



>> KNOW MORE.

# *JETNET iQ Snap! Report Q3 2021 Summary Report*

> BUSINESS AVIATION MARKET INTELLIGENCE > REPORTS > SUMMITS > CONSULTING

Prepared for:  
JETNET iQ Global Business Aviation Survey Respondents  
\$U.S. 199

*JETNET iQ Snap!: 3rd Quarter 2021 - Private & Confidential*

# Thank You, Merci, Obrigado, Muchas Gracias, תודה, Danke, ありがとう, Grazie, شكرا, спасибо, 謝謝

Thank you for participating in our quarterly JETNET iQ Global Business Aviation Surveys. Your opinions and inputs are vital to the many people in the industry tasked with designing and developing aircraft, providing aviation services on the ground and in the air, financing / selling / and buying aircraft, and creating the operational framework for safe and efficient flight.

JETNET has been a trusted source of aviation market intelligence since 1988. From humble beginnings in Utica, NY, we have built one of the finest research teams and business aviation databases in the industry. Our people are professional and dedicated, and our data products and services are unique and innovative. We are committed to continuous improvement as

we provide our clients with unprecedented global coverage, data connectability, and market insights wherever they are.

We continue to focus on new products and services to keep our customers better informed. “Know More” – JETNET’s familiar tagline – is what we hope you will agree is amongst the primary benefits that we bring to the aviation community. Thank you again for participating in our quarterly survey - we hope this JETNET iQ *Snap!* Report is useful to you.

## Navigating by JETNET iQ

JETNET iQ *Snap!* Reports are one of the ways we would like to say “thank you” for the time and opinions you provide us when participating in our quarterly JETNET iQ Global Business Aviation Surveys. With seemingly endless demands on your time, we appreciate your help and want to provide you useful information in return. In the attached pages you will find some of the latest market intelligence that we have collected and analyzed. Our goal is to be a resource to identify, analyze, and highlight issues that matter to the business aviation community. As an industry leader and aviation professional, you make a difference by participating in these surveys, providing us with objective and subjective perspectives into the state of the worldwide business aviation industry.

JETNET iQ *Snap!* Reports reflect the collaborative insights of you, our respondents, and our JETNET iQ research

team. Collectively, we have extensive experience in business aviation, from executive offices and boardrooms, to the cubicles, factory floors, design centers, situation rooms, cockpits, service hangars and flight lines of the industry. Much like a magnifying glass concentrates light and energy, JETNET iQ draws from a diverse set of intelligence sources to bring the power of this experience into sharp focus.

Since early 2011, our JETNET iQ research team has been reaching out to you – fixed-wing turbine aircraft owners and operators - with our quarterly JETNET iQ Global Business Aviation Surveys. As always, we hope that this latest issue of our JETNET iQ *Snap!* Report is insightful to you.

*Rolland Vincent*  
*JETNET iQ Creator / Director*  
*rollie@jetnet.com*

# JETNET

- Founded in 1988
- Privately-owned family business
- Headquarters in Utica, NY
- 70+ employees (50+ in research)
- Daily contact with aircraft owners and operators globally



**JETNET: Worldwide leader in aviation market intelligence**

# JETNET

- Solutions and services:
  - JETNET iQ
  - Evolution Marketplace
  - Evolution Aerodex
  - Marketplace Manager
  - Values
  - JETNET Global
  - AvData Reports
- Data coverage:
  - 60,000 business aircraft (fixed and rotary wing)
  - 50,000 commercial aircraft



**JETNET: Tracking more than 110,000 business and commercial aircraft worldwide**

**JETNET**

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The World Leader in Aviation Market Intelligence

MARKETPLACE

Values

AERODEX

MARKETPLACE Manager

JETNET iQ

JETNET iQ Summit

YachtSpot

JETNET Global

**>> KNOW MORE.**

30,000'

29,900'

29,800'

29,700'

29,600'

29,500'

29,400'

29,300'

29,200'

# JETNET iQ

- *Intelligence....quarterly*
- Focus: Business aviation research & forecasting
- Main features
  - Surveys – of aircraft owners and operators
  - Reports – of current and forecast market conditions
  - Summits – of industry thought leaders
  - Advisory – customized research projects

# JETNET iQ Surveys

- Turbine business aircraft owners and operators
- Quarterly
- Global
- On-line
- Multilingual
- Password-protected
- Password-linked




**Welcome!!!**



\* Survey responses:

- 1) Will be strictly confidential
- 2) Will NOT be used in any way to directly market to you or your organization
- 3) Will take approximately 15+ minutes to complete

PASSWORD (provided by JETNET):



For questions about this survey, please contact:

JETNET iQ Voice of  
Global Business & General Aviation

**ROLLAND VINCENT**  
JETNET iQ Creator / Director  
Phone: 1-972-439-2069 (U.S. Central Time)  
Email: rollie@jetnet.com

# A Note About Business Aircraft Size Categories

For the purposes of JETNET iQ Reports, business aircraft are classified into 11 different size categories, reflecting propulsion, price, performance, and weight class differences. “Personal Jets” refer to very light single-engine jets. The 11 categories are:

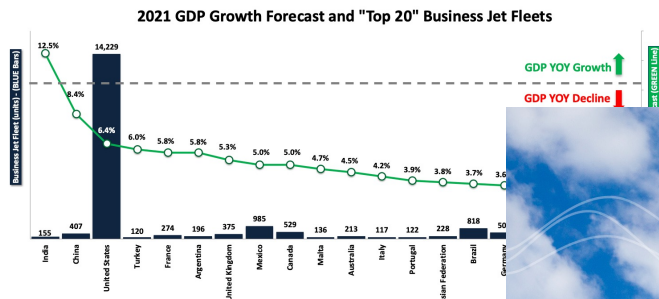
For presentation purposes, we sometimes further group business jets as “Small Jets”, “Medium Jets”, or “Large Jets” (as bracketed opposite). The following table summarizes the various aircraft manufacturers, size categories, and examples of aircraft models that are currently in production or in development.

- Turboprops
- Personal Jets
- Very Light Jet
- Light Jet
- Super-Light Jet
- Mid-Size Jet
- Super Mid-Size Jet
- Large Jet
- Large Long-Range Jet
- Large Ultra Long-Range Jet
- Airline Business Jet

|        |            | Turboprop                      | Personal Jet | Very Light Jet | Light Jet                   | Super Light Jet | Mid-Size Jet                            | Super Mid-Size Jet       | Large Jet        | Large Long-Range Jet                 | Large Ultra Long-Range Jet                       | Airline Business Jet |
|--------|------------|--------------------------------|--------------|----------------|-----------------------------|-----------------|---|--------------------------|------------------|--------------------------------------|--|----------------------|
|        | Aerion     |                                |              |                |                             |                 |   |                          |                  |                                      |  |                      |
|        | Airbus     |                                |              |                |                             |                 |   |                          |                  |                                      |  | All Models           |
|        | Beechcraft | King Air                       |              |                |                             |                 |   |                          |                  |                                      |  |                      |
|        | Boeing     |                                |              |                |                             |                 |   |                          |                  |                                      |  | All Models           |
| Medium | Bombardier |                                |              |                | Learjet 70                  | Learjet 75      |   | Challenger 350           | Challenger 650   | Global 5000                          | Global 6000<br>Global 6500<br>Global 7500        |                      |
|        |            |                                |              |                |                             |                 |   |                          |                  |                                      |  |                      |
|        | Cessna     | Cessna Caravan                 |              | Citation M2    | Citation C3<br>Citation C34 | Citation XLS    | Citation Sovereign<br>Citation Latitude | Citation Longitude       | Hemisphere       |                                      |  |                      |
|        | Cirrus     | Cirrus Vision SF50             |              | EA-500         |                             |                 |   |                          |                  |                                      |  |                      |
|        | Daher      | TBM 900 / 910<br>TBM 930 / 940 |              |                |                             |                 |   |                          |                  |                                      |  |                      |
|        | Dassault   |                                |              |                |                             |                 |   |                          | 2000             | Falcon 900<br>Falcon 6X<br>Falcon 7X | Falcon 8X<br>Falcon 10X                          |                      |
|        | Eclipse    |                                |              | EA-500         |                             |                 |   |                          |                  |                                      |  |                      |
|        | Embraer    |                                |              | Phenom 100     | Phenom 300                  |                 | / Praetor 500                           | Legacy 500 / Praetor 600 | Legacy 600 / 650 |                                      |  | Lineage 1000         |
|        | Gulfstream |                                |              |                |                             |                 |   | Gulfstream G280          |                  | Gulfstream G500                      | Gulfstream G550 / G600 / G650<br>Gulfstream G700 |                      |
|        | Honda      |                                |              | HondaJet       |                             |                 |   |                          |                  |                                      |  |                      |
|        | Piaggio    | P180 Avanti II                 |              |                |                             |                 |   |                          |                  |                                      |  |                      |
|        | Pilatus    | PC-12NG / NGX                  |              |                | PC-24                       |                 |   |                          |                  |                                      |  |                      |
|        | Piper      | Meridian / M500 / M600         |              |                |                             |                 |   |                          |                  |                                      |  |                      |
|        | Quest      | Kodiak 100                     |              |                |                             |                 |   |                          |                  |                                      |  |                      |

# JETNET iQ Reports

## The Economy and Aircraft Fleets

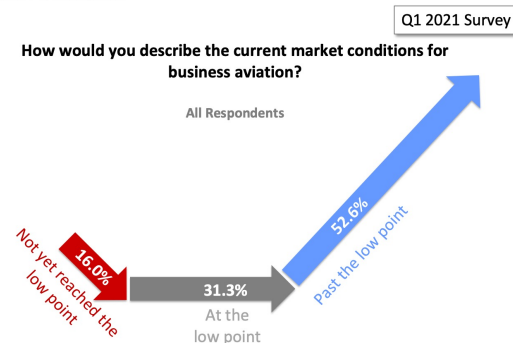


Sources: The Economist – January 28, 2021; JETNET; excludes Venezuela

Most of the countries with strong business aircraft fleets are expected to have positive GDP growth in 2021 – a recovery over last year's negative growth.

## Survey Respondents' Sentiment

Current Market Sentiment



**JETNET iQ**

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**JETNET iQ Snap! Report**  
**Q3 2021 Summary Report**

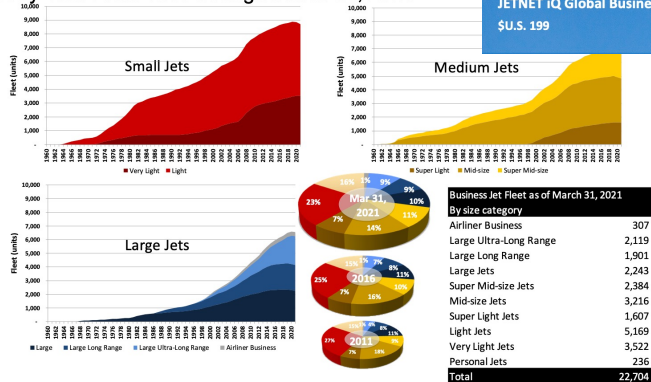
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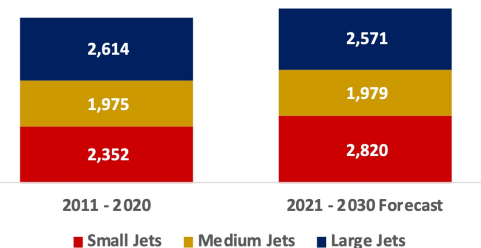
## Business Jet Fleet by Size Category

Fleet by Year From 1960 through March 31, 2021



## Business Jet Delivery History & Forecast

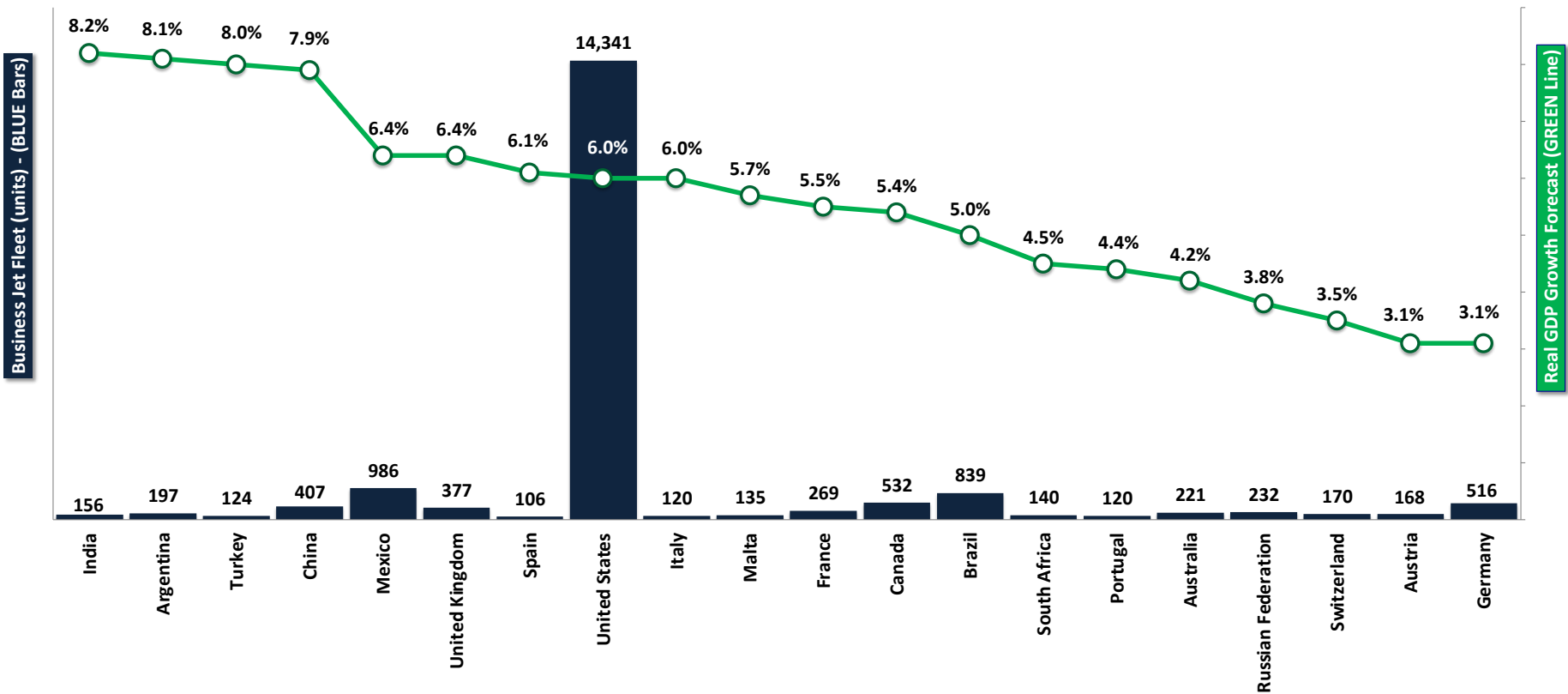
Business Jet Deliveries by Size



JETNET iQ 10-year forecast for 2021-2030 is for 6,941 new business jet deliveries (including single-engine Personal Jets) valued at \$210 billion (\$U.S. 2020)

