated air infusing the cabin every two to three minutes, the industry's lowest cabin altitude and whisper-quiet noise levels. This wellness-inducing atmosphere is complemented by 16 panoramic windows – the largest in the industry – that flood the cabin with natural light.

Plasma Ionization System

Gulfstream took its investment in operators' wellness a step further in 2020 by equipping the G650 and G650ER with a new plasma ionization system – provided at no extra charge. The air purification system, which complements Gulfstream's already 100%-fresh-air environment, has been proven in lab tests to kill pathogens and allergens. Gulfstream's plasma ionization system, which operates whenever the aircraft environmental control system is active, works by emitting positive and negative oxygen ions that actively seek out and deactivate harmful molecules in the air and on surfaces. This process neutralizes particulate matter — not just bacteria and viruses, but also unpleasant odors from organic materials like ciga

SPECS

Price & Passengers

Maximum Passengers :	19
Living Areas:	4
G650 Price :	$68.5 million
G650ER Price :	$70.5 million

Performance

G650 Maximum Range[1] :	7,000 nm
G650ER Maximum Range[1] :	7,500 nm
High-Speed Cruise :	Mach 0.90
Long-Range Cruise :	Mach 0.85
Maximum Operating Mach Number (Mmo) :	Mach 0.925
G650 Takeoff Distance (SL, ISA, MTOW) :	5,858 ft
G650ER Takeoff Distance (SL, ISA, MTOW) :	6,299 ft
Initial Cruise Altitude :	41,000 ft
Maximum Cruise Altitude :	51,000 ft

[1] NBAA IFR theoretical range at Mach 0.85 with 8 passengers, 4 crew and NBAA IFR reserves. Actual range will be affected by ATC routing, operating speed, weather, outfitting options and other factors.

System

Avionics :	Gulfstream PlaneView™ II
Engines :	Two Rolls-Royce BR725
Rated Takeoff Thrust (each) :	75.20 kN

Cabin Measurements

Finished Cabin Height :	1.91 m
Finished Cabin Width :	2.49 m
Cabin Length (excluding baggage) :	14.27 m
Total Interior Length :	16.33 m
Cabin Volume :	60.54 cu m
Baggage Compartment Volume :	5.52 cu m

rette smoke. Even when running solely on an auxiliary power unit, the system produces thousands of ions throughout the entire aircraft, ensuring that cabin air remains pure and surfaces are disinfected while aircraft are prepared for flight by caterers, cleaning crews and FBO technicians alike.

Worldwide Accessibility

Gulfstream has also enhanced worldwide accessibility for G650ER operators by earning steep approach certification. Steep approach certification opens the G650ER up to challenging airports around the world, like London City, with its short runway and strict noise-abatement requirements. The certification also gives the G650ER access to many small airports in mountainous regions. Combined with its long range and high speeds, the G650ER's steep approach certification creates even more opportunities for operators.

Beijing Service Center

To ensure continued support of Gulfstream operators in the region, Gulfstream has made investments in its Beijing facility to offer even more services for customers. Last December, Gulfstream's Beijing service center completed its first 4C inspection – one of the more extensive maintenance checks – for a G650. In addition to the in-depth inspection of the fuel tank, landing gear modification and full-scope servicing, the inspection included the modification and operations check of critical systems. More than 30 highly skilled technicians, engineers, planners and support staff in Beijing were closely involved in the inspection, with strong support from Gulfstream Customer Support based at Gulfstream's headquarters in Savannah, Georgia, USA.

The G650 can fly up to 7,000 nautical miles/12,964 kilometers at Mach 0.85 and 6,000 nm/11,112 km when flying faster at a high-speed cruise of Mach 0.90. The G650ER can fly up to 7,500 nm/13,890 km at the same long-range cruise speed and 6,400 nm/11,853 km at Mach 0.90. Both aircraft are capable of a near-supersonic maximum operating speed of Mach 0.925 and have a maximum cruise altitude of 51,000 feet/ 15,545 meters.

The award-winning G650 and G650ER cabin can accommodate up to four living areas and up to 19 passengers with berthing for up to ten.

www.gulfstreamnews.com

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Get the best advice you can.

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1

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2

ASG's TEAM ARE SOME OF THE WORLD'S ONLY CERTIFIED AIRCRAFT BROKERS

Our 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 five years.

3

ASG HAS EXCLUSIVE ACCESS TO THE AIRCRAFT DEALERS 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.

4

ASG LISTS AND SOURCES AIRCRAFT FROM AN EXCLUSIVE ONLINE MARKETPLACE

AircraftExchange 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 there are no aircraft advertised that are not truly available for sale.

5

ASG HAS EXCLUSIVE ACCESS TO IADA-VERIFIED PRODUCTS AND SERVICES MEMBERS

IADA Products and Services Members are the industry's leaders in their respective fields, including escrow, legal, financial services, maintenance and refurbishment, aircraft management and operation, and over 15 other specialties.

JSSI

INTERVIEW WITH **MARK WINZAR** , SVP OF BUSINESS DEVELOPMENT EMEA & APAC

Although Jet Support Service Inc (JSSI) is best known for its hourly cost membership programs that cover airframes and engines, it is only one side of the business. To find out more, Asian Sky Media spoke with Mark Winzar, the company's senior vice president for business development in EMEA and Asia to find out what more the company offers, and how the company currently views the market.

JSSI IS MOSTLY KNOWN FOR HOURLY COST MAINTENANCE, BUT WHAT OTHER SERVICES DOES IT PROVIDE?

Jet Support Services, Inc. (JSSI), is the leading independent provider of maintenance support and financial services to the business aviation industry. JSSI hourly cost maintenance programs (HCMPs)—available for engines, APUs and airframes—give customers comprehensive, flexible and affordable tools for managing the unpredictable costs of operating and maintaining aircraft. In addition, JSSI leverages this technical knowledge, experience, buying power and data to provide support at every stage of the aircraft life cycle; from aircraft acquisition to aircraft teardown and part out. Services include:

- Ownership consulting services
- Asset evaluation
- Operating cost analysis
- Aviation tax expertise
- Technical support
- Maintenance event management
- Asset appraisals and inspections
- Rental engine supply
- Asset leasing
- Parts procurement and supply chain solutions
- MRO management software

ON THE AIRCRAFT ACQUISITION SIDE, ARE YOU ABLE TO HELP WITH FINANCING?

Yes, JSSI will look at options that may include financing or leasing assets depending on the individual requirements of the client.

