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Rollie Vincent
JETNET iQ Creator/Director



I Want to Get Away, I Want To Fly

The skies are beckoning, as flight activity continues to slowly but surely rebound across business and general aviation (B&GA). Not surprisingly, the speed and durability of recovery is uneven by almost every measure, by operational segment, aircraft size category, and geography.

On the good news side of emerging developments, a very noticeable uptick in COVID-19 vaccination rates in the U.S. in the past several weeks has injected life-saving and confidence-building serum into the world's largest B&GA market. Progress in vaccine administration in other key countries and regions - including Mexico, Brazil, Canada, and most of Europe – appears to be on a slower track, although the U.K. stands out as a regional bright spot, with half of adults reportedly having received “the jab” by mid-March 2021. In Australia, a bright star in the Southern skies (despite recent torrential rainfall), the country's share of COVID-19-related cases and deaths is more than 10x lower than its share of the world's population.

While certain countries and regions are demonstrating relatively strong performance in health outcomes and vaccination rates, the tough work of reopening borders, rebuilding economies, and returning to a more mobility-oriented society will simply take time and all the resources we can muster.

“...reopening borders, rebuilding economies, and returning to a more mobility-oriented society will simply take time...”

American singer-songwriter Lenny Kravitz won a Grammy Award for Best Male Rock Performance in 1999 for *Fly Away*. Aviation aficionados may recognize the tune as one of the theme songs from the TV series *Ice Pilots*, a reality show that portrayed Buffalo

Airways, an actual air transportation business based in Yellowknife in Canada's Northwest Territories. Although most renowned for its World War II-era transport aircraft, Buffalo Airways also operates vintage King Air 100 / A100 and 690 Turbo Commander aircraft into some of the most remote communities in Canada's Far North. Serving air passenger, combi, courier, and freight charters, and operating its own Transport Canada Approved Maintenance Organization (AMO), the company personifies a “can do” service culture that is a refreshing reminder of human resilience and inventiveness in the face of some of the most challenging operating environments in the industry.



Providing unique products and services that customers value is at the core of successful business strategies in any industry, and particularly in business and general aviation. With many people longing to get “back in the saddle” after a long COVID-19 induced hibernation, B&GA is uniquely positioned to serve customers who are eager for a return to face-to-face meetings and conventions, gatherings of families and friends, escapes to sand & sea, mountains, and remote adventures. While get-rich-quick temptations abound, we believe that B&GA organizations and leadership teams that take a long view of investment and payback horizons are poised to be amongst the strongest survivors of the current pandemic.

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Outlook

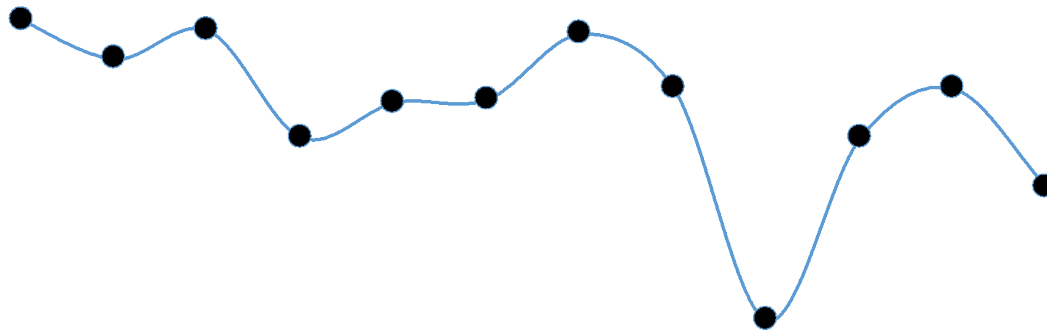
Pre-owned business jet sales and leases ended the Year 2020 up ~5% year-over-year, while pre-owned turboprop transactions were down ~3% YOY, based on the latest JETNET databases. Given the fact that most world economies were in a COVID-related recession last year, this can only be described as impressive performance and a recognition by customers of the value they place in business aviation. Pre-owned business jet transaction activity last year was inversely proportional to aircraft size, with Small Jets capturing a bigger share of sales than Large Jets in 2020 than in 2019.