# The Economy and Aircraft Fleets

2021 GDP Growth Forecast and "Top 20" Business Jet Fleets

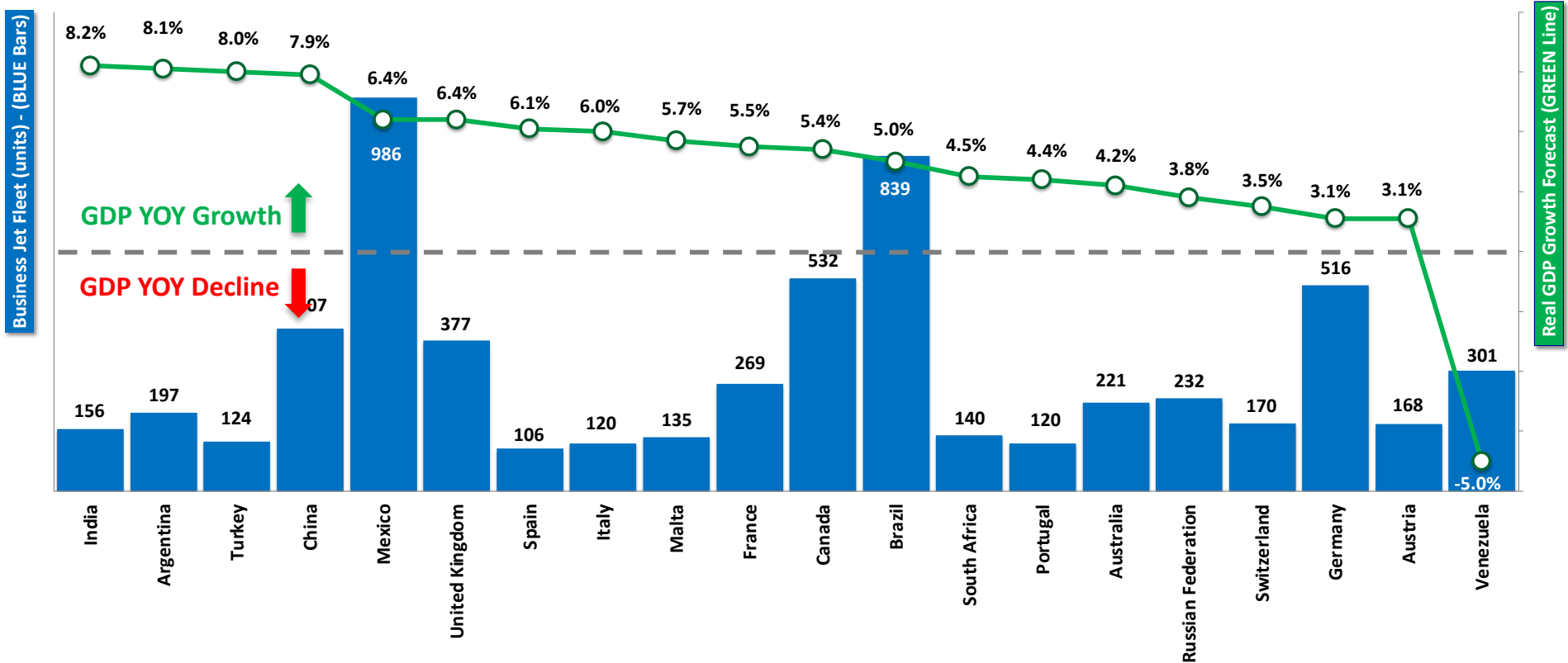


Sources: The Economist – October 23, 2021; JETNET; excludes Venezuela

**Countries with the largest business jet fleets are expected to exceed 3% GDP growth in 2021 – a solid rebound from the COVID-19 recession**

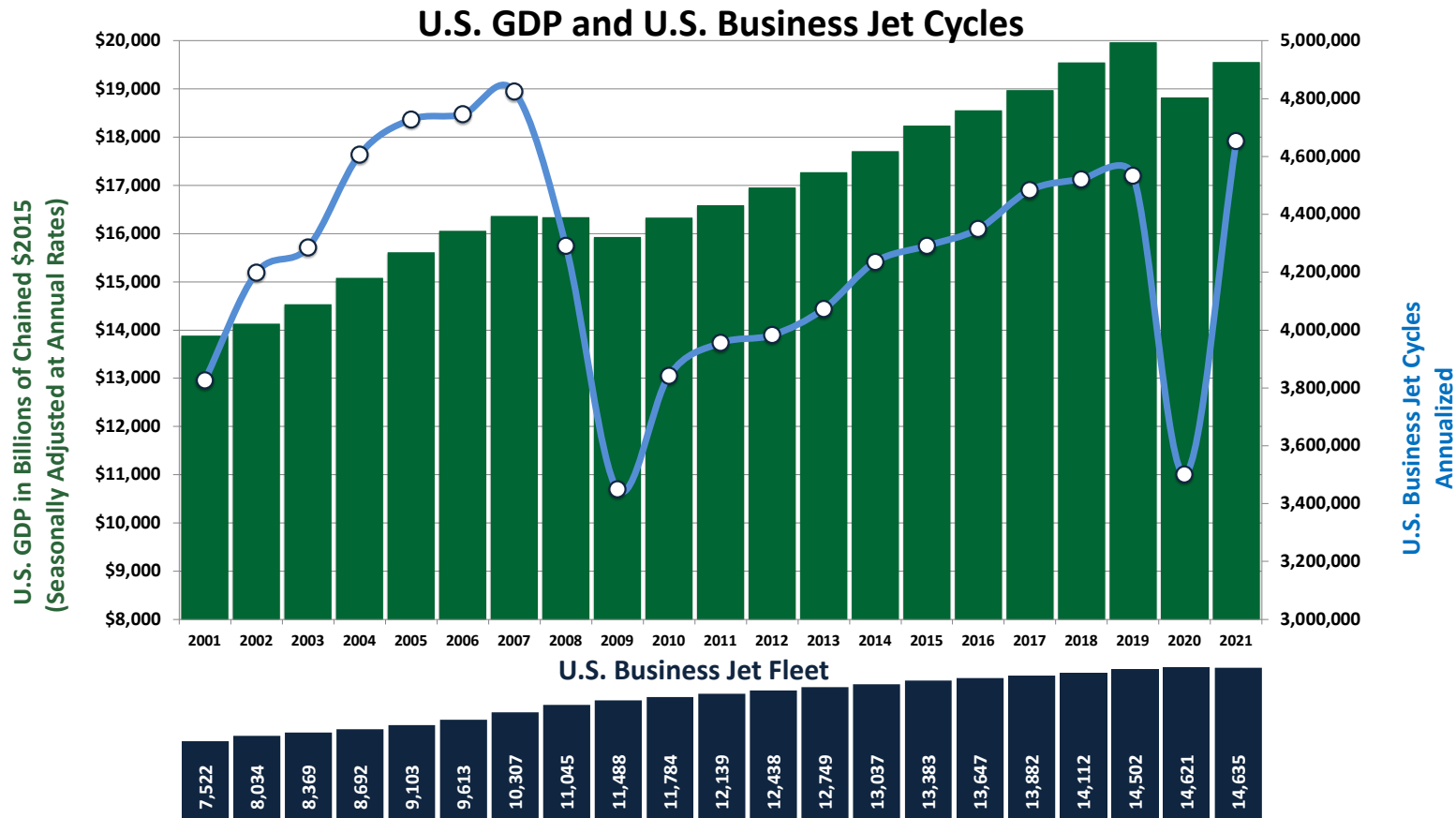
# The Economy and Aircraft Fleets

2021 GDP Growth Estimates and "Top 20" Business Jet Fleets  
(excluding the United States)



Sources: The Economist – October 23, 2021; JETNET

# The Economy and Aircraft Utilization

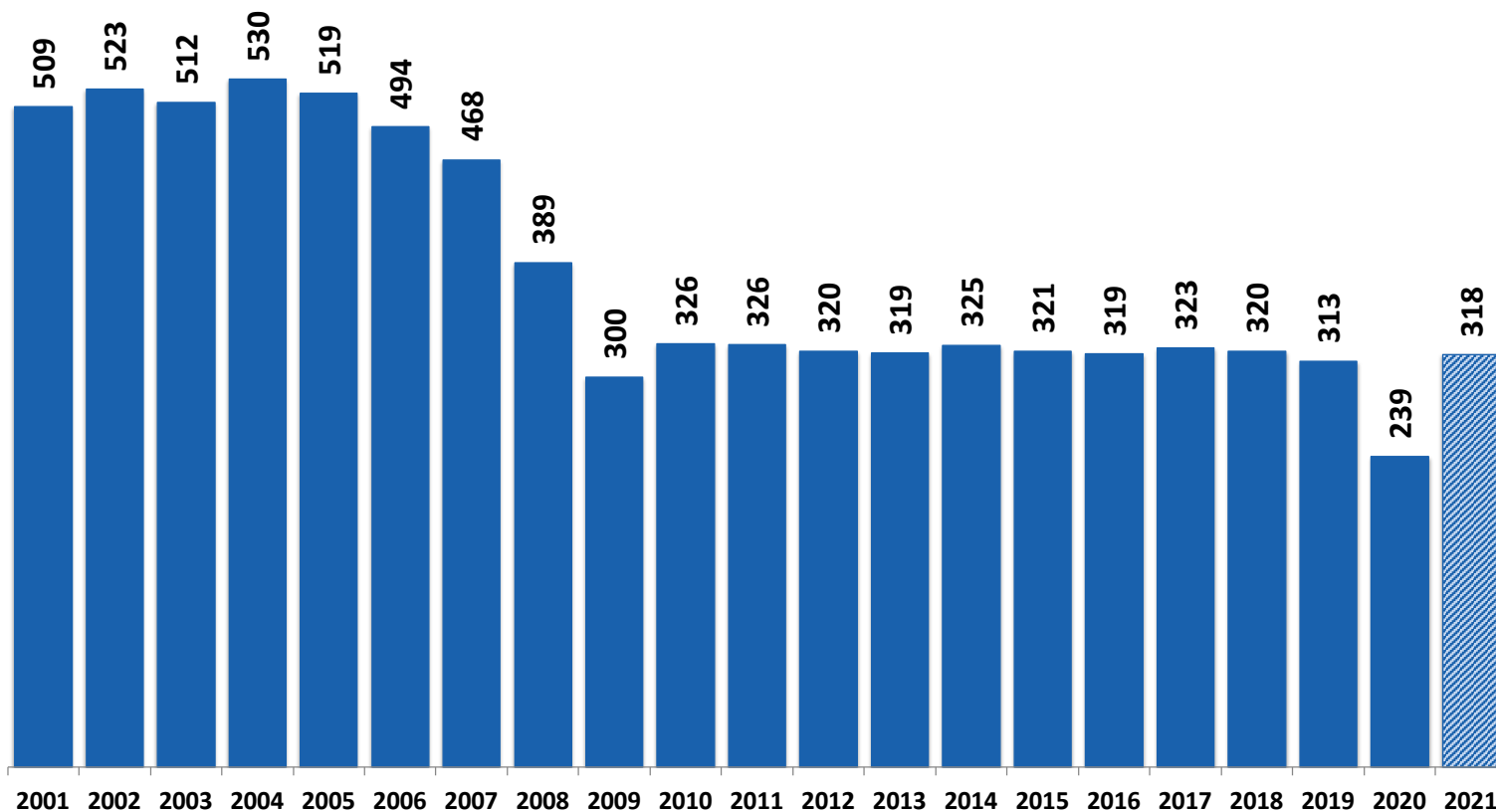


Sources: U.S. Congressional Budget Office, FAA , JETNET

U.S. business jet cycles for the full-year 2020 were down 23% due to COVID-19 impacts; 2021 cycles as depicted are through Sep 2021 on a trailing 12 months basis

# Aircraft Utilization

Average Number of Business Jet Cycles per Aircraft Per Year - USA

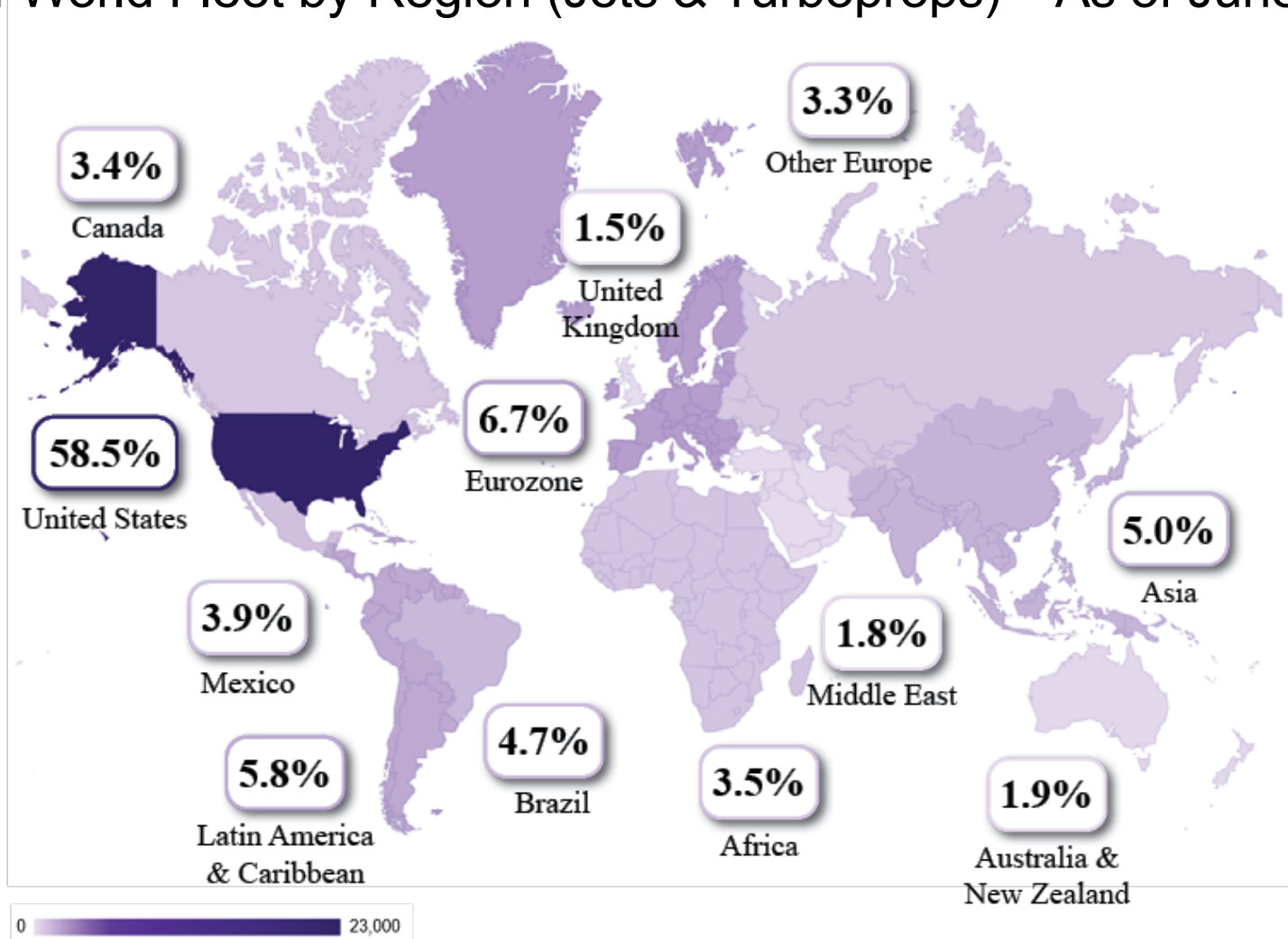


Sources: U.S. FAA; Cycles data for latest year are YTD on a Trailing Twelve Months (TTM) basis for the most recent period available; U.S. fleet from JETNET