DOES THAT INCLUDE NEW AND PRE-OWNED AIRCRAFT?

At JSSI, we are able to look at either option. The vast majority of financing or leasing deals we have been involved in relate to pre-owned aircraft but much depends on the specific requirements of potential owners. We are always flexible.

WAS THE APPRAISAL SIDE OF THE BUSINESS CREATED TO ASSIST WITH THE ACQUISITIONS SIDE?

There were many reasons to offer appraisal services at JSSI. By its very nature, offering appraisals fits into the acquisition process but we also do many appraisals for existing lenders and lessors as part of their asset management requirements.

DID YOU SEE MANY NEW ENQUIRIES FROM PEOPLE NEW TO BUSINESS AVIATION IN THE LAST YEAR?

Yes, we are seeing an increase in new users to business aviation; from jet cards and fractional ownership to charter operations and new aircraft owners, it's a trend that is consistent across the industry. Our mission is to continue to support these new users and ensure all customers have the financial and digital tools they need to fully realize the far-reaching benefits of business aviation for the long term. The full suite of services that JSSI offers helps educate all, from novices to industry veterans, to ensure they know which aircraft to choose, are fully aware of what ownership entails, and have access to resources to manage their asset effectively and efficiently.

HAVE YOU SEEN AN INCREASE IN ACTIVITY SO FAR IN 2021?

Yes, we are seeing clear signs of an increase in activity. In our latest Business Aviation Index for Q1 2021, average flight hours are up 10% quarter-over-quarter, and up 0.5% year-over-year compared with average flight hours for Q1 2020, when the impact of the Covid-19 pandemic was first starting to be felt.

That said, there are regional variations. For example, North America is bouncing back very quickly with flight hours up 5.2% YoY, whereas Europe is taking more time due to a resurgence in Covid-19 case numbers and lockdowns, so YoY flight activity is down -14.6%. International travel restrictions are making the recovery a bit bumpier in certain regions but overall, we believe the recovery has started.

THERE IS ALSO A PARTS AND LEASING SIDE OF JSSI, DID YOU SEE MANY AIRCRAFT GET PERMANENTLY WITHDRAWN FROM SERVICE LAST YEAR?

This trend is not as common as you may imagine. There was a view in the early part of the pandemic that permanent withdrawal and distress sales of aircraft would increase significantly but I don't think that has happened. Of course, some aircraft have ceased operation, but overall business aviation has been far less severely hit than the regional and commercial sectors.

JSSI IN A FAIRLY UNIQUE POSITION TO MONITOR FLIGHT ACTIVITY. WHEN DO YOU THINK IT WILL BE BACK TO PRE-PANDEMIC LEVELS?

As mentioned, US flight activity has bounced back to pre-Covid levels, with a particular surge in charter usage but the recovery is at a slower pace in other parts of the world. While the day-to-day restrictions in countries such as the UK, China and Australia are easing, international travel is still either prohibited, restricted or entails long isolation periods and multiple Covid-19 tests. As a result, I believe we won't see pre-pandemic levels of business jet utilization returning universally this year, although as the year progresses, we will see an overall upturn.

www.jetsupport.com

MARKET UPDATE:
ENGINE OVERVIEW

THERE WERE A TOTAL OF 2,524 TURBINE ENGINES POWERING THE FLEET OF 1,232 BUSINESS JETS IN THE ASIA-PACIFIC REGION AS OF YEAR-END 2020. OVER THE PAST FIVE YEARS, THE ASIA-PACIFIC ENGINE MARKET HAS GROWN AT A COMPOUNDED ANNUAL RATE OF 1.9% - INCREASING BY 231 UNITS, FROM 2,293 ENGINES IN 2015 TO 2,524 IN 2020.

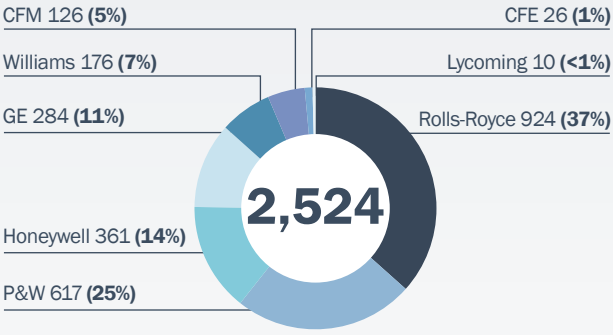
Rolls-Royce remained the market leader with 924 engines (37% market share), followed by Pratt & Whitney (P&W), Honeywell, and GE - with 617 (24% market share), 361 (14% market share) and 284 (11% market share) engines, respectively.

The majority of the Rolls-Royce engines were used to power business jets belonging to the long-range and large size business jet categories – 75% and 24% of all Rolls-Royce engines, respectively. Of the 398 long-range and 273 large business jets in operation in the region, 345 and 111 jets were powered by Rolls-Royce engines, respectively.

Pratt & Whitney, the second most utilized engine in the region, was the opposite, with 42% of its engines dedicated to light sized aircraft and only 8% to large jets.

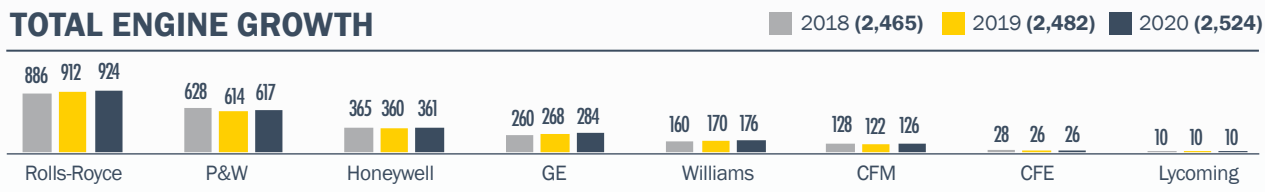
Rolls-Royce's BR700 remained the most popular turbine engine family in the Asia-Pacific region, with 690 engines powering 345 business jets as of year-end 2020. Honeywell's TFE731 came in second, with 146 business jets powered by 307 engines. The PW300 was the most popular Pratt & Whitney engine in the region, with 122 business jets powered by 285 engines. Gulfstream G550 (90 units), Learjet 35/36 (34 units) and Falcon 7X (35 units) are the most popular business jets in the region using the BR700, TFE731 and PW300 engines, respectively.