With more than 10 years of historical data captured on a quarterly basis, our on-going JETNET iQ Survey tracker of new aircraft purchase

probability rebounded to pre-COVID levels at the end of last year but has since slipped back somewhat, at least based on early results from our in-field Q1 2021 JETNET iQ Global Business Aviation Survey of aircraft owners / operators. An initial analysis of results with approximately 2/3rds of expected respondents having completed the survey reveals that Q1 2021 purchase interest is somewhat higher in Latin America & Caribbean than it was in Q4 2020, but that expectations are mostly flat to down in other regions of the world.

While we expect market conditions to continue to improve throughout 2021 and into 2022, the evidence suggests that it is still too early to expect a return to 2019-era aircraft production rates this year.

**Mid-Point Purchase Probability
Q2 2018 - Q1 2021**



Q2 2018 Q3 2018 Q4 2018 Q1 2019 Q2 2019 Q3 2019 Q4 2019 Q1 2020 Q2 2020 Q3 2020 Q4 2020 Q1 2021

Source: JETNET iQ Global Business Aviation Surveys; Respondents were asked about their probability of purchasing a new business aircraft in the next 12 months. Options were 0%, 1-20%, 21-40%, 41-60%, 61-80%, and 81-100%. The mid-point calculation takes the mid-point of those buckets and calculates a weighted average purchase probability; Q1 2021 JETNET iQ Survey in progress (n = 325 respondents to date out of a target of 500+ total respondents); For aircraft size category definitions, please see the Appendix

A Long View



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All of us came to aviation along a unique path, either one we carved ourselves or, I think more likely, that was prepared for us, whether wittingly or not. For me, it was definitely my father and his work as an A&P mechanic that provided my initial exposure and experiences with what would become my chosen profession.

As a child, I recall some advice that my father gave me. One of his friends was working at Canadair, which at the time was working on several military and commercial aircraft programs. "Don't ever work for an aircraft company," he told me. "Too many ups and downs. They hire you then they fire you." My father was working for Air Canada, one of the world's premier airlines and at the time a government-owned Crown corporation and would stay with that employer for the rest of his career.

Whether through visits to the ramp observation deck at Montreal's Dorval Airport to see and hear the Boeing 727 Whisperjets (not) from Eastern Airlines or to wave goodbye to my grandmother on her flight to England on the elegant BOAC VC-10, some of my earliest and most memorable experiences revolved around aircraft and air travel. I will always recall standing under an Aeroflot Tupolev Tu-114 with counter-rotating propellers and being dripped on by engine oil. I remember thinking at the time that this might not be a good thing to fly in over the Atlantic.

In 1967, the world came to Montreal to celebrate the country's centennial, stimulating an early interest in geography and international travel. After my first flight from Montreal to Los Angeles on a DC-8-63 in 1968, I was unknowingly and permanently injected with kerosene in the veins, an affliction that ultimately became a lifelong passion. From my studies to my earliest office work experiences, aviation would become front-and-center in what I wanted to do. At 15, our family purchased a Cessna 150, and I was lucky enough to get exposed to general aviation, aerial navigation, and eventually to piloting light aircraft. A chance meeting with a distinguished looking gentleman flying a twin piston at Wichita's Cessna Aircraft Field turned into a half-day factory tour and lunch with none other than the company's chairman and president Dwayne Wallace, the father of the iconic Citation family of business jets and GAMA's 1st chairperson.



I was just a kid from Canada flying with my sister in a Canadian-registered tiger yellow C150 with a "funny N-number". His kindness, enthusiasm, and welcoming nature were life-changing and career-establishing for me. My initial "office job" would eventually be with the International Civil Aviation Organization in Montreal, working in aviation statistics. Eight years later and going against my Dad's counsel, I joined aircraft manufacturer Bombardier in market research and analysis, eventually transferring with my family to Toronto and then to Wichita to join Learjet. I later was recruited by Cessna Aircraft as Director and ultimately Vice President of Strategic Planning. All along the path, career decisions (not always planned) led to doors of opportunity to work alongside people who I would come to know as leaders in the industry, whether they knew it or not. It was an honor, to say the least, to have the opportunity to even be in the same room with some of the best and brightest in the industry.