Cycles per U.S.-based business jet were down ~23% in 2020 and have now rebounded

# Business Aircraft Fleet

Share of World Fleet by Region (Jets & Turboprops) – As of June 30, 2021

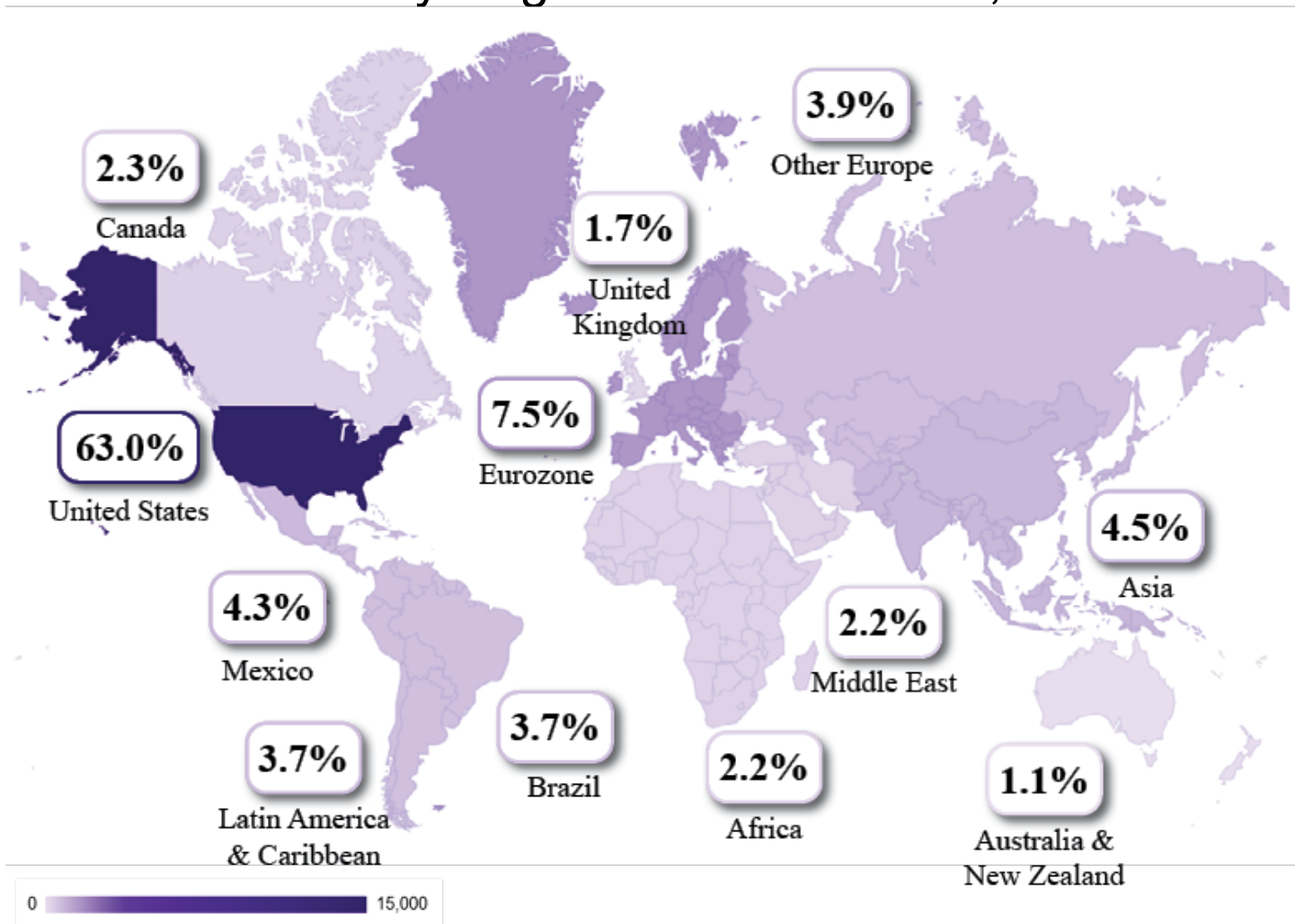


Note: For the purposes of this chart, the “Latin America & Caribbean” region excludes Mexico and Brazil

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# Business Jet Fleet

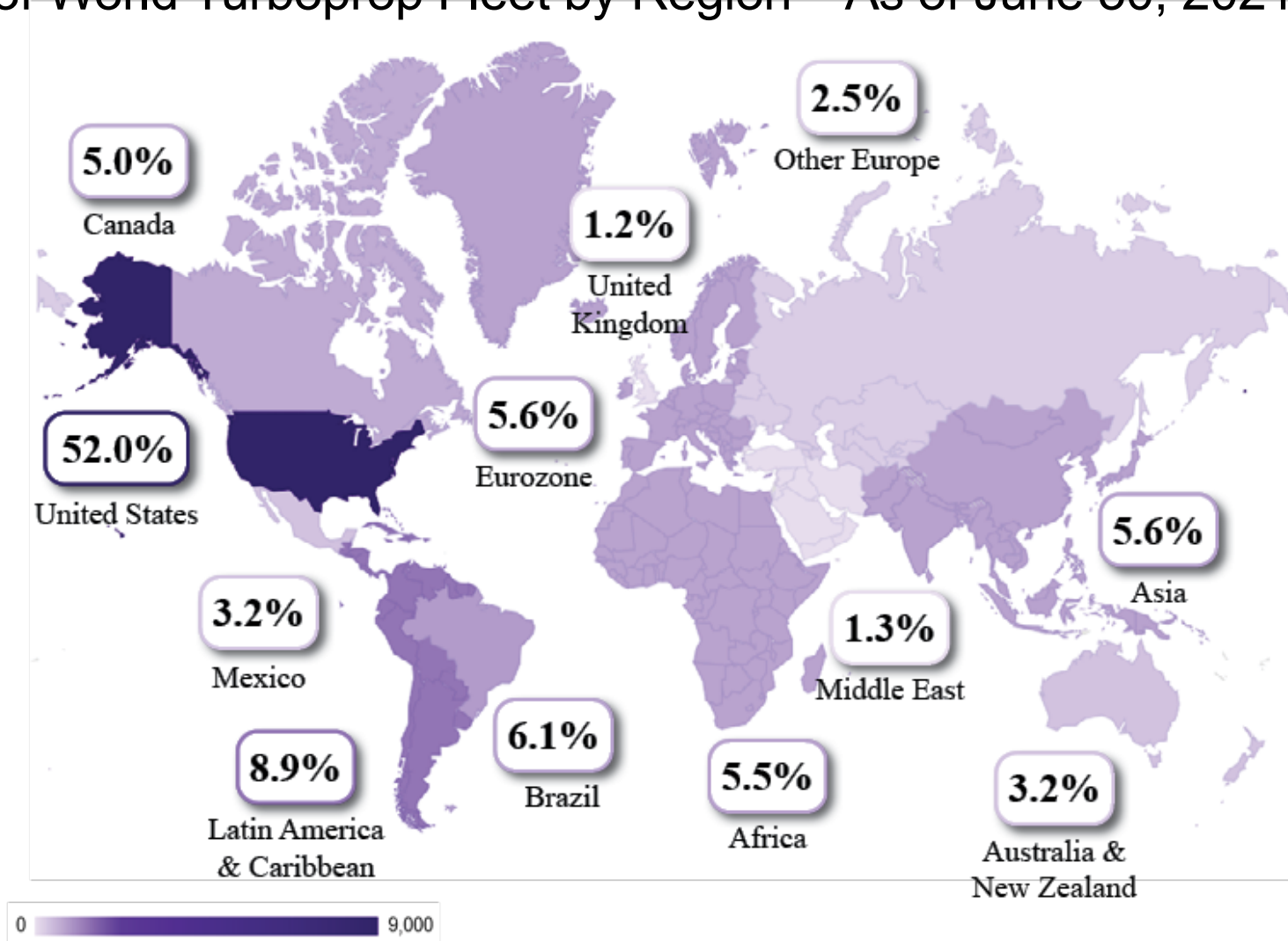
Share of World Jet Fleet by Region – As of June 30, 2021



Note: For the purposes of this chart, the “Latin America & Caribbean” region excludes Mexico and Brazil

# Business Turboprop Fleet

Share of World Turboprop Fleet by Region – As of June 30, 2021

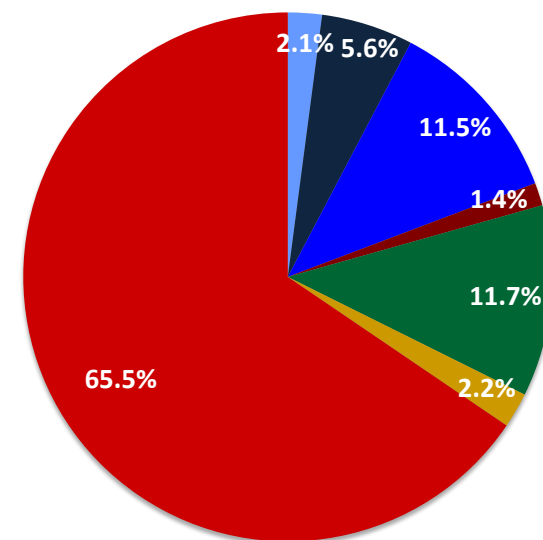
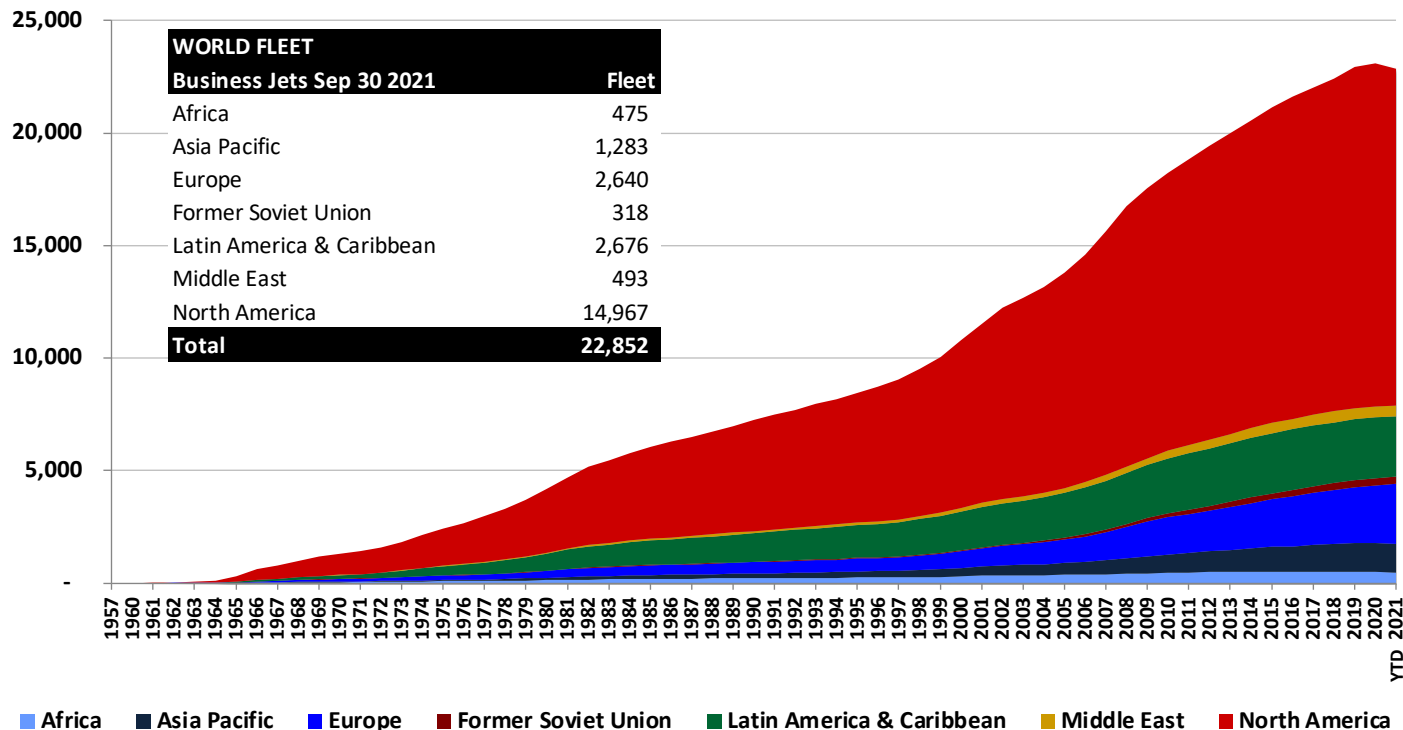


Note: For the purposes of this chart, the “Latin America & Caribbean” region excludes Mexico and Brazil

## Business Jet Fleet by Region

As of September 30, 2021

Business Jet Fleet by Region



# Business Jet Fleet by Manufacturer

As of September 30, 2021

| NORTH AMERICA<br>OEM | Fleet as of<br>Sep 30 2021 |
|----------------------|----------------------------|
| Beechcraft           | 187                        |
| Bombardier           | 3,052                      |
| Cessna Citation      | 5,298                      |
| Dassault Falcon      | 1,429                      |
| Embraer              | 842                        |
| Gulfstream           | 2,155                      |
| Hawker               | 1,087                      |
| Other                | 917                        |
| <b>Total</b>         | <b>14,967</b>              |

| EUROPE<br>OEM   | Fleet as of<br>Sep 30 2021 |
|-----------------|----------------------------|
| Beechcraft      | 18                         |
| Bombardier      | 614                        |
| Cessna Citation | 850                        |
| Dassault Falcon | 385                        |
| Embraer         | 251                        |
| Gulfstream      | 210                        |
| Hawker          | 132                        |
| Other           | 180                        |
| <b>Total</b>    | <b>2,640</b>               |

| FORMER SOVIET UNION<br>OEM | Fleet as of<br>Sep 30 2021 |
|----------------------------|----------------------------|
| Beechcraft                 | -                          |
| Bombardier                 | 93                         |
| Cessna Citation            | 19                         |
| Dassault Falcon            | 43                         |
| Embraer                    | 37                         |
| Gulfstream                 | 57                         |
| Hawker                     | 42                         |
| Other                      | 27                         |
| <b>Total</b>               | <b>318</b>                 |

| MIDDLE EAST<br>OEM | Fleet as of<br>Sep 30 2021 |
|--------------------|----------------------------|
| Beechcraft         | 5                          |
| Bombardier         | 132                        |
| Cessna Citation    | 51                         |
| Dassault Falcon    | 47                         |
| Embraer            | 37                         |
| Gulfstream         | 102                        |
| Hawker             | 49                         |
| Other              | 70                         |
| <b>Total</b>       | <b>493</b>                 |

| LATIN AMERICA & CARIBBEAN<br>OEM | Fleet as of<br>Sep 30 2021 |
|----------------------------------|----------------------------|
| Beechcraft                       | 68                         |
| Bombardier                       | 665                        |
| Cessna Citation                  | 817                        |
| Dassault Falcon                  | 118                        |
| Embraer                          | 275                        |
| Gulfstream                       | 230                        |
| Hawker                           | 322                        |
| Other                            | 181                        |
| <b>Total</b>                     | <b>2,676</b>               |