ENGINE BY ENGINE OEM

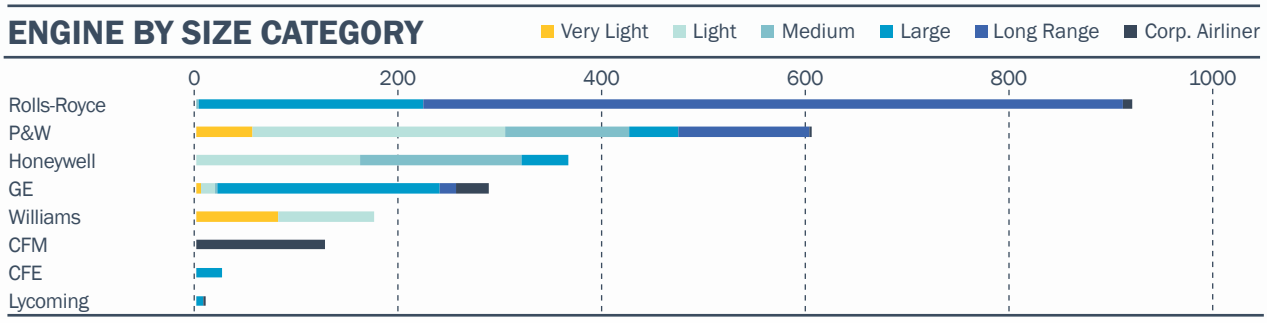


COVID-19 proved to be so deadly and far-reaching that we are still, even after a year since it was declared a pandemic by the World Health Organization, awaiting its end. As things stand, with several countries witnessing a spike in the number of cases due to the second and third waves, commercial aviation is unlikely to pick-up anytime soon. Business jets are thus expected to continue being in high demand and fill in the void left by grounding commercial flights. Business jet fleet numbers are expected to increase in 2021, accompanied by an increase in the number of turbine engines.

TOTAL ENGINE GROWTH



ENGINE BY SIZE CATEGORY



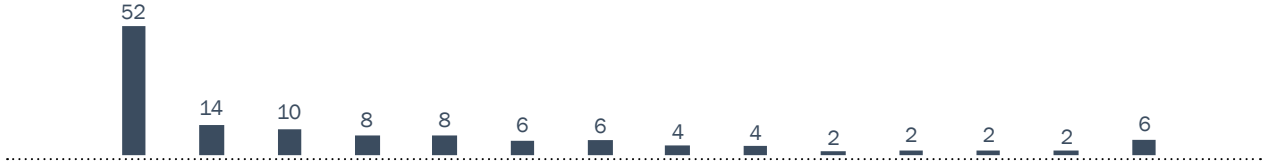
CFM

RANKING
No.6

NET GROWTH
4 ▲ 3.3% ▲

MOST POPULAR
CFM56

LARGEST FLEET
Mainland China

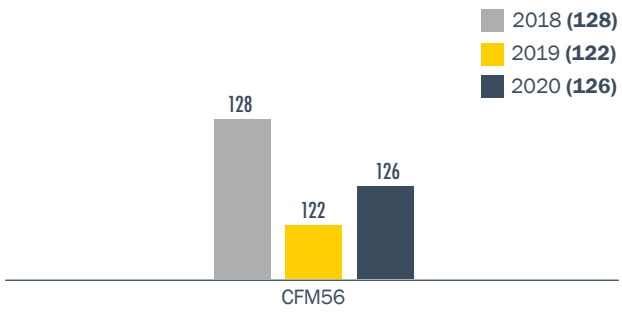


	MAINLAND CHINA	MALAYSIA	THAILAND	SOUTH KOREA	TAIWAN	HONG KONG SAR	AUSTRALIA	INDIA	INDONESIA	VIETNAM	SINGAPORE	PHILIPPINES	JAPAN	OTHERS	TOTAL
CFM56	52	14	10	8	8	6	6	4	4	2	2	2	2	6	126
Total	**52**	**14**	**10**	**8**	**8**	**6**	**6**	**4**	**4**	**2**	**2**	**2**	**2**	**6**	**126**

ENGINE INSTALLED IN TOP AIRCRAFT MODELS

MODEL	CFM56
BBJ	46
ACJ319	36
ACJ318	16
ACJ320	8
BBJ2	6
A319ER	6
A340	4
Boeing 737	4
TOTAL	**126**

ENGINE FAMILY GROWTH TREND



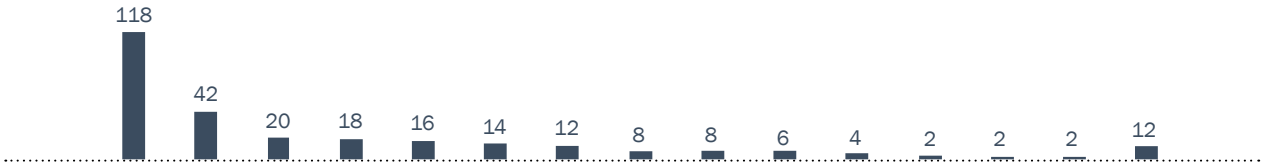
GE

RANKING **No.4**

NET GROWTH **16 ▲ 6.0% ▲**

MOST POPULAR **CF34**

LARGEST FLEET **Mainland China**

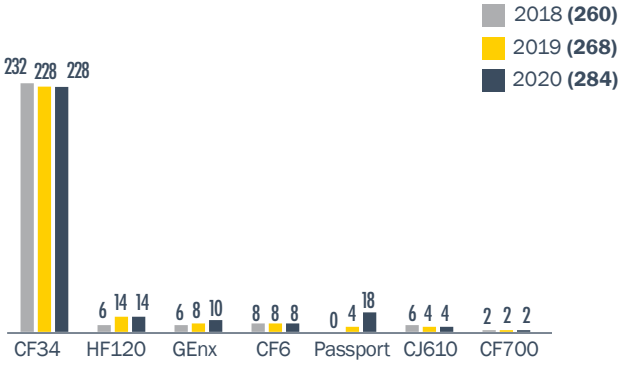


	MAINLAND CHINA	AUSTRALIA	HONG KONG SAR	MALAYSIA	INDIA	SINGAPORE	JAPAN	MACAO SAR	INDONESIA	TAIWAN	NEW ZEALAND	THAILAND	PHILIPPINES	SOUTH KOREA	OTHERS	TOTAL
CF34	114	36	14	12	16	10		8	8	2	4		2	2		**228**
Passport		4	4	2			4			4						**18**
HF120	2					2	8					2				**14**
GEnx	2		2												6	**10**
CF6				2											6	**8**
CJ610		2				2										**4**
CF700				2												**2**
Total	**118**	**42**	**20**	**18**	**16**	**14**	**12**	**8**	**8**	**6**	**4**	**2**	**2**	**2**	**12**	**284**