A Long View (cont.)

Why do I recount these experiences here? I believe that I have been one of the lucky ones. Being in the right place at the right time, of course, was vital but really was just a part of it. A fire needs fuel, oxygen, and a spark to ignite and be sustained. A child needs to know what is out there before he or she can imagine their part in something bigger. For me, illumination came from an early initial exposure to the world of aviation, which sparked in me a lifelong fascination with the technologies, infrastructure, and people that make it all work so well.

I am not alone in recognizing that the past year has been unprecedented – the COVID-19 pandemic has changed the way all of us live and work, and fears, border closures, and quarantines have put a sledgehammer into air travel unlike anything we have witnessed on a sustained basis. We can only speculate at this point as to whether we are in fact staring at a step change in how business is conducted going forward. While we can all adjust to new work routines and work-from-anywhere arrangements, I wonder about whether in the race to make us all safe and secure we have unwittingly erected fresh barriers to people getting early exposure to aviation. This is especially the case for our younger generations, whose initial experiences today have more to do with the less friendly skies - of crowded airports, frustratingly long security lineups, intrusive full-body scanners, and continuous barriers and fences - than with the open-air sights and sounds of an airport ramp brimming with the comings and goings of planes, people, and cargo. In our need to ensure safety and security, particularly in large commercial airports, we seem to have lost sight of the art and science of making customers feel welcome and appreciated. Thankfully, and for the most part, these features of the air travel experience live on in business and general aviation, which as much as anything bodes well for the industry's future. Bringing more people into the industry is key to making sure we stay relevant and attractive to customers, investors, employees, students, and their communities. It was only about a year ago when many in our industry were concerned about where we were going to find the next generations of talent – including engineers, pilots, and maintenance technicians – to bridge us into the future. Given the relatively strong performance of the B&GA industry through

these COVID times, we are not far off the days when these concerns will resurface. Will we be ready?

By many measures, business and general aviation is a relatively small industry with a global footprint. Broadening the reach of our industry is an opportunity that we should all embrace. I admire organizations that welcome new people into their doors, with open houses, job fairs, and mentoring and intern programs. Bringing the community inside the (necessary) fences and into our big buildings just might lead to enlightenment in that young boy or girl who can see themselves in us.



A front-facing view of a HondaJet aircraft, showing the cockpit windows and the two engines mounted on the wings. The aircraft is illuminated from below, creating a dramatic effect.

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Business Conditions

GDP



The Economist's **GDP growth forecasts** for 2021 are: U.S. +4.5%, Euro Area +4.5%, U.K. +4.4%, Mexico +4.0%, Brazil +3.2%, Canada +4.0%, China +8.5%, Russia +2.5%, and Australia +2.8%



Business jet cycles (take-offs and landings) in February 2021 were *down* by 29% YOY for U.S. Part 91, *up* by 41% YOY for U.S. Part 91K, *up* by 29% YOY for U.S. Part 135, and *down* by 23% at European airports (all comparisons adjusted for 2020 Leap Year)



Dow Jones Index (U.S.) was up 76%,
FTSE 100 (U.K.) was up 18%,
CAC 40 (France) was up 40%, and
DAX 30 (Germany) was up 68%
YOY from Mar. 22, 2020 to Mar. 23, 2021



U.S. Index of **Consumer Sentiment** (preliminary) was 83.0 in Mar. 2021, versus 76.8 in Feb. 2021 and 89.1 in Mar. 2020 YOY; Euro Area **Economic Sentiment Indicator** was 93.4 in Feb. 2021, versus 91.5 in Jan. 2021 and 104.0 in Feb. 2020 at the onset of COVID-19



U.S. initial **unemployment claims** were 82.0 million in the 52 weeks ending Mar. 13, 2021; U.S. unemployment rate (seasonally adjusted) was 6.2% in Feb. 2021 (representing ~10.0 million people)