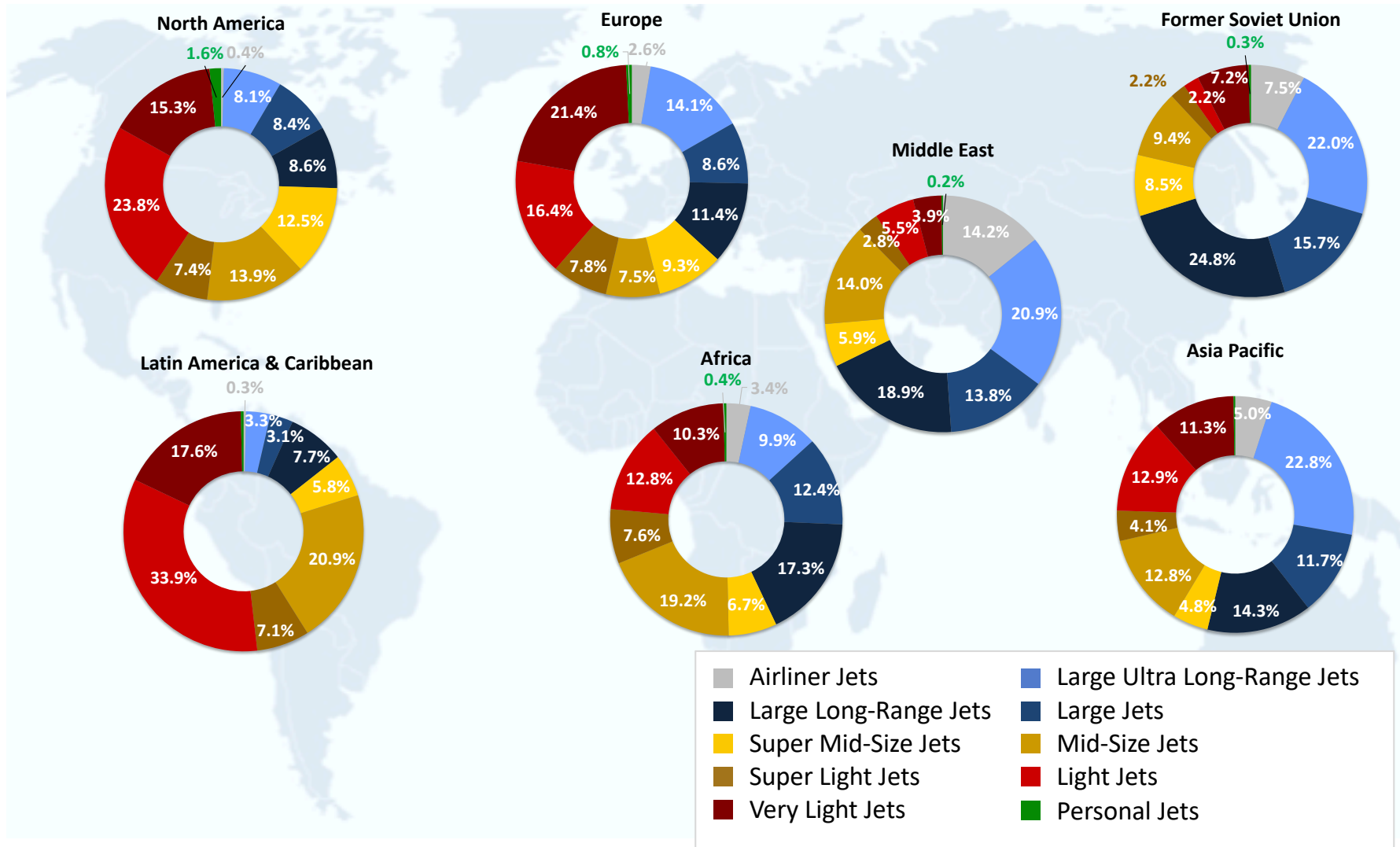
| AFRICA<br>OEM   | Fleet as of<br>Sep 30 2021 |
|-----------------|----------------------------|
| Beechcraft      | 2                          |
| Bombardier      | 107                        |
| Cessna Citation | 106                        |
| Dassault Falcon | 64                         |
| Embraer         | 21                         |
| Gulfstream      | 64                         |
| Hawker          | 82                         |
| Other           | 29                         |
| <b>Total</b>    | <b>475</b>                 |

| ASIA PACIFIC<br>OEM | Fleet as of<br>Sep 30 2021 |
|---------------------|----------------------------|
| Beechcraft          | 4                          |
| Bombardier          | 332                        |
| Cessna Citation     | 252                        |
| Dassault Falcon     | 106                        |
| Embraer             | 79                         |
| Gulfstream          | 297                        |
| Hawker              | 119                        |
| Other               | 94                         |
| <b>Total</b>        | <b>1,283</b>               |

**World business jet fleet was 22,852 jets on September 30, 2021**

# Business Jet Fleet by Size Category

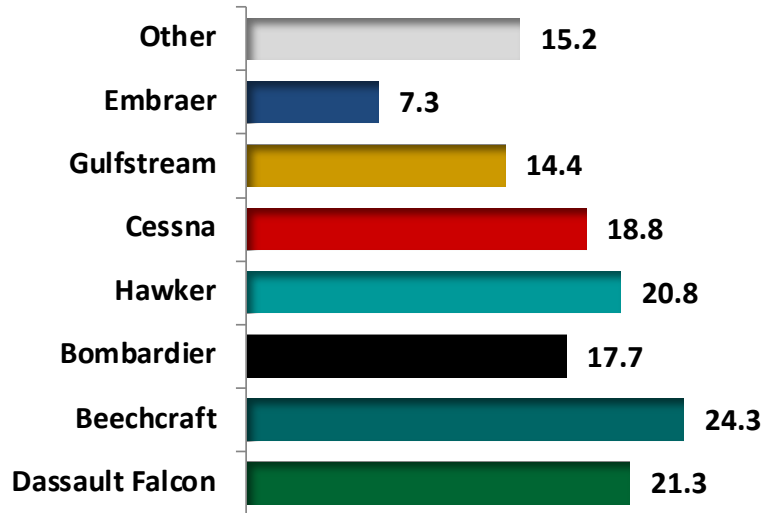
As of September 30, 2021



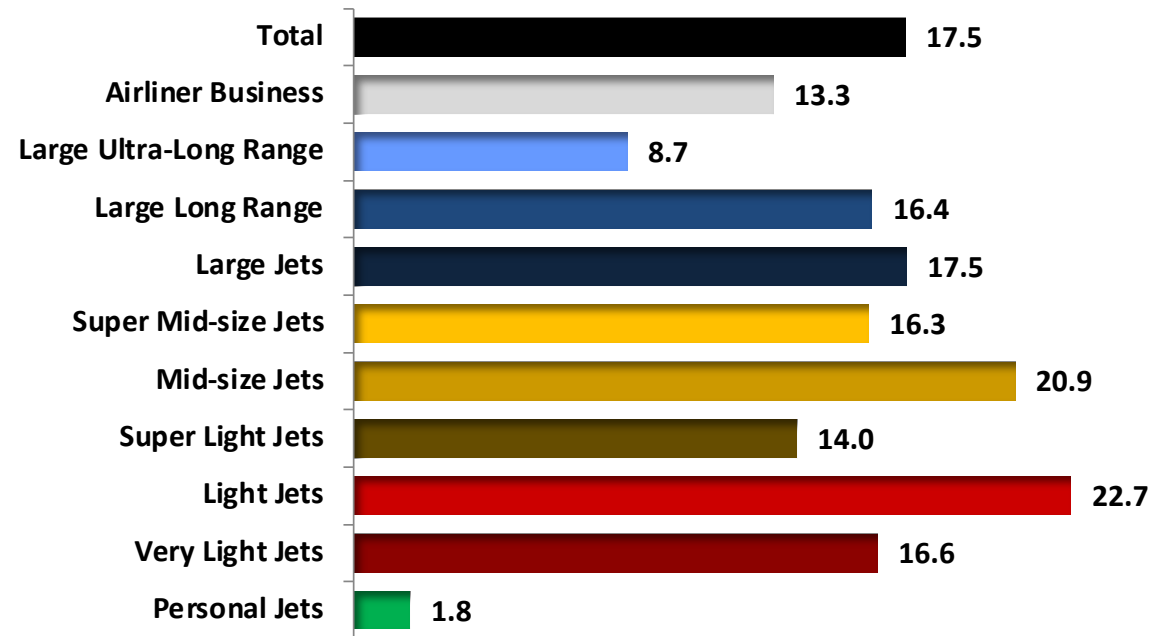
# Business Jet Fleet Age (Years)

As of September 30, 2021

**Business aircraft average fleet age as of September 30, 2021**

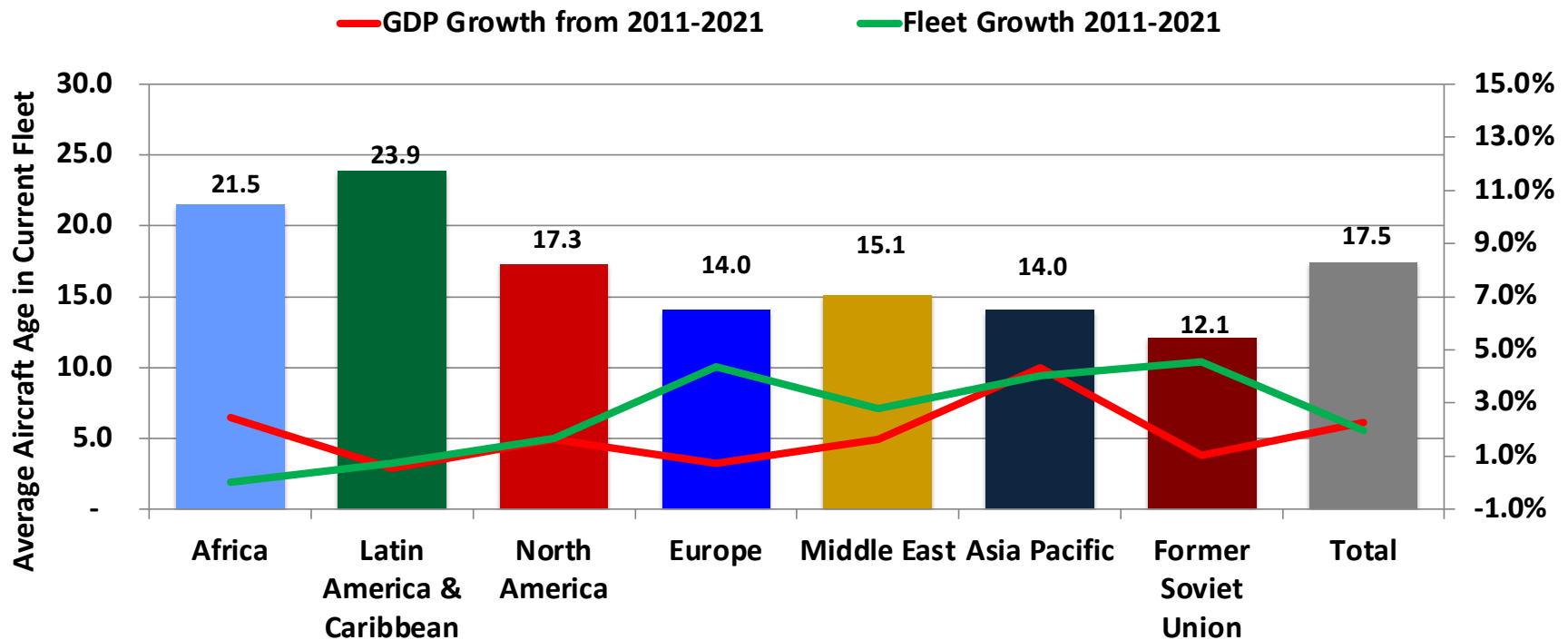


**Business aircraft average fleet age as of September 30, 2021**



# Business Jet Fleet Age, GDP & Fleet Growth

Regional profile of current average business Jet fleet age and regional GDP and fleet growth (2011-2021)

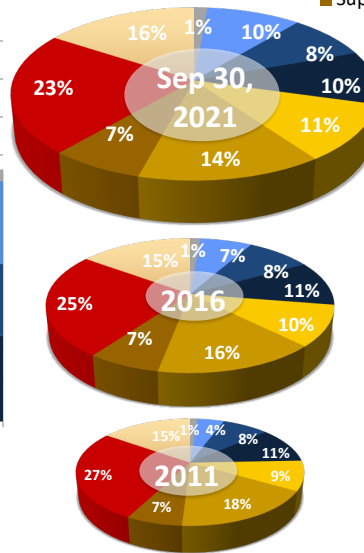
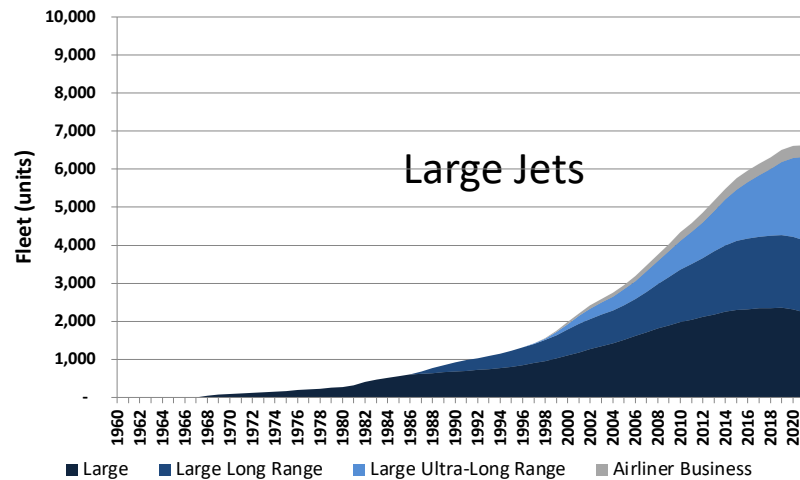
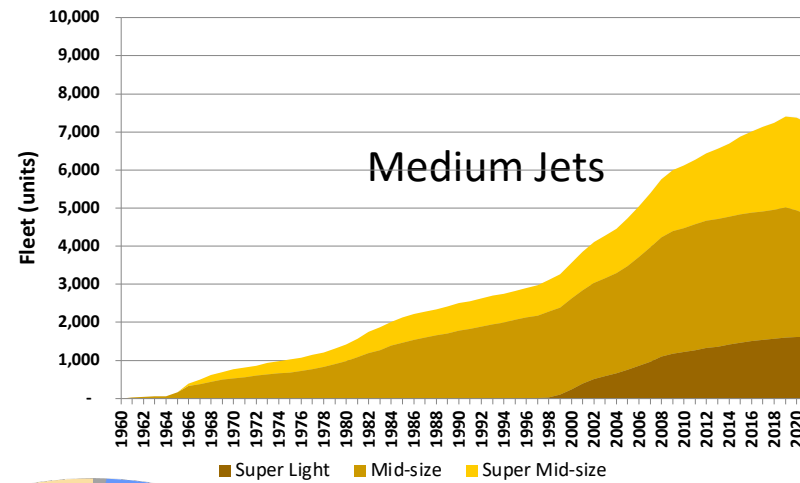
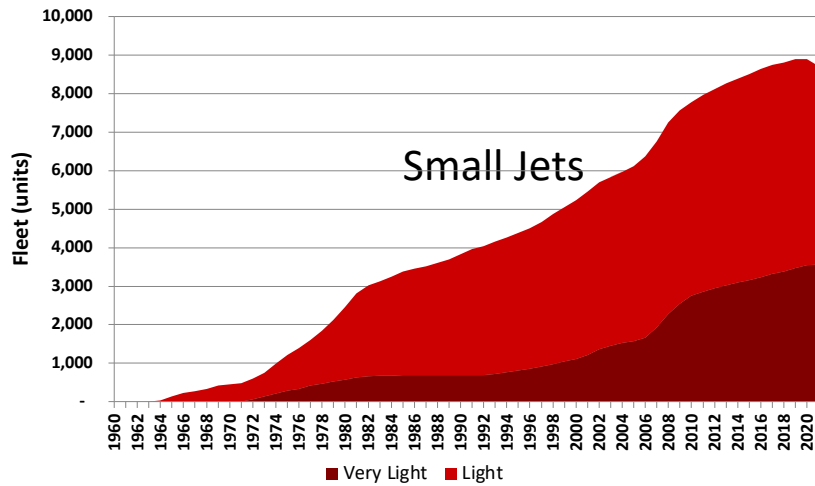