ENGINE INSTALLED IN TOP AIRCRAFT MODELS

MODEL	CF34	PASSPORT	HF120
Challenger 800/850	62		
Challenger 605	52		
Challenger 604	44		
Challenger 870	24		
Global 7500		18	
Challenger 600/601	16		
Lineage 1000	12		
Challenger 650	12		
HondaJet ELITE			8
HondaJet			6
TOTAL	**222**	**18**	**14**

ENGINE FAMILY GROWTH TREND



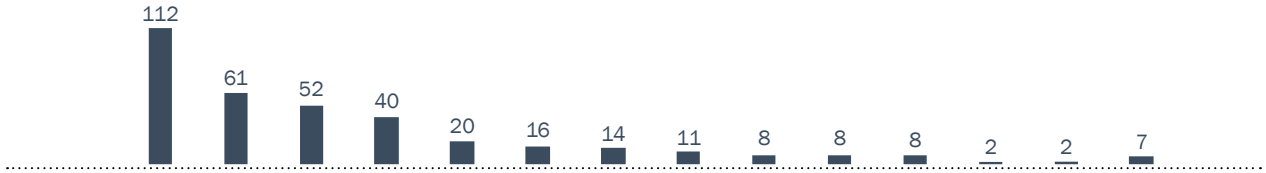
HONEYWELL

RANKING **No.3**

NET GROWTH **1 ▲ 0.3% ▲**

MOST POPULAR **TFE731**

LARGEST FLEET **Australia**

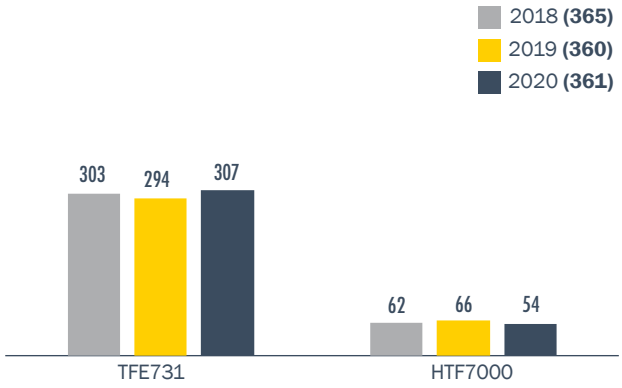


	AUSTRALIA	INDIA	MAINLAND CHINA	PHILIPPINES	INDONESIA	SINGAPORE	MALAYSIA	NEW ZEALAND	TAIWAN	THAILAND	JAPAN	SOUTH KOREA	HONG KONG SAR	OTHERS	TOTAL
TFE731	110	53	30	36	18	14	10	9	2	8	8	2		7	307
HTF7000	2	8	22	4	2	2	4	2	6				2		54
Total	**112**	**61**	**52**	**40**	**20**	**16**	**14**	**11**	**8**	**8**	**8**	**2**	**2**	**7**	**361**

ENGINE INSTALLED IN TOP AIRCRAFT MODELS

MODEL	TFE731	HTF7000
Learjet 35/36	68	
Falcon 900	45	
Hawker 800/XP	34	
Hawker 900XP	28	
Challenger 300/350		26
Citation 650(III/VI/VII)	24	
G280		24
Hawker 850XP	20	
G100/G150	18	
Westwind 1/2	16	
TOTAL	**253**	**50**

ENGINE FAMILY GROWTH TREND



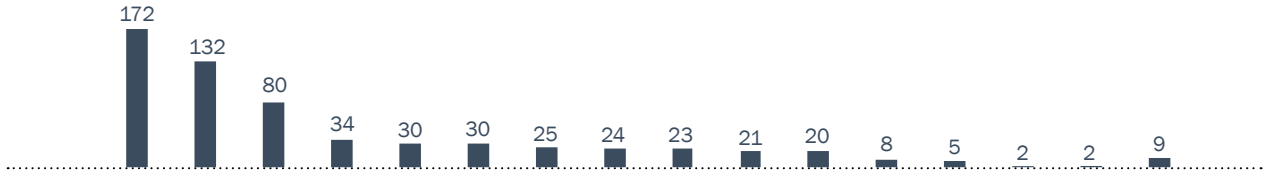
P&W

RANKING **No.2**

NET GROWTH **3 ▲ 0.5% ▲**

MOST POPULAR **PW300**

LARGEST FLEET **Mainland China**

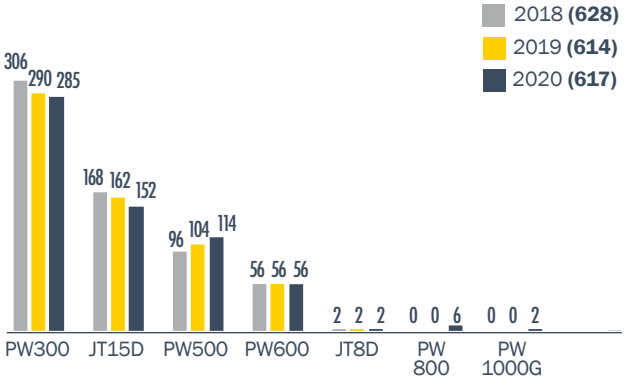


	MAINLAND CHINA	AUSTRALIA	INDIA	JAPAN	PHILIPPINES	MALAYSIA	SINGAPORE	INDONESIA	THAILAND	HONG KONG SAR	NEW ZEALAND	TAIWAN	SOUTH KOREA	VIETNAM	MACAO SAR	OTHERS	TOTAL
PW300	112	26	22	18	10	22	23	6	11	17	6		3	2	2	5	285
JT15D	12	62	20	8	8	4	2	12	8		4	6	2			4	152
PW500	44	18	28	4	10	2		6				2					114
PW600	2	24	10	4	2				4		10						56
PW 800	2	2								2							6
PW 1000G										2							2
JT8D						2											2
Total	**172**	**132**	**80**	**34**	**30**	**30**	**25**	**24**	**23**	**21**	**20**	**8**	**5**	**2**	**2**	**9**	**617**