U.S. **Purchasing Manager Index** (Manufacturing PMI) was 60.8% in Feb. 2021, versus 58.7% in Jan. 2020; Euro Area **Business Climate Indicator** was -0.14 in Feb. 2021, versus -0.31 in Jan. 2020



Transactions of pre-owned business jets (retail sales & leases) in Jan. 2021 were 155 units, unchanged YOY; days-on-market were up 8% YOY to 297 days (JETNET as of Mar. 24, 2021)



Business aircraft deliveries in 2021 YTD are 57 jets (including Cirrus, Boeing, Airbus) and 25 turboprops (JETNET as of Mar. 24, 2021)

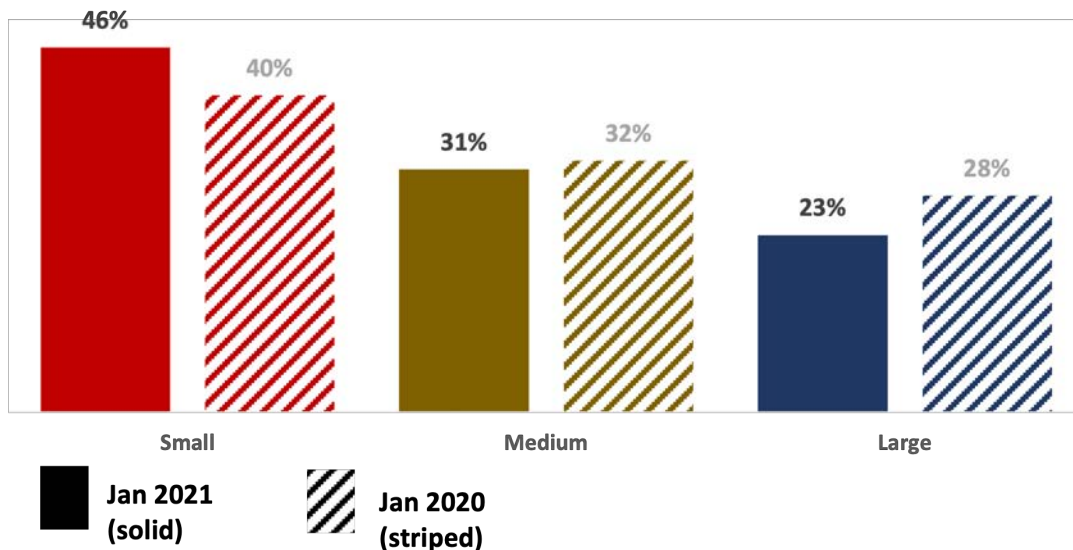
Pre-Owned Business Jet Transactions

By Aircraft Size Category - Worldwide
January 2021 versus January 2020

While aircraft transaction data for 2021 are being recorded daily, we believe that it is prudent to wait 6-8 weeks after the end of a reporting period for data capture and before we can begin to confidently assess the results. Based on this caveat, our initial assessment of the overall pre-owned business jet market is that January 2021 volumes were essentially unchanged YOY at 155 retail sales and leases of whole aircraft. By size category,

the transaction mix somewhat favored Small Jets (Personal Jets, Very Light Jets, Light Jets), which represented 46% of the deal share, up from 40% YOY. As reported in our last issue of JETNET iQ PULSE, this pattern is also evident in U.S. Part 91, 91K, and Part 135 flight operations, where demand has held up better at the lower ends of the market.