Note: Fleet age is in years since initial aircraft delivery; GDP and fleet growth rates are 10-year CAGR

JETNET iQ Snap!: 3rd Quarter 2021 - Private & Confidential

## Business Jet Fleet by Size Category

Fleet by Year From 1960 through September 30, 2021



### Business Jet Fleet as of September 30, 2021

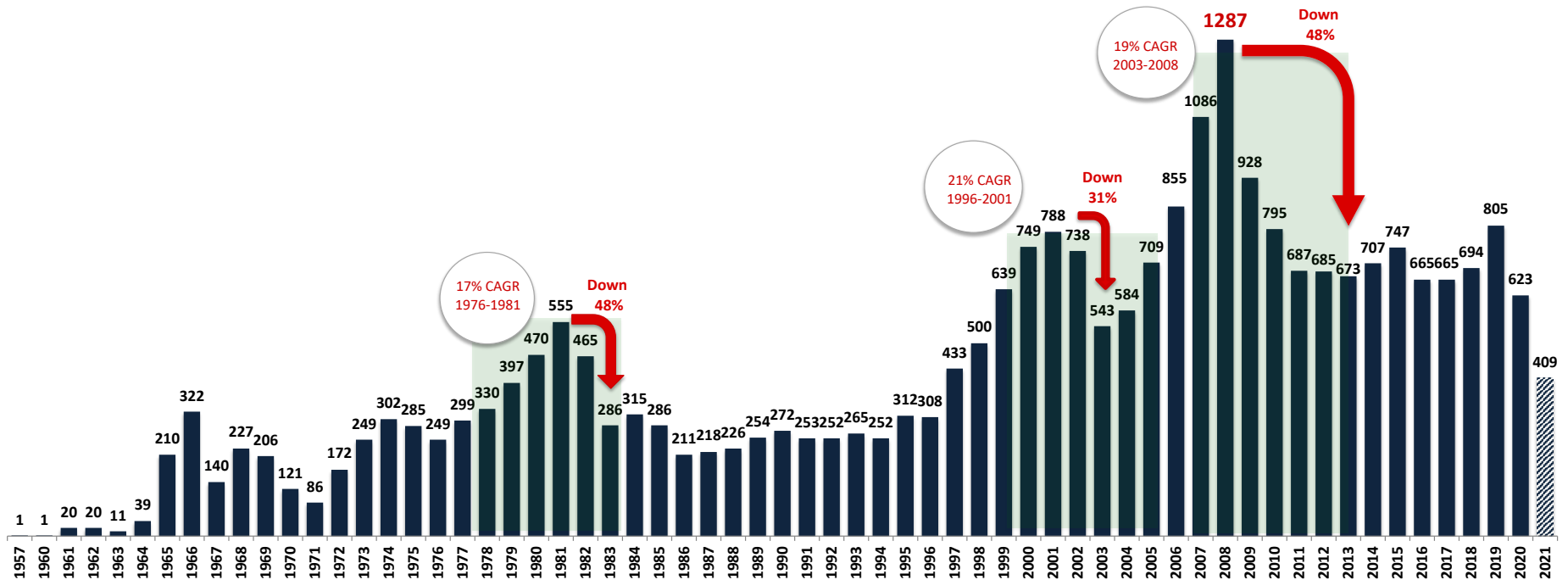
#### By size category

|                        |               |
|------------------------|---------------|
| Airliner Business      | 310           |
| Large Ultra-Long Range | 2,186         |
| Large Long Range       | 1,896         |
| Large Jets             | 2,236         |
| Super Mid-size Jets    | 2,416         |
| Mid-size Jets          | 3,196         |
| Super Light Jets       | 1,617         |
| Light Jets             | 5,156         |
| Very Light Jets        | 3,563         |
| Personal Jets          | 276           |
| <b>Total</b>           | <b>22,852</b> |

# Business Jet Deliveries (Units)

As of September 30, 2021

Business Jet Deliveries

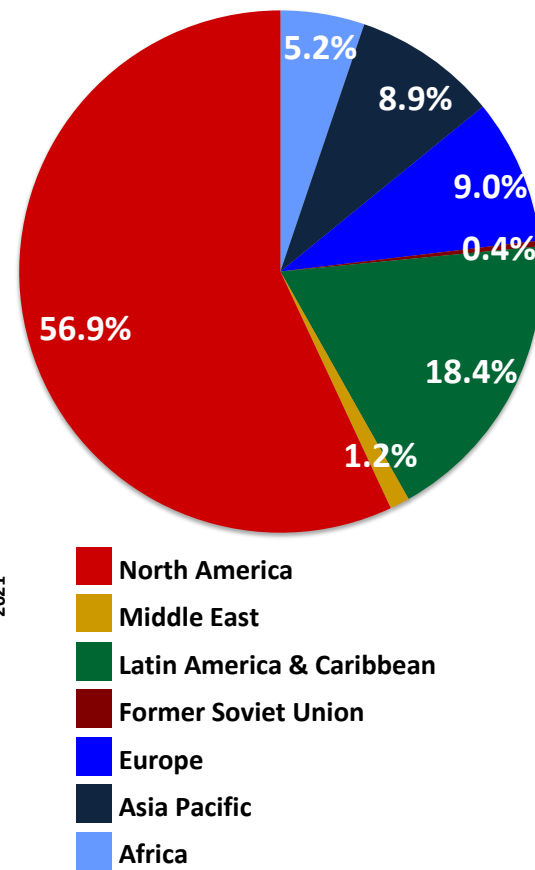
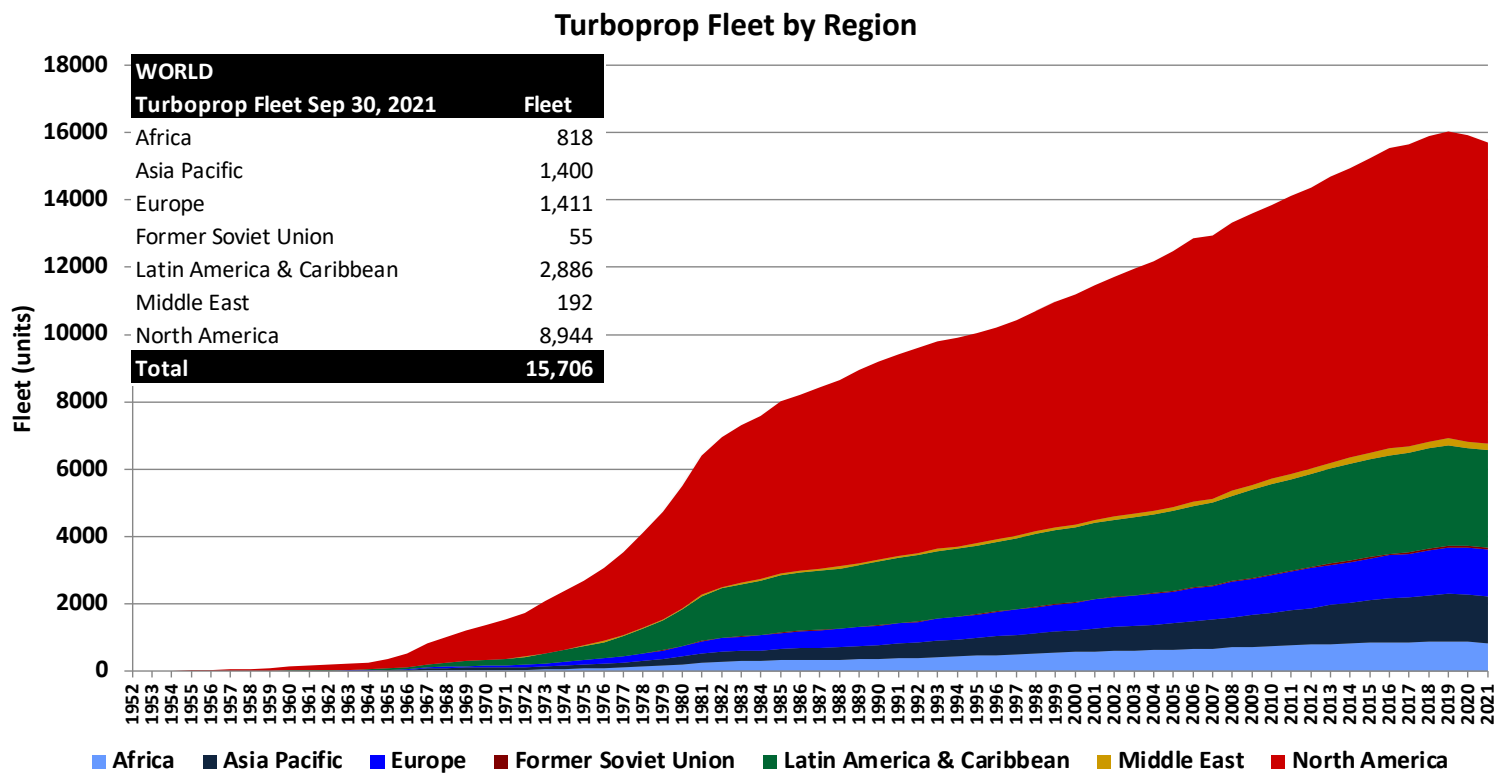


Source: JETNET; totals include single-engine Personal Jets (i.e., Cirrus SF50 Vision Jet); latest year data are year-to-date

**New business jet deliveries in 2020 were down 23% from 2019 due to interruptions in travel, production, supply chains, and sales driven by COVID-19**

## Business Turboprop Fleet by Region

As of September 30, 2021



# Business Turboprop Fleet by Manufacturer

## As of September 30, 2021

| NORTH AMERICA                |              |
|------------------------------|--------------|
| Turboprop Fleet Sep 30, 2021 | Fleet        |
| Cessna                       | 1,366        |
| Daher Socata                 | 764          |
| Beechcraft                   | 3,562        |
| Pilatus                      | 1,215        |
| Piper                        | 1,027        |
| Turbo Commander              | 249          |
| Other                        | 761          |
| <b>Total</b>                 | <b>8,944</b> |

| EUROPE                       |              |
|------------------------------|--------------|
| Turboprop Fleet Sep 30, 2021 | Fleet        |
| Cessna                       | 171          |
| Daher Socata                 | 143          |
| Beechcraft                   | 404          |
| Pilatus                      | 240          |
| Piper                        | 249          |
| Turbo Commander              | 22           |
| Other                        | 182          |
| <b>Total</b>                 | <b>1,411</b> |

| FORMER SOVIET UNION          |           |
|------------------------------|-----------|
| Turboprop Fleet Sep 30, 2021 | Fleet     |
| Cessna                       | 10        |
| Daher Socata                 | 2         |
| Beechcraft                   | 13        |
| Pilatus                      | 8         |
| Piper                        | 12        |
| Turbo Commander              | 1         |
| Other                        | 9         |
| <b>Total</b>                 | <b>55</b> |

| MIDDLE EAST                  |            |
|------------------------------|------------|
| Turboprop Fleet Sep 30, 2021 | Fleet      |
| Cessna                       | 54         |
| Daher Socata                 | 1          |
| Beechcraft                   | 105        |
| Pilatus                      | 1          |
| Piper                        | 8          |
| Turbo Commander              | 17         |
| Other                        | 6          |
| <b>Total</b>                 | <b>192</b> |

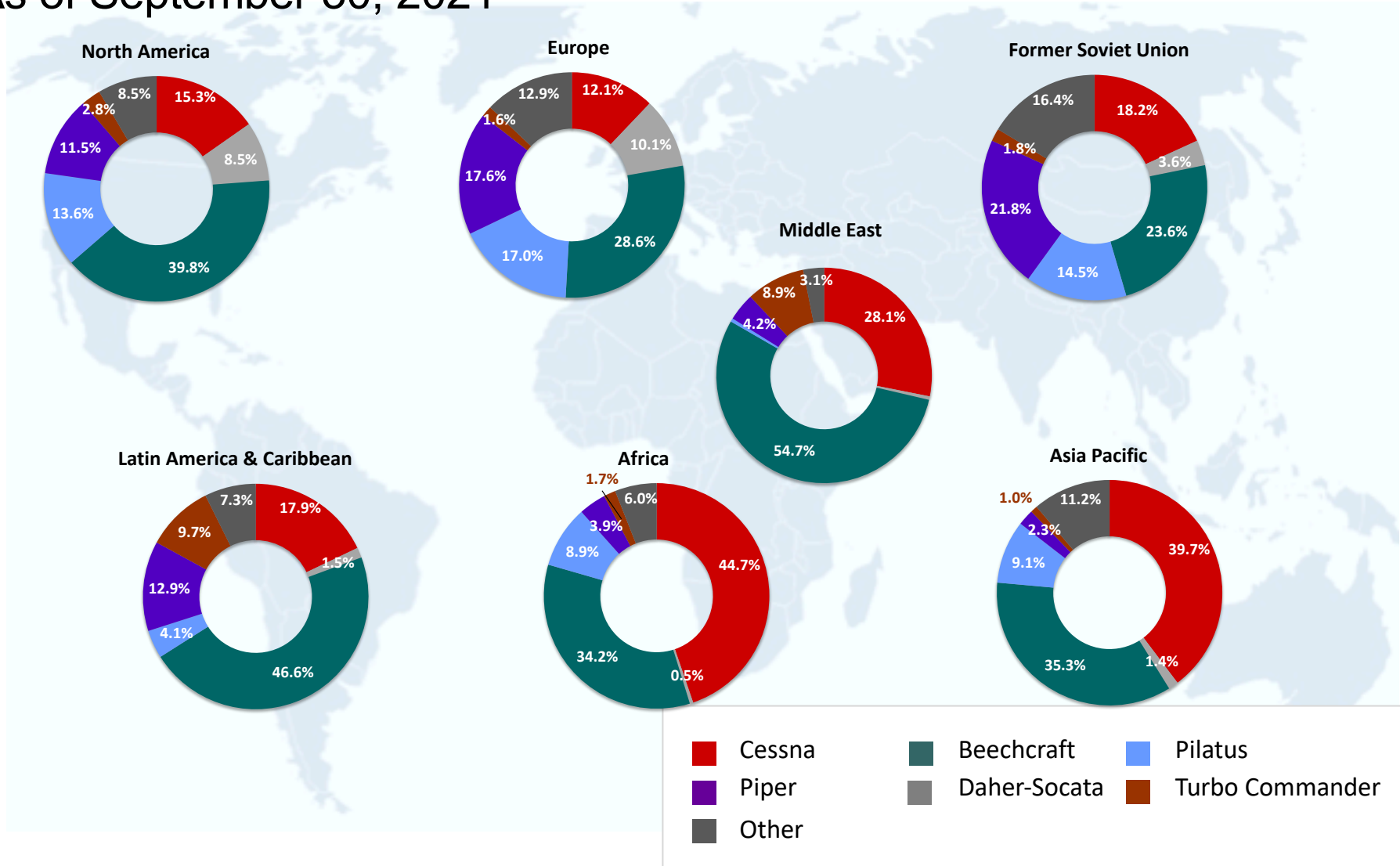
| LATIN AMERICA & CARIBBEAN    |              |
|------------------------------|--------------|
| Turboprop Fleet Sep 30, 2021 | Fleet        |
| Cessna                       | 517          |
| Daher Socata                 | 42           |
| Beechcraft                   | 1,346        |
| Pilatus                      | 117          |
| Piper                        | 372          |
| Turbo Commander              | 280          |
| Other                        | 212          |
| <b>Total</b>                 | <b>2,886</b> |

| AFRICA                       |            |
|------------------------------|------------|
| Turboprop Fleet Sep 30, 2021 | Fleet      |
| Cessna                       | 366        |
| Daher Socata                 | 4          |
| Beechcraft                   | 280        |
| Pilatus                      | 73         |
| Piper                        | 32         |
| Turbo Commander              | 14         |
| Other                        | 49         |
| <b>Total</b>                 | <b>818</b> |

| ASIA PACIFIC                 |              |
|------------------------------|--------------|
| Turboprop Fleet Sep 30, 2021 | Fleet        |
| Cessna                       | 556          |
| Daher Socata                 | 20           |
| Beechcraft                   | 494          |
| Pilatus                      | 127          |
| Piper                        | 32           |
| Turbo Commander              | 14           |
| Other                        | 157          |
| <b>Total</b>                 | <b>1,400</b> |