ENGINE INSTALLED IN TOP AIRCRAFT MODELS

MODEL	PW300	JT15D	PW500	PW600
Falcon 7X	105			
Citation 560XL(Excel/XLS/XLS+)			78	
Citation 550(II/IISP/SII/Bravo)		72		
Falcon 2000	46			
G200	42			
Citation 510(Mustang)				38
Hawker 400		38		
Citation 680(Sovereign/+)	34			
Learjet 60 XR	32			
Phenom 300			22	
TOTAL	**259**	**110**	**100**	**38**

ENGINE FAMILY GROWTH TREND



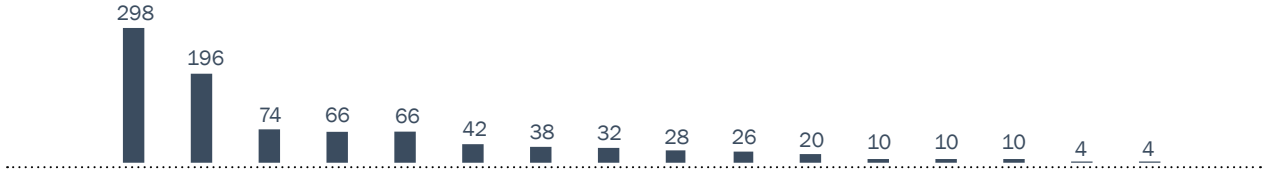
ROLLS-ROYCE

RANKING **No.1**

NET GROWTH **12 ▲ 1.3% ▲**

MOST POPULAR **BR700**

LARGEST FLEET **Mainland China**

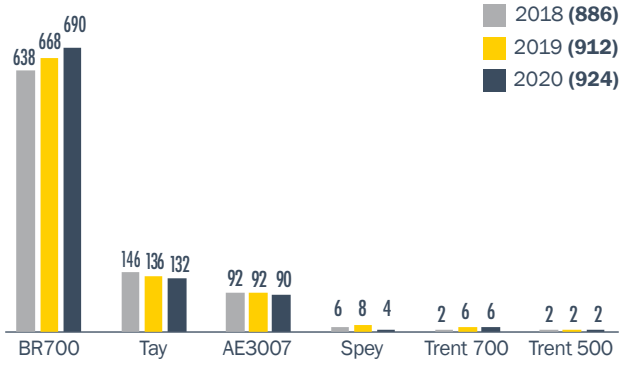


	MAINLAND CHINA	HONG KONG SAR	AUSTRALIA	SINGAPORE	INDIA	INDONESIA	MALAYSIA	JAPAN	TAIWAN	THAILAND	PHILIPPINES	VIETNAM	SOUTH KOREA	MACAO SAR	NEW ZEALAND	OTHERS	TOTAL
BR700	218	172	58	50	40	14	28	30	26	20	8	2	10	8	4	2	**690**
Tay	60	20	12	6		8	4	2	2		12	4				2	**132**
AE3007	18		4	10	26	20	2			4		4		2			**90**
Trent 700	2	4															**6**
Spey							4										**4**
Trent 500										2							**2**
Total	**298**	**196**	**74**	**66**	**66**	**42**	**38**	**32**	**28**	**26**	**20**	**10**	**10**	**10**	**4**	**4**	**924**

ENGINE INSTALLED IN TOP AIRCRAFT MODELS

MODEL	BR700	TAY	AE3007
G550	180		
G650ER	122		
Global 6000	116		
G450		106	
G650	92		
Global 5000	78		
Global Express XRS	58		
Legacy 650			44
Legacy 600			34
Global Express	28		
TOTAL	**674**	**106**	**78**

ENGINE FAMILY GROWTH TREND



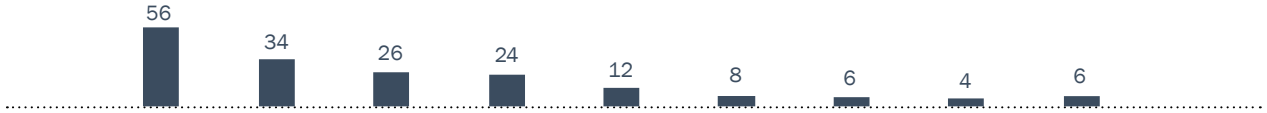
WILLIAMS

RANKING **No.5**

NET GROWTH **6 ▲ 3.5% ▲**

MOST POPULAR **FJ44**

LARGEST FLEET **Australia**

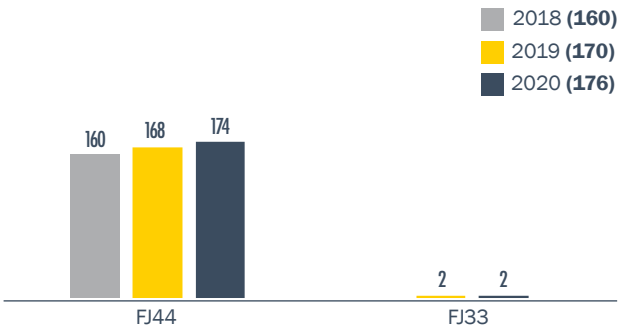


	AUSTRALIA	JAPAN	INDIA	MAINLAND CHINA	PHILIPPINES	SOUTH KOREA	NEW ZEALAND	HONG KONG SAR	OTHERS	TOTAL
FJ44	54	34	26	24	12	8	6	4	6	174
FJ33	2									2
Total	**56**	**34**	**26**	**24**	**12**	**8**	**6**	**4**	**6**	**176**

ENGINE INSTALLED IN TOP AIRCRAFT MODELS

MODEL	FJ44	FJ33
Citation 525(M2/CJ1/+)	72	
Citation 525A(CJ2/CJ2+)	44	
Citation 525C(CJ4)	26	
Pilatus PC-24	12	
Citation 525B(CJ3/CJ3+)	10	
Premier I/IA	6	
Nextant 400XT/XTi	4	
VISION SF50		2
TOTAL	**174**	**2**