Pre-owned Retail Sales and Lease Transactions
% By Size Category Jan 2021 vs Jan 2020 - Business Jets



Sources: JETNET; JETNET iQ
For aircraft size category definitions, please see the Appendix

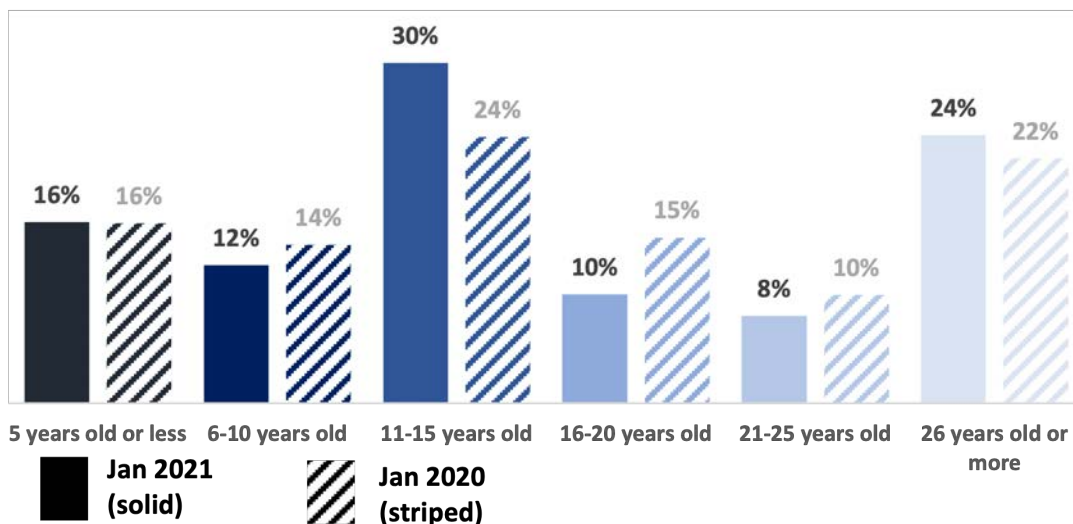
Pre-Owned Business Jet Transactions

By Aircraft Age Category - Worldwide
January 2021 versus January 2020

Although for-sale inventory levels are down YOY, there has been relatively little change in the age profile of business jets that are transacting, based on a comparison of January 2021 versus January 2020 deals as recorded by JETNET. This suggests that aircraft brokers and dealers are still managing to locate and propose a wide array of aircraft for their customers, despite tight inventory. Based on 155 pre-owned jet retail transactions in January 2021 (to date), 28% of deals involved an aircraft that was initially delivered in the prior 10 years, little

changed from 30% in January 2020. The market is functioning as expected, and perhaps better than should be expected given the fact that there are ~200 fewer jets listed as “for sale” in the JETNET database as of March 22, 2021 than there were at the beginning of the year. This represents a shift from 8.2% of the fleet available for sale to 7.2% over the course of ~11 weeks. Pre-owned jet inventory levels are now at historic lows, which in a “normal” market would result in firmer used aircraft prices and stronger valuations, other things being equal.

**Pre-owned Retail Sales and Lease Transactions
% By Age Category Jan 2021 vs Jan 2020 - Business Jets**



Sources: JETNET; JETNET IQ

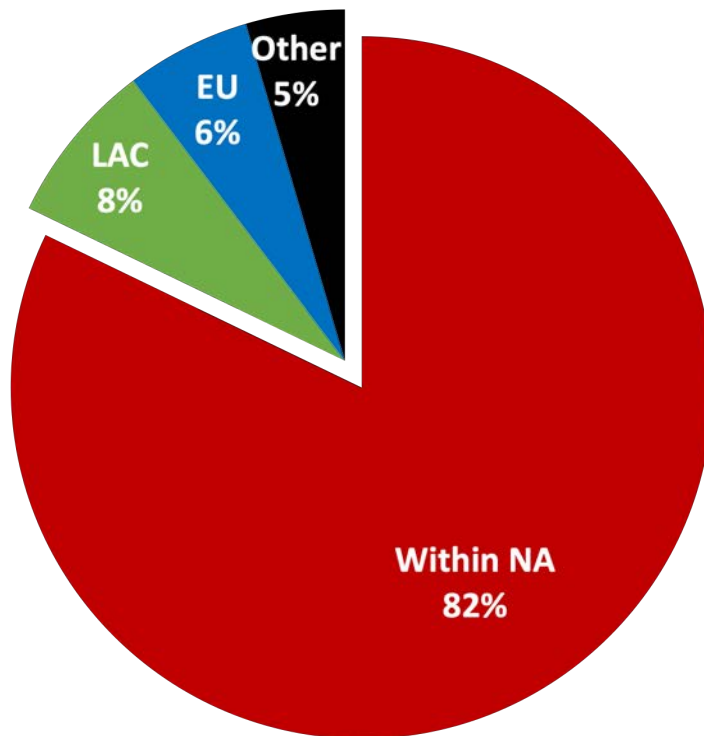
Distribution of Landings - North America