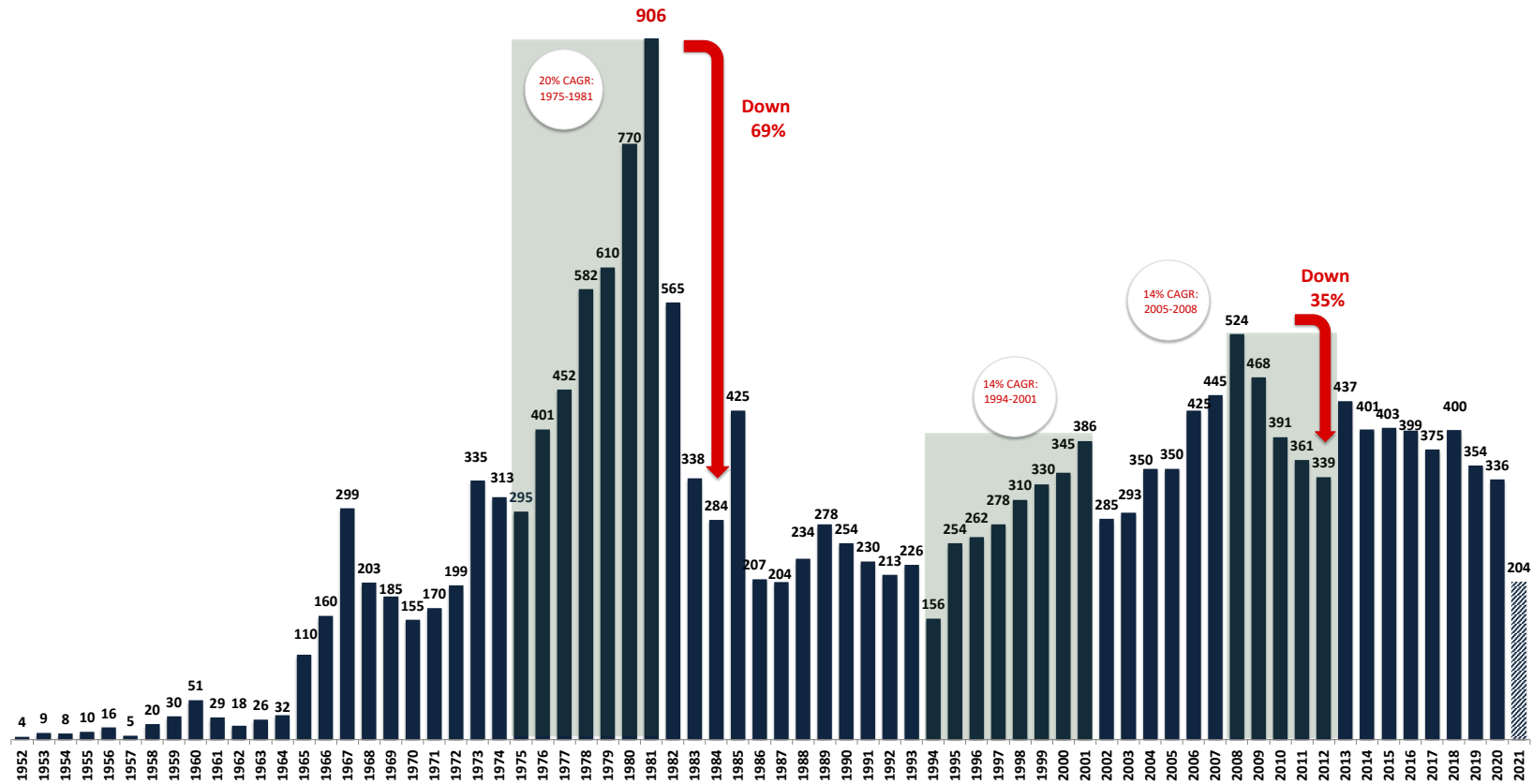
# Business Turboprop Fleet by Manufacturer

As of September 30, 2021



# Business Turboprop Deliveries (Units)

As of September 30, 2021

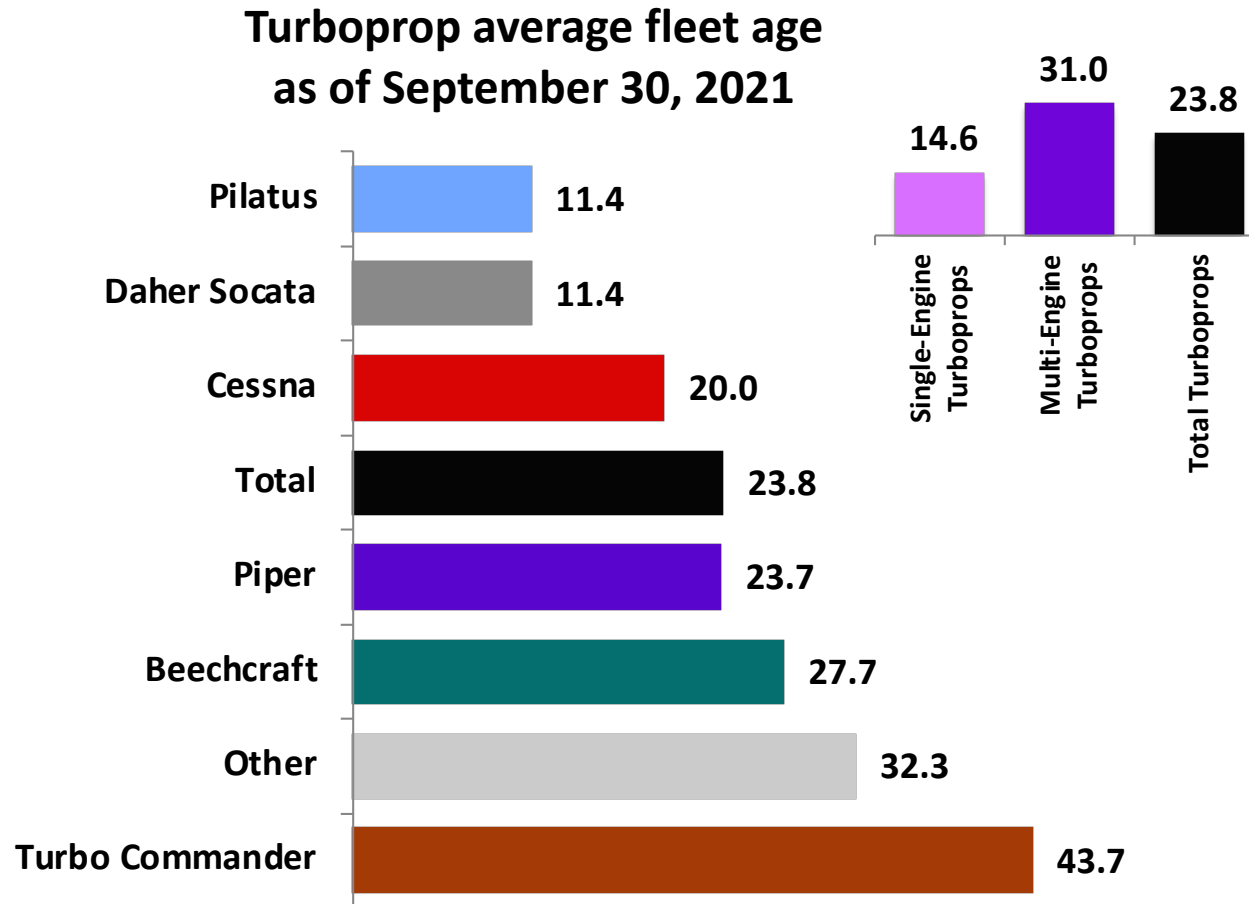


Source: JETNET; latest year data are year-to-date

Deliveries of turboprops were down only 5% YOY from 2019 to 2020 with COVID-19, a testament to their utility, practicality, and enduring value

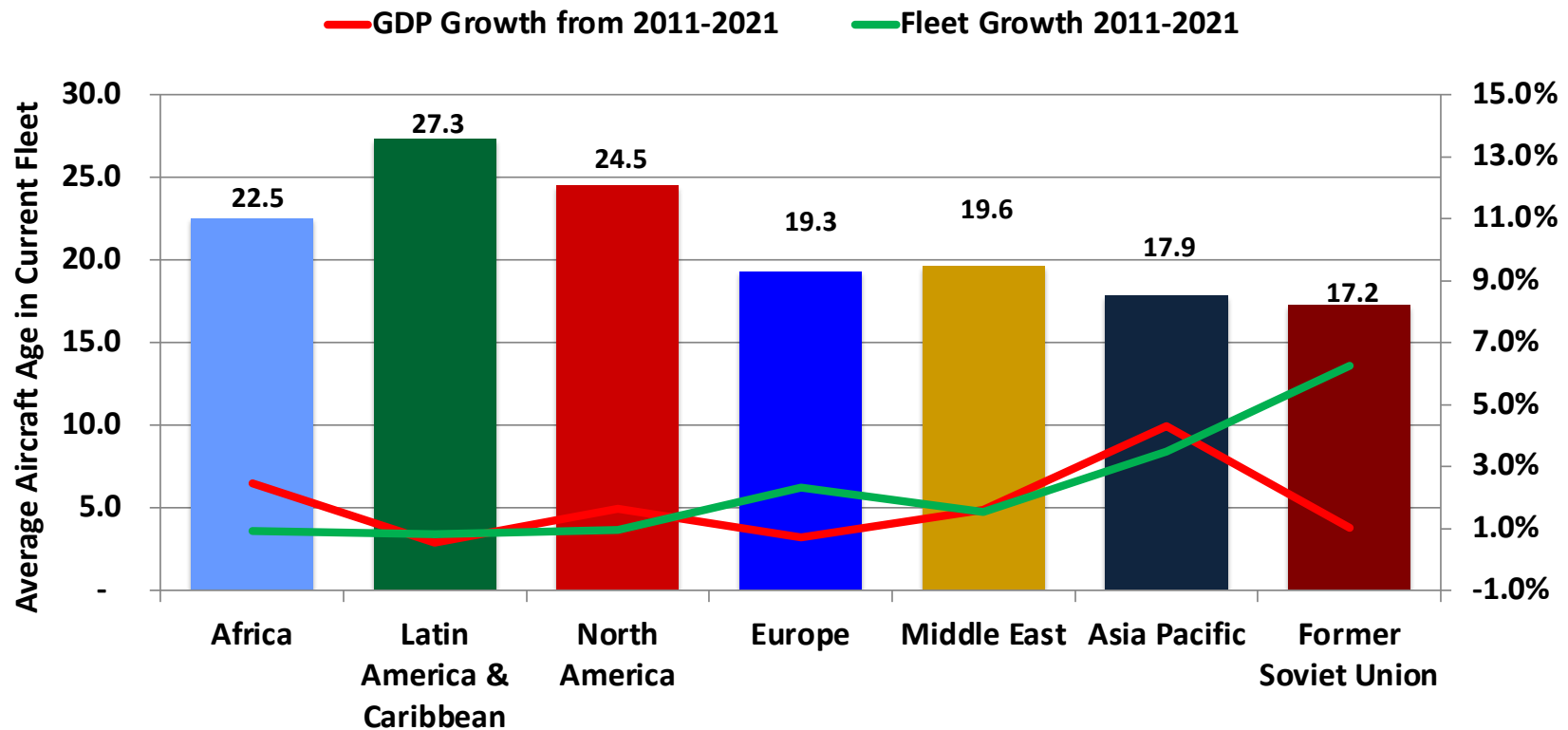
# Turboprop Fleet Age (Years)

As of September 30, 2021



# Turboprop Fleet Age, GDP & Fleet Growth

Regional profile of current average turboprop fleet age and regional GDP and fleet growth (2011-2021)

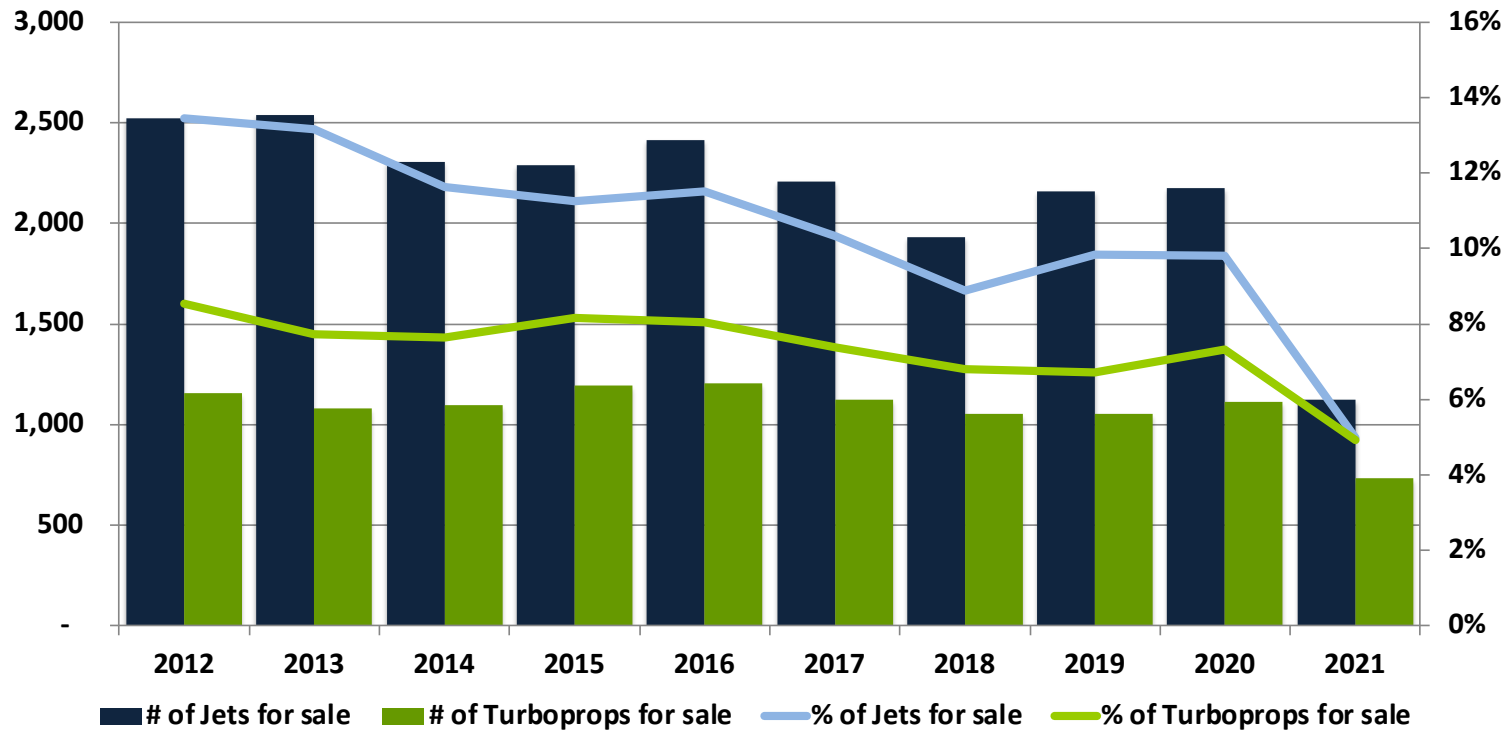


Note: Fleet age is in years since initial aircraft delivery; GDP and fleet growth rates are 10-year CAGR