ENGINE FAMILY GROWTH TREND



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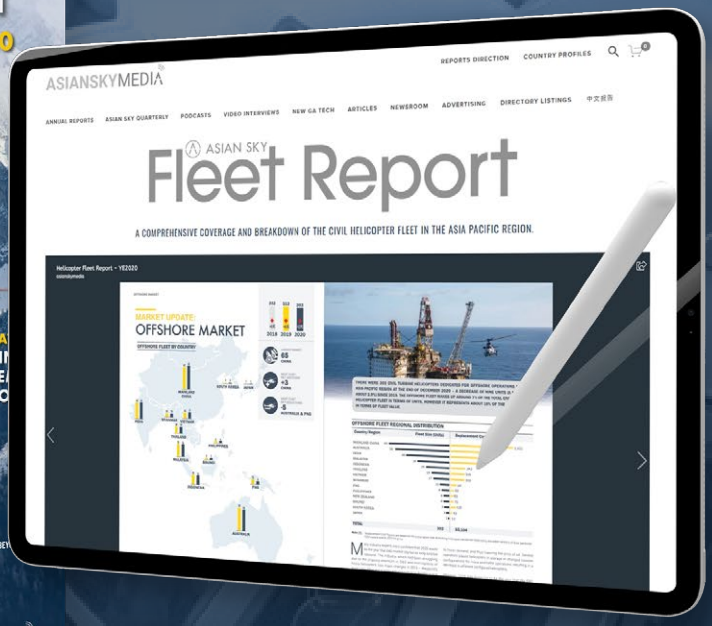

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SPECIAL FEATURE:

ASM SURVEY ON THE FUTURE OF CONNECTIVITY

Whether it is still being able to work emails, chat with friends, post pictures on Instagram or being able to catch Pokémon, we all have our own different reasons for being able to connect to the internet. But although we take it for granted on the ground, in the air it is a much different story. On the ground, it is much simpler. Your cell phone connects to a cell tower when there is no Wi-Fi in range, and to Wi-Fi when it is. But on an aircraft, especially one that is flying at 500 miles per hour, it is much more complicated.

There are two main systems available for doing this. The first uses cell towers, much like with a cell phone. However, the problem with this system is that it relies on ground-based systems to be within a certain range of the aircraft. Over large expanses of land, like the US, this system can work well, but as soon as the aircraft starts flying over oceans then the internet connection is lost.

The second system uses satellites. This way of delivering connectivity to an aircraft is much more complex, as it relies on a number of different factors, not least the use of a satellite. Satellites themselves cost millions of dollars to build, and millions more dollars to launch. Depending on how high above the earth a satellite is, you might only need a few satellites to provide global coverage, with the general rule being that the higher up the satellite is, the more global coverage it will have. GEO (Geostationary or Geosynchronous Orbit) satellites take the fewest to cover the globe as they are so high up (35,786km). At the other end of the spectrum are LEO (Low Earth Orbit) satellites, which are much closer to the earth, so have a smaller coverage range. LEO satellites are generally lower than 1,000km above the surface of the earth. Sitting in the middle are MEO (Middle Earth Orbit) satellites, which take fewer than LEO satellites but many more than GEO satellites.

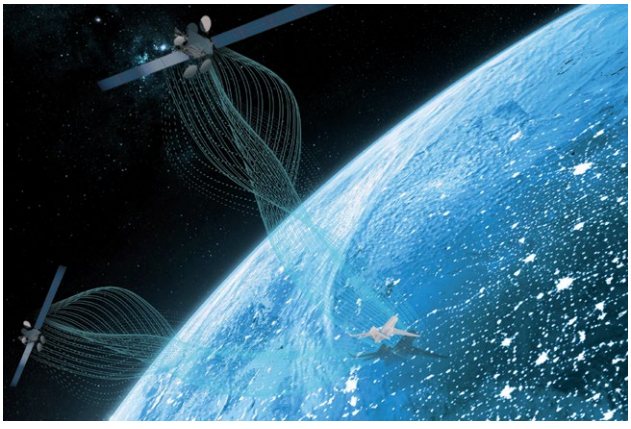
But with advances in technology, and more satellites being launched, the days of having to wait until you land before you can finally check to see if you have received that important email are almost over. Asian Sky Media spoke to two connectivity companies – Honeywell and Satcom Direct, and asked them five questions about the future of connectivity in the air.

DOES EVERYBODY WANT TO STILL BE CONNECTED WHEN THEY FLY?

"Of course! More than ever before. The current and future generations are increasingly becoming the new leisure and business traveller which demand to be always connected. In-flight connectivity is essential to heighten the passenger experience and modernize flight operations. For the business aviation passenger, having access to high-speed in-flight cabin connectivity thousands of meters in the sky is essential when working in mercurial business environments to access emails, conduct online conferences, or read the news; while leisure passengers rely on inflight entertainment or want to stay connected with family and friends onboard"– Bret Aldieri, Senior Director, Connected System Product Management, Honeywell Aerospace

"Absolutely, connectivity is now the number one priority for charter passengers, aircraft owners, corporate flight departments and for purchasers, all of which want to optimize their aircraft as a work and leisure space. The role of connectivity is maturing and today it is much more than just a means of staying connected, it has developed into a data industry.

The SD connectivity eco-system has been developed using open architecture which means that our customers can plug-in third-party tools which support for example maintenance tracking, scheduling systems, flightlogs, fiscal management, risk analysis, and much more. Communications is now a given, but the optimization of the data adds incredible value to operations." - Michael Skou Christensen VP International Satcom Direct.



HOW CLOSE ARE WE TO REPLICATING ON-GROUND CONNECTIVITY WHEN WE FLY?

"Today, passengers want high-speed internet access like they receive on the ground so that they can stay connected to work or social media wherever they fly. Connectivity solutions for aircraft that replicate what we are using on ground have become an important element operators are looking for. Honeywell's JetWave system that connects with Inmarsat's JetConneX high-speed broadband service has made speeds and connectivity capabilities onboard as easy and enjoyable in the skies as it is on the ground." – Bret Aldieri, Senior Director, Connected System Product Management, Honeywell Aerospace

"Connecting a computer to a satellite system on a machine that is 40 000 feet in the air and travelling at speeds of up to 500mph, is actually pretty difficult, so we have to manage customer expectations about the in air connectivity experience when compared to ground usage. There is still a difference, however every year we move closer towards the holy grail of on-board connectivity replicating on the ground functionality. All stakeholders in the supply chain are investing heavily to improve infrastructure, hardware, software and flexibility of service." Michael Skou Christensen VP International Satcom Direct.

WHAT ARE THE CURRENT LIMITING FACTORS?