North America-Based Respondents
JETNET iQ Surveys: Q1 2018 Through Q1 2021

In order to gain a worldwide understanding of business aircraft flight patterns, we ask JETNET iQ Survey respondents to provide information on the regions of the world where their fleet lands. Over a 3-year period from Q1 2018 through Q1 2021, respondents based in North America (U.S. and Canada) have indicated that 82% of their flight operations involve landing

at an airport in North America. This is consistently the highest “local” flight activity of any of the 4 major regions of the world that we analyze. While no part of our interconnected economies is truly isolated, North America and its business aircraft flight operations reflect a region that is relatively independent from the rest of the world.

North American Respondents
3-Year Average



Sources: JETNET iQ Global Business Aviation Surveys
Q1 2021 JETNET iQ Survey in progress (n = 325 respondents to date out of a target of 500+ total respondents)

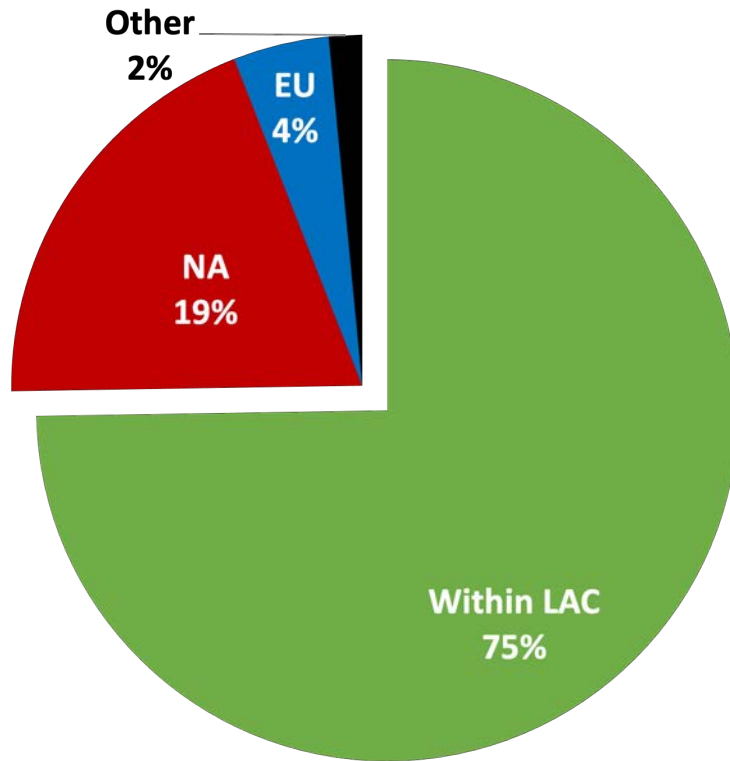
Distribution of Landings - Latin America & Caribbean

Latin America & Caribbean-Based Respondents
JETNET iQ Surveys: Q1 2018 Through Q1 2021

Over a 3-year period from Q1 2018 through Q1 2021, JETNET iQ Survey respondents based in Latin America & Caribbean (LAC) have indicated that 75% of their flight operations involve landing at an airport within the LAC region. A further 19% of

landings are at an airport in North America, with just 4% of flights touching Europe and 2% involving Rest of World. This pattern of landings reflects a highly integrated region with a predominant North-South trade orientation.