JETNET iQ Snap!: 3rd Quarter 2021 - Private & Confidential

# Pre-Owned Business Aircraft Inventory

Business Jets and Turboprops for sale  
September 2012 - September 2021

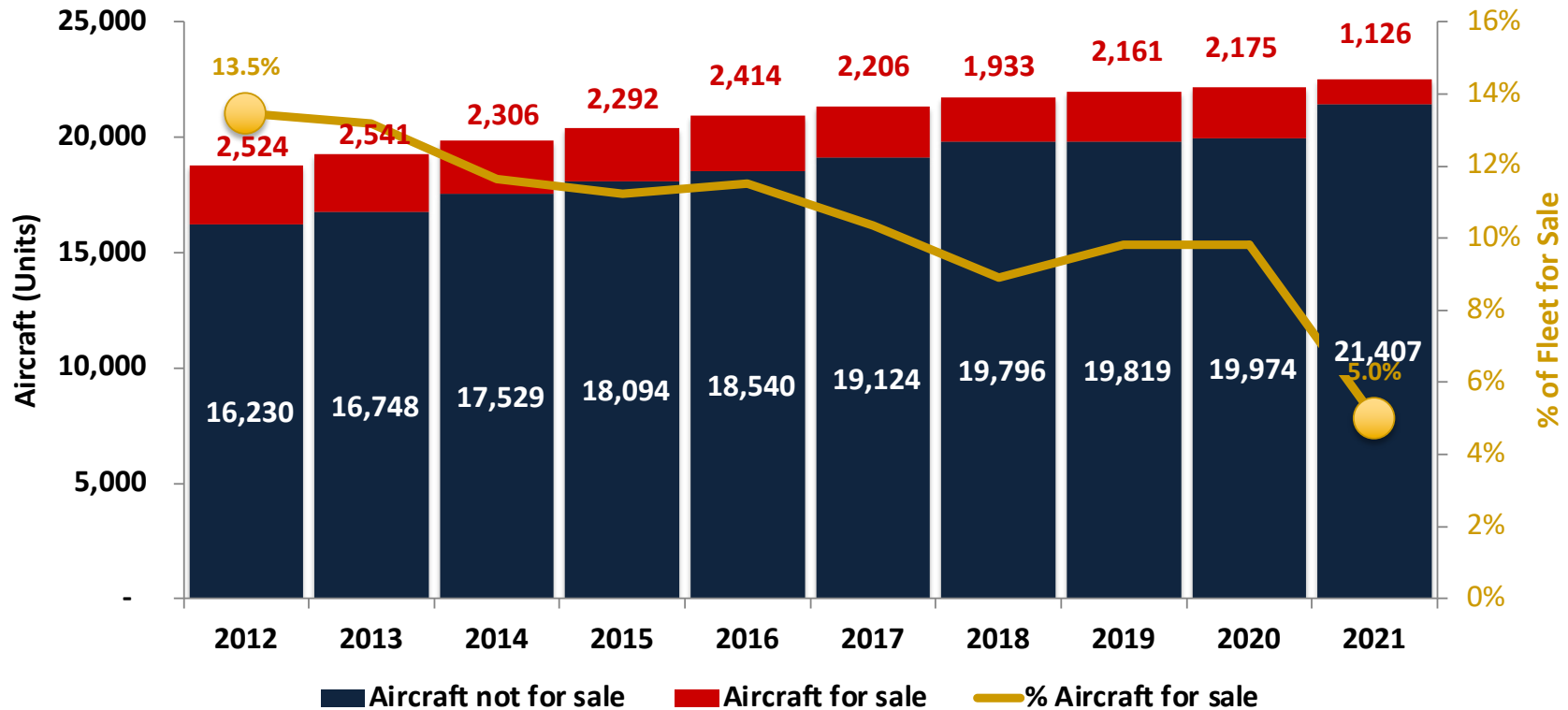


| Aircraft Available for Sale as % of World Fleet (as of September 30) |       |       |       |       |       |       |      |      |      |      |
|--|-------|-------|-------|-------|-------|-------|------|------|------|------|
|  | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018 | 2019 | 2020 | 2021 |
| Business Jets  | 13.5% | 13.2% | 11.6% | 11.2% | 11.5% | 10.3% | 8.9% | 9.8% | 9.8% | 5.0% |
| Turboprop  | 8.5%  | 7.7%  | 7.7%  | 8.2%  | 8.1%  | 7.4%  | 6.8% | 6.7% | 7.3% | 4.9% |

For-sale inventories of pre-owned business aircraft were at historical lows at the end of September 2021, a much tighter market than was evident after the 2008/2009 crisis

# Pre-Owned Business Jet Inventory

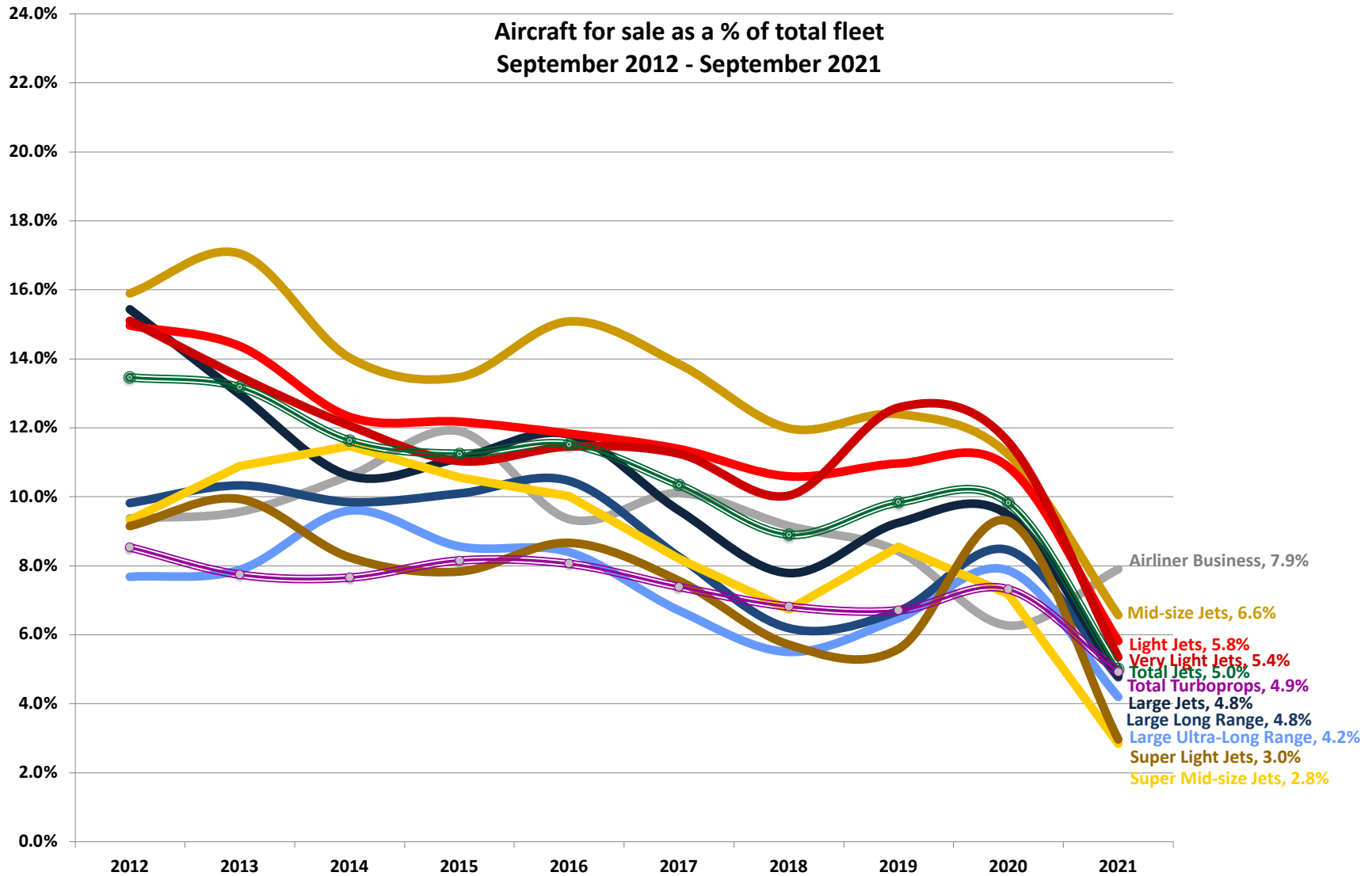
Business Jets for sale - September 30, 2012-2021



Jets Available for Sale as % of World Fleet (as of September 30)

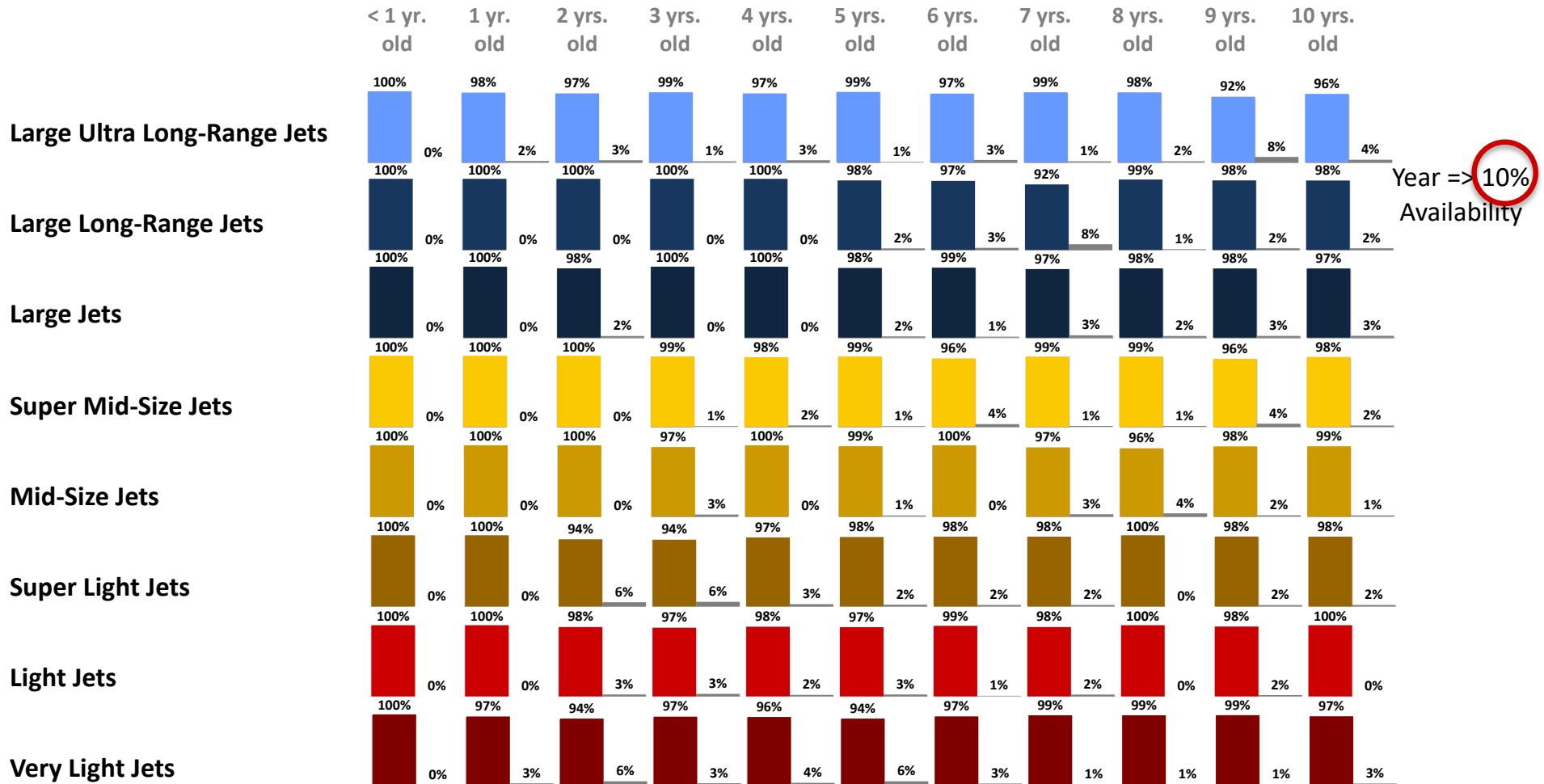
| 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018 | 2019 | 2020 | 2021 |
|-------|-------|-------|-------|-------|-------|------|------|------|------|
| 13.5% | 13.2% | 11.6% | 11.2% | 11.5% | 10.3% | 8.9% | 9.8% | 9.8% | 5.0% |