"Limiting factors are coming down to polar routes, latency, and capacity. As we see polar orbits, new satellite technology in the Medium-Earth-Orbit (MEO) and Low-Earth-Orbit (LEO) constellation with our new antenna technologies and increased capacity the seamless experience will be achieved." – Bret Aldieri, Senior Director, Connected System Product Management, Honeywell Aerospace

"The number of factors limiting the perfect in air connectivity experience are slowly being removed as enhanced elements of the connectivity supply chain are continually added. Satellite constellations are being updated or new ones launched into LEO, MEO and GEO, providing more bandwidth for more aircraft. We are partnering with Intelsat to provide a dedicated Ku-band connectivity service FlexExec. By eliminating the need to share the

satellite signals with marine, commercial aviation or other users the Ku-band is consistent and global. Currently there are still a few black spots for Ka-band reception too – over the poles is the most common, but this is being rectified as new satellites are launched. Cost of outfitting aircraft and equipment size makes it prohibitive for all but the super-mid to large cabin aircraft to access the high-speed Ka-band services, but that is changing too." – Michael Skou Christensen VP International Satcom Direct.

HOW DO YOU DEAL WITH REGULATORY ISSUES IN DIFFERENT COUNTRIES AROUND THE WORLD?

"Regulatory requirements come in two forms: First is the standard process to certify our hardware to be installed on an aircraft registered to a specific country. Second are the data governance policies for each country regarding landing and fly-over rights for different frequencies.

Honeywell is an industry leader in hardware certification for aircraft globally and we have global and regional teams that make certain our hardware complies with each countries' certification standard. Honeywell works with our capacity providers to ensure that data governance policies are complied with in each country to be certain that our corporate jet customers know where the equipment and frequency ranges they have installed can be safely and legally operated throughout the world." – Bret Aldieri, Senior Director, Connected System Product Management, Honeywell Aerospace

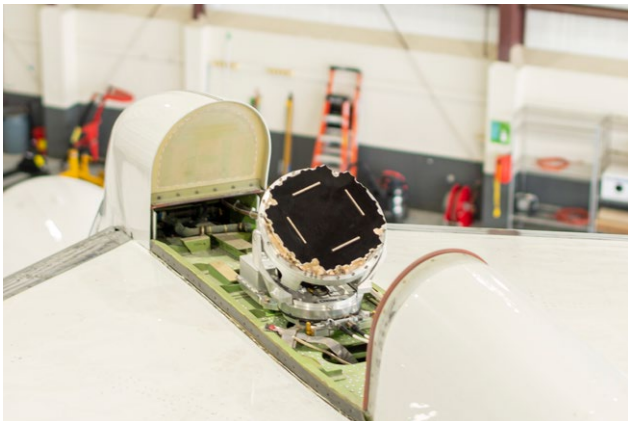
"We work with our partners, industry interest groups and regulatory bodies around the globe to make sure that we meet regulatory requirements that ensure our customers have a seamless and uninterrupted experience." - Michael Skou Christensen VP International Satcom Direct.

WHAT DEVELOPMENTS WILL WE SEE IN THE NEXT FEW YEARS?

"It is now the era of "connected." There are advances occurring in antenna technology and maturity in wide band, dual-pole phased array antennas as well as electronically steered array antennas. To accommodate the constantly evolving technology requirements, we are also leveraging the advancement of technology that will allow data to flow through flight operations in real time that enables actionable insights, making it much easier to know all aspects of

the mission and optimize the passenger experience. As the world's leading developer of nose-to-tail and air-to-ground connected aircraft solutions, we continue to upgrade and expand our technology capabilities by increasing the capacity with lower latencies to make the overall experience with a personal device completely seamless from home to car to office to aircraft to hotel. We believe we are going to see streaming services everywhere and the ability to be on video for all conversations anywhere. The result is to be much closer to a more connected world." – Bret Aldieri, Senior Director, Connected System Product Management, Honeywell Aerospace

"Defined industry standards - We continue to strive to set industry standards and are currently focusing on trying to define international standards for the way third parties integrate with our SD Pro® operating system. By simplifying integration and adding value to the system through incorporation of data management systems, maintenance tracking and pre- and post-flight resources customers can better manage the receiving and distribution of data from numerous third-party sources, as well as their own assets. This simplifies and enhances all areas of the flight operation, improve safety, and support asset value retention. We will see more integration and removing of silos between company departments during the next five years



Speeds will continue to increase, this is always high on the demand list, and will eventually support IoT functionality.

New hardware the SD Plane Simple Antenna systems represent a giant step forward in providing connectivity to more aircraft types around the world. We are very excited about the connectivity this will deliver to a much broader segment of the business aviation sector. Once the antennas are in service SD will support the customer connectivity experience from end to end ensuring a single point of contact to resolve any issues, make any changes to the service they need or upgrade existing services. This will make life so much easier for the end users.

Artificial Intelligence - will enrich the value of data as the data collected is optimized using machine learning and AI algorithms to deliver vital information to crew, maintenance teams, flight departments to further streamline flight operations." – Michael Skou Christensen VP International Satcom Direct

www.satcomdirect.com

www.honeywell.com

PREOWNED AIRCRAFT SALES PACE QUICKENS

If preowned aircraft sales are a leading indicator of how the outlook for new and used business jets is shaping up, then the market is surprisingly heated as the world's economies begin to see light at the end of the pandemic tunnel.

Dealers, including Asian Sky Group, which are accredited by the International Aircraft Dealers Association (IADA), usually average over 700 transactions and $6 billion in sales volume per year. However, in the 12 month period from April 1, 2020 to March 31, 2021, IADA dealers actually registered 1,222 global transactions worth more than $10 billion.

For the calendar year 2020, new aircraft manufacturers also delivered just over a thousand new turbine business aircraft (jets and turboprops). One could conclude that quite a few business aircraft changed hands since the pandemic struck a year ago in March.

Members of IADA closed 211 preowned aircraft sales transactions in the first quarter of 2021 alone, which is usually a lackluster quarter for aircraft sales. In the same quarter, they inked another 246 aircraft deals that are scheduled to close in the next few months.

The data was included in the Spring 2021 IADA Market Report. IADA began tracking preowned sales metrics for business aircraft

in April 2020 on a monthly basis, as a result of the volatile market conditions caused by the pandemic and will be announcing future results quarterly.

"The IADA data clearly indicates that the aviation industry has proven its resilience through the economic fluctuations brought about by the pandemic and is now on a trajectory for continued success," said IADA Executive Director Wayne Starling.

"Further, a perception survey of our members indicates they expect the next six months to demonstrate a slight increase in all market conditions, with the strongest areas of increase in the light and mid-sized jet markets," Starling added.

The perception survey reflects the opinions of IADA's entire global network of accredited dealers, certified brokers, major OEMs, and more than 60 of the industry's leading products and services providers. The Spring 2021 IADA Market Report is available at https://aircraftexchange.com/market-report.