Latin America & Caribbean Respondents
3-Year Average



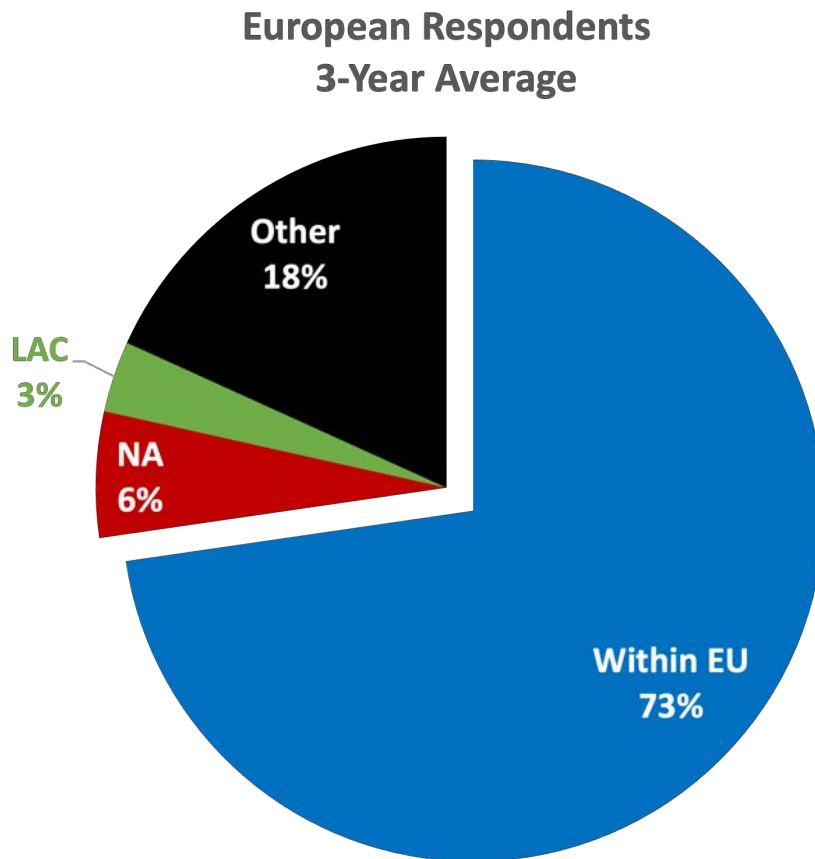
Sources: JETNET iQ Global Business Aviation Surveys
Q1 2021 JETNET iQ Survey in progress (n = 325 respondents to date out of a target of 500+ total respondents)

Distribution of Landings - Europe

Europe-Based Respondents
JETNET iQ Surveys: Q1 2018 Through Q1 2021

Over a 3-year period from Q1 2018 through Q1 2021, JETNET iQ Survey respondents based in Europe have indicated that 73% of their flight operations involve landing at an airport within the European region. A further 18% of landings are at an airport in Rest of World (Former Soviet Union, Middle East, Africa, and

Asia Pacific). While no region is truly independent, operators in each region have flight patterns that reflect their own unique circumstances, which are different from other regions with important implications for policy-makers.



Sources: JETNET iQ Global Business Aviation Surveys
Q1 2021 JETNET iQ Survey in progress (n = 325 respondents to date out of a target of 500+ total respondents)

About JETNET iQ

JETNET iQ is a business aviation market research, analysis and forecasting service consisting of three main elements:

- **JETNET iQ Reports** are the definitive analytical reference for business aviation, incorporating quarterly state-of-the-industry analyses, owner / operator surveys, and detailed delivery and fleet forecasts;
- **JETNET iQ Summits** are annual industry conferences providing unique data, insights and networking opportunities; and
- **JETNET iQ Consulting** provides customized research and analysis for clients on a project-by-project basis.

JETNET iQ Reports are available in various formats on a subscription basis, and are published regularly by JETNET LLC, 101 First Street, Utica, NY 13501 - **currently offered at 11 different levels**. JETNET iQ is a partnership between JETNET LLC of Utica, New York and Rolland Vincent Associates, LLC, of Plano, Texas.