# Pre-Owned Business Jet Inventory



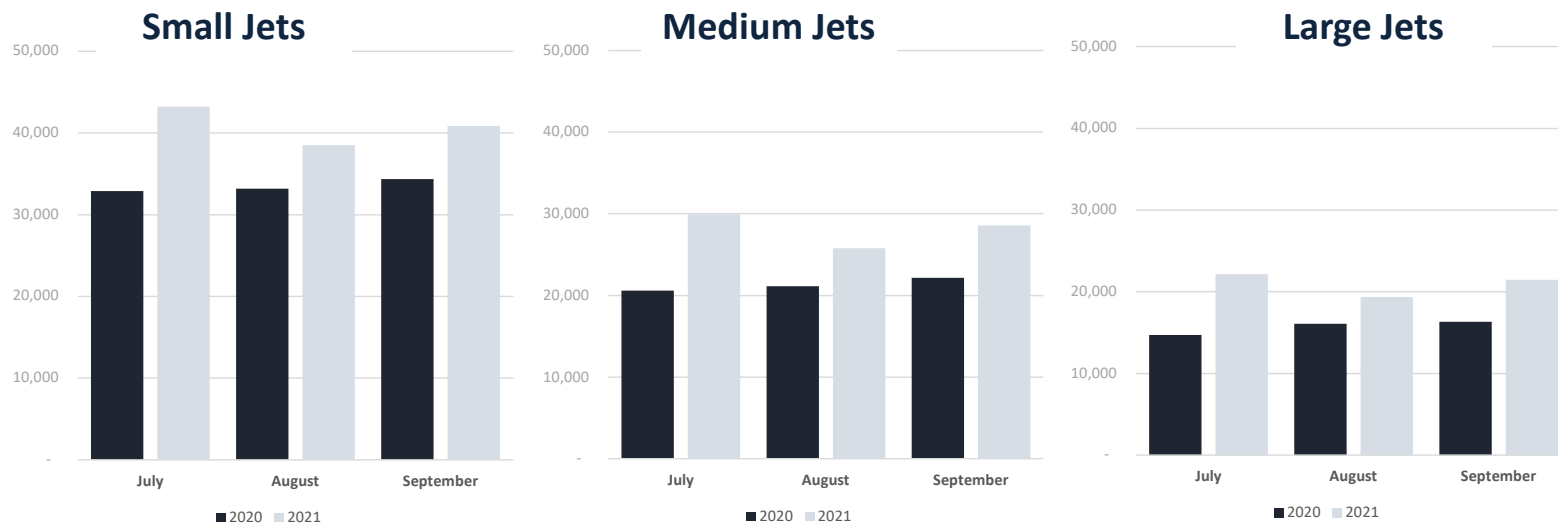
## Pre-Owned Business Jet Inventory

10-Years Old or Less – % for sale and % not for sale by size category

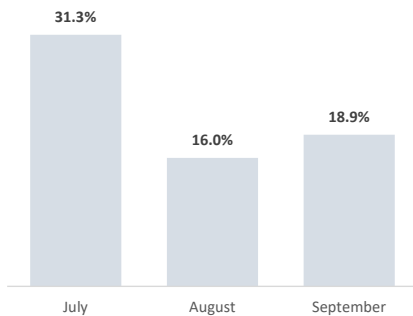


# U.S. Business Jet Utilization

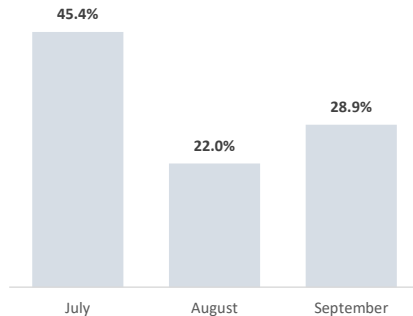
## U.S. Part 91 Operations – Q3 2021 versus Q3 2020



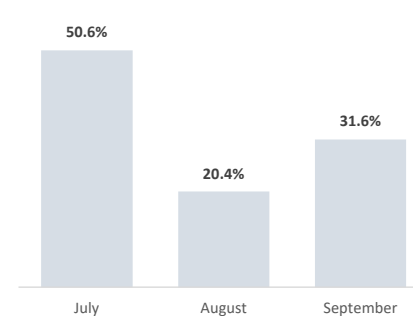
Part 91 Flight Activity:  
Year-over-Year Change  
Small Jets



Part 91 Flight Activity:  
Year-over-Year Change  
Medium Jets



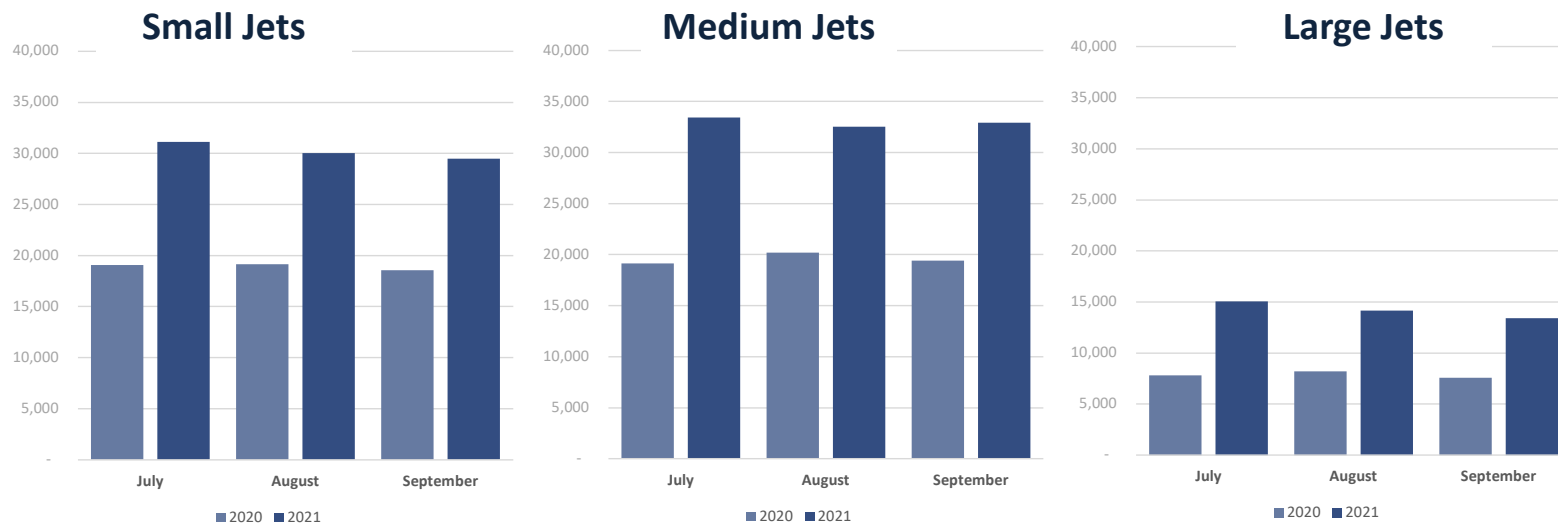
Part 91 Flight Activity:  
Year-over-Year Change  
Large Jets



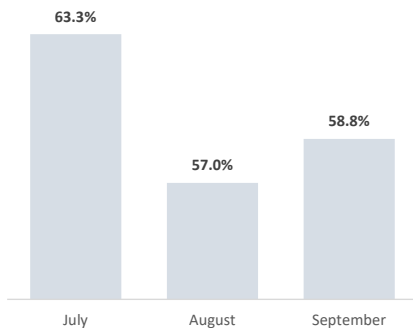
Source: U.S. FAA; JETNET

# U.S. Business Jet Utilization

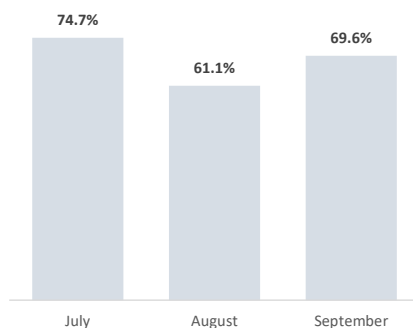
## U.S. Part 135 Operations – Q3 2021 versus Q3 2020



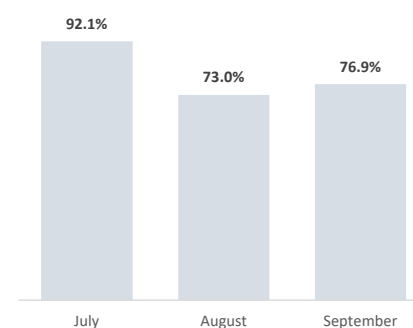
Part 135 Flight Activity:  
Year-over-Year Change  
Small Jets



Part 135 Flight Activity:  
Year-over-Year Change  
Medium Jets



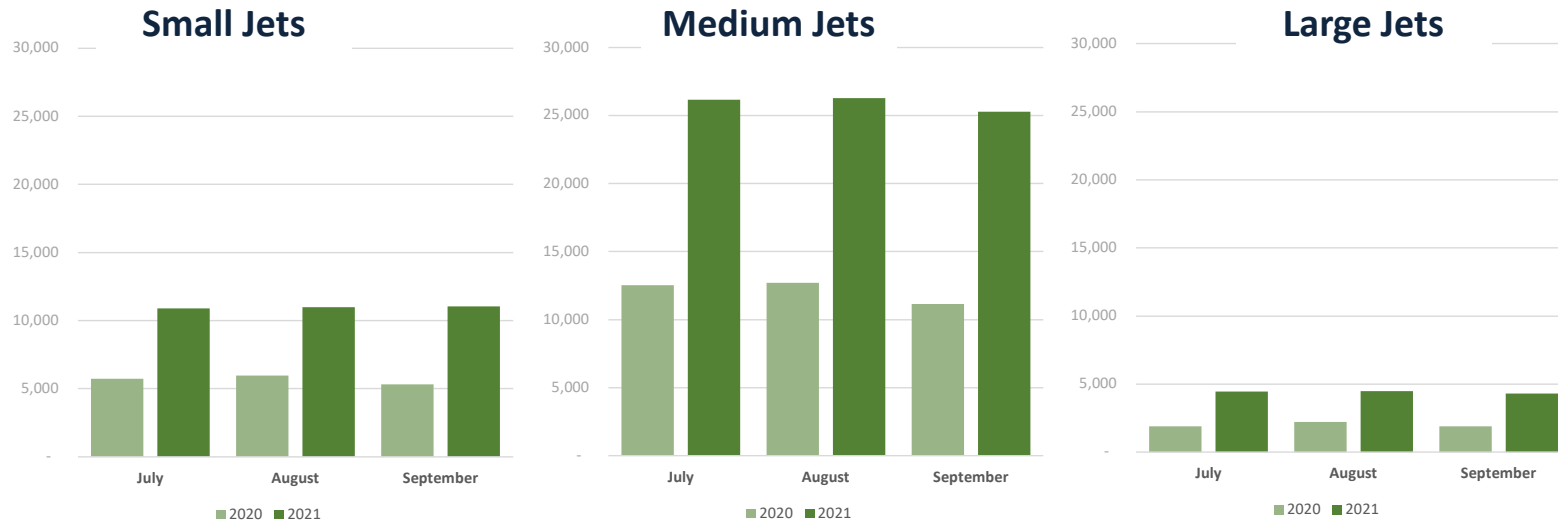
Part 135 Flight Activity:  
Year-over-Year Change  
Large Jets



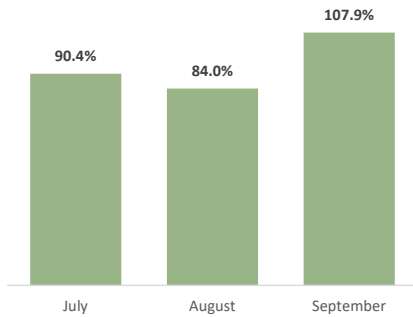
Source: U.S. FAA; JETNET

# U.S. Business Jet Utilization

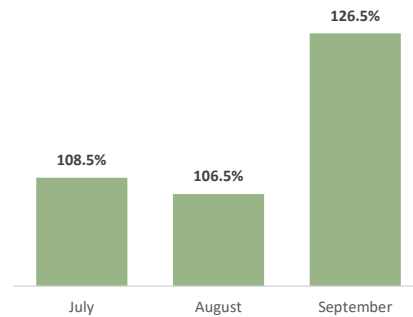
## U.S. Part 91K Operations – Q3 2021 versus Q3 2020



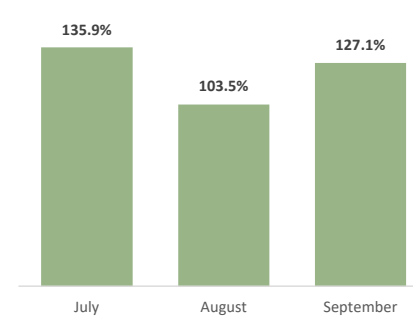
Part 91K Flight Activity:  
Year-over-Year Change  
Small Jets



Part 91K Flight Activity:  
Year-over-Year Change  
Medium Jets



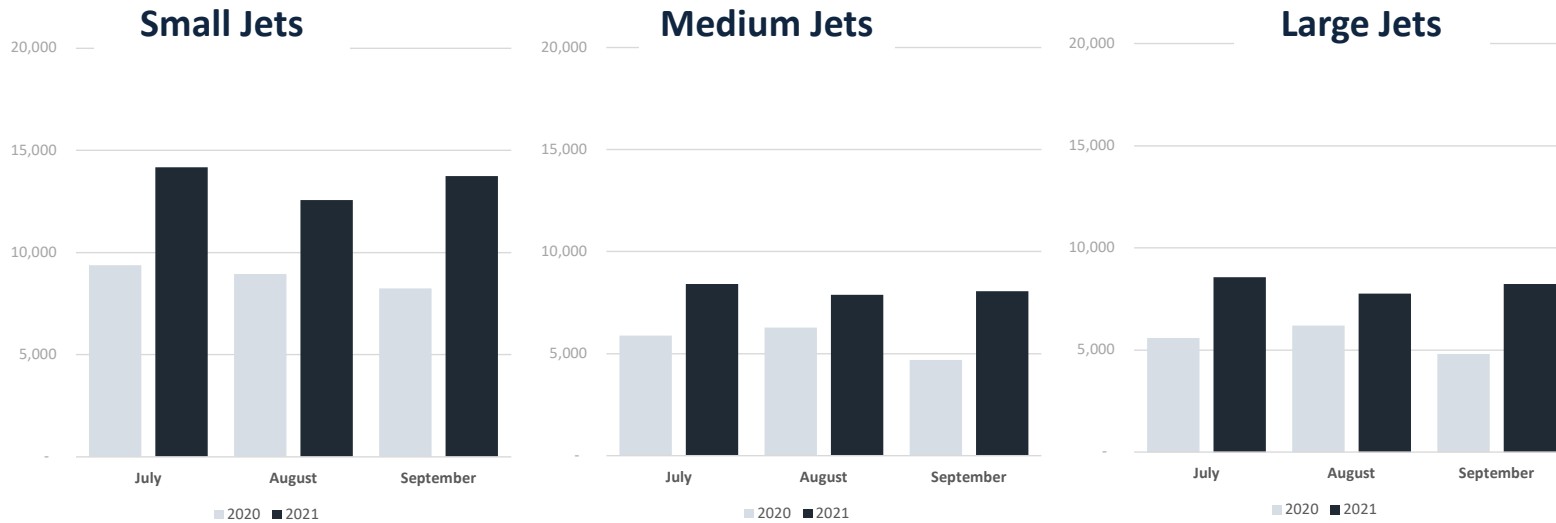
Part 91K Flight Activity:  
Year-over-Year Change  
Large Jets



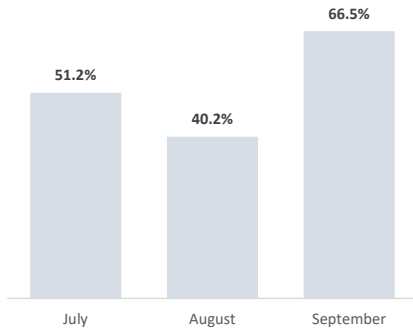
Source: U.S. FAA; JETNET

# European Business Jet Utilization

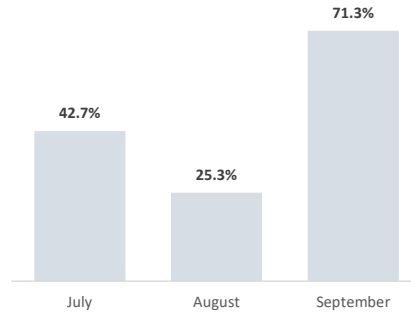
## European Operations – Q3 2021 versus Q3 2020



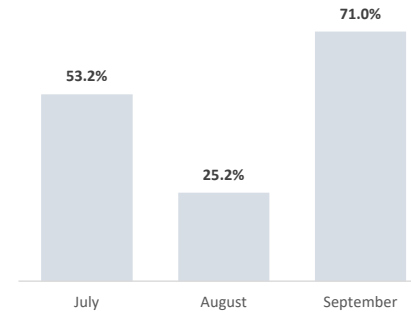
European Flight Activity:  
Year-over-Year Change  
Small