IADA is now regularly taking the pulse of all of its members, including accredited dealers, certified aircraft brokers, new airplane manufacturers, and products and services providers. As a group they have become more optimistic as we enter 2021.

They generally think that the current business aircraft sales market is better than normal, with expectations for a slightly better market in the next six months. Those polled feel that the aircraft leasing market will be at normal levels for the next six months.

Respondents to the most recent survey indicated the next six months will show a slight increase in all market segments, with the strongest areas of increase in the light and midsize jet markets. The fourth quarter 2020 ultra-long-range jet market responses predicted mostly stable conditions; however, the first quarter 2021 responses indicate the next six months will show a slight increase in this sector of the market.

IADA members executed 119 acquisition agreements during the first quarter and were exclusively retained to sell 157 aircraft. During the quarter aircraft transaction prices were lowered on only 27 aircraft, while 41 transactions fell through for one reason or another, which was about the average for the previous three quarters.

The organization's exclusive marketplace, www.AircraftExchange.com, lists more than 500 business aircraft for sale on its site. The aircraft range from turboprops to VVIP long range business jets. The online marketplace lists only aircraft offered exclusively for sale or lease by IADA members.

Asian Sky Group is proud to be an accredited dealer member of IADA. IADA's dealer organizations and individual brokers do business in more than 100 countries. All IADA dealers have been accredited by the organization, and brokers also receive certification, both through strenuous approval processes to ensure the utmost professionalism and integrity.

IADA members participate in a program of ongoing education to remain current on best practices and new developments in acquiring and selling business aircraft, as well as abiding by a strict code of ethics, integrity and transparency. IADA represents a variety of IADA verified product and aviation services that also operate with the highest professional standards in the industry.

IADA is a professional trade association formed more than 25 years ago, promoting the growth and public understanding of the aircraft resale industry. IADA now offers the world's only accreditation program for dealer organizations and the only certification program for individual brokers. The process delivers high standards of ethical business and transparency regarding aircraft transactions, leading to a more efficient and reliable marketplace. For more info about IADA go to www.IADA.aero.

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Cook Islands
French Polynesia
Marshall Islands
New Caledonia
New Zealand
Papua New Guinea
Solomon Islands

SOUTHEAST ASIA

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

A310
A319ER
A340
ACJ318
ACJ319
ACJ320
ACJ330
BAe 146
BBJ
BBJ 787-8
BBJ2
Boeing 727
Boeing 737
Boeing 747
Boeing 767
Fokker 100
Lineage 1000
Lineage 1000E

LONG RANGE

Falcon 7X
Falcon 8X
G550
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
ERJ145
Falcon 2000
Falcon 900
G300/G350
G450
GII
GIII
GIV/GIV-SP/G400
Legacy 600
Legacy 650

MEDIUM

Cessna Citation Latitude
Cessna Citation Sovereign
Cessna Citation X
Challenger 300/350
Falcon 20
Falcon 50
G200
G280
Hawker 4000
Hawker 700/750
Hawker 800/XP
Hawker 850XP
Hawker 900XP
Learjet 60/XR
Legacy 500

LIGHT

Cessna Citation CJ2
Cessna Citation CJ3
Cessna Citation CJ4
Cessna Citation Encore
Cessna Citation Excel
Cessna Citation I
Cessna Citation II
Cessna Citation III
Cessna Citation V
G100/G150
Hawker 400
HondaJet
HondaJet ELITE
Learjet 31
Learjet 35/36
Learjet 40/45/XR
Learjet 70/75
Nextant 400XT/XTi
Phenom 300
Phenom 300E
Pilatus PC-24
Sabreliner
Westwind 1/2

VERY LIGHT

Cessna Citation CJ1
Cessna Citation Mustang
EA500
Learjet 24/25
Phenom 100
Premier I/IA
VISION SF50

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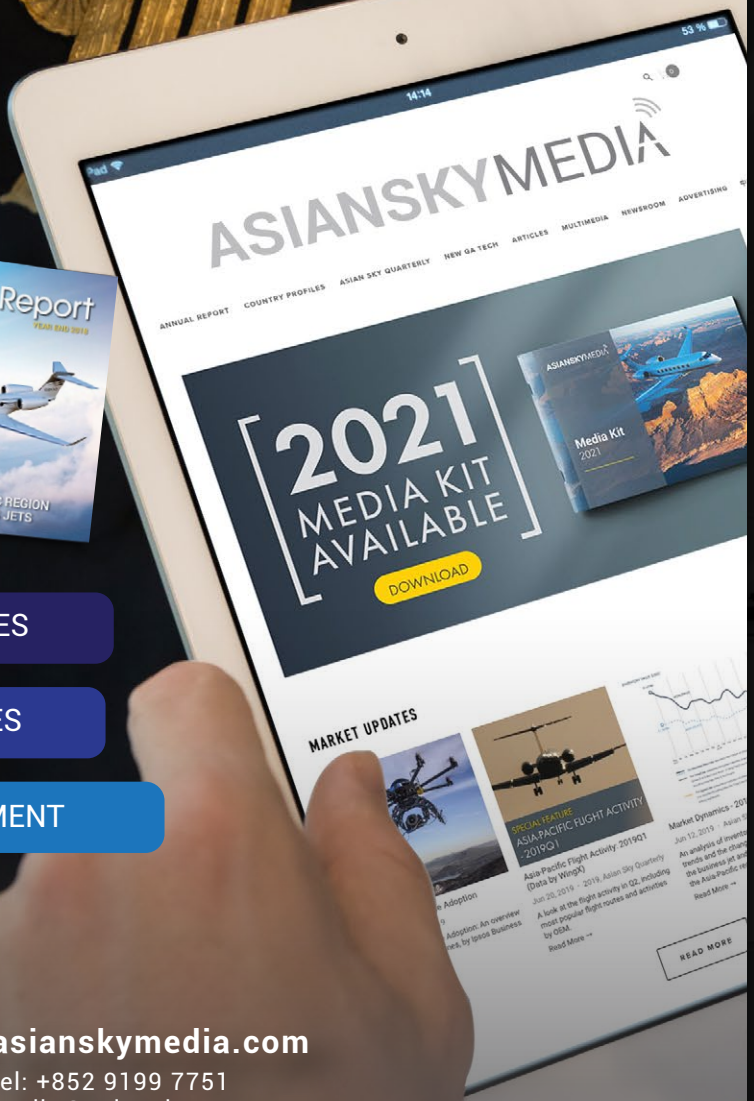

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