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Since late 2010, JETNET has conducted quarterly surveys of the worldwide community of business aircraft owners and operators in order to gauge customer sentiment, brand perceptions, aircraft purchase, selling, and utilization expectations, and other factors. JETNET iQ Global Business Aviation Surveys are password-protected and by invitation-only. Potential respondents are drawn randomly from the JETNET worldwide database of business jet and business turboprop owners and operators; they are initially contacted by telephone and/or e-mail by JETNET's team of multilingual researchers. Target respondents include chief pilots, directors of aviation, and senior management. Each survey includes at least 500 respondents in 50 or more countries each quarter, and respondents closely reflect the worldwide distribution of the business jet and turboprop community.

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Appendix

Data sources:

Real GDP growth forecasts (2021): The Economist – March 18, 2021

<https://www.economist.com/economic-and-financial-indicators/2021/03/18/economic-data-commodities-and-markets>

Stock Markets:

Dow Jones Industrial Average: <http://ca.spindices.com/indices/equity/dow-jones-industrial-average>

London Stock Exchange (FTSE 100): <https://www.londonstockexchange.com/indices/ftse-100>

Euronext Paris (CAC 40): <https://live.euronext.com/en/product/indices/FR0003500008-XPAR>

Frankfurt Stock Exchange (DAX 30): <https://www.boerse-frankfurt.de/indices/dax?mic=XETR>

Initial Unemployment Claims: Bureau of Labor Statistics (U.S.); <https://www.dol.gov/ui/data.pdf>; “SA” = seasonally adjusted

Unemployment: Bureau of Labor Statistics (U.S.); <https://www.bls.gov/news.release/pdf/empsit.pdf>

Consumer Confidence: University of Michigan Survey of Consumers (U.S.); <http://www.sca.isr.umich.edu>

European Commission (Euro Area) – Economic Sentiment Indicator; https://ec.europa.eu/info/sites/info/files/full_bcs_2021_02_en.pdf

Business Confidence: U.S. ISM Manufacturing PMI (U.S.)

<https://www.ismworld.org/globalassets/pub/research-and-surveys/rob/pmi/rob202103pmi.pdf>

Eurostat (Euro Area); <https://ec.europa.eu/eurostat/databrowser/view/teibs010/default/table?lang=en>

https://ec.europa.eu/eurostat/databrowser/view/ei_bsci_m_r2/default/table?lang=en

Business aircraft fleet, deliveries, transactions, days-on-market (DOM), utilization: JETNET; GAMA

Survey results: JETNET iQ Global Business Aviation Surveys (Quarterly)

COVID-19: Johns Hopkins University of Medicine - <https://coronavirus.jhu.edu/map.html>

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Page 3 LHS: E. Otto; Page 3 RHS: Cessna Aircraft Company / Textron Aviation

All other photos / images: Rolland Vincent Associates, LLC / JETNET iQ

Definitions and Abbreviations:

For the purposes of these Reports, business aircraft may be classified into 4 primary categories, reflecting propulsion, price, performance, and weight class differences. These categories are: Turboprops (Single-Engine Turboprops - SETP and Multi-Engine Turboprops - METP), Small Jets (Personal Jets, Very Light Jets, Light Jets), Medium Jets (Super-Light Jet, Mid-Size Jet, Super Mid-Size Jet), and Large Jets (Large Jet, Large Long-Range Jet, Large Ultra Long-Range Jet, Airline Business Jet). The “Personal Jet” category includes single-engine turboprop-powered models, today represented by the Cirrus Vision Jet.

B&GA: Business & General Aviation

EIS: Entry in Service

FBO: Fixed Base Operator (private air terminal)

FTSE: Financial Times Stock Exchange (London)

GAMA: General Aviation Manufacturers Association

GDP: Gross Domestic Product

HNWI: High Net Worth Individual

MTOW: Maximum Takeoff Weight

NGO: Non-Governmental Organization

OEM: Original Equipment Manufacturer

QOQ: Quarter over Quarter

QTD: Quarter to Date

S&P: Standard & Poor's

TTM: Trailing Twelve Months

WHO: World Health Organization

YOY: Year over Year

YTD: Year to Date

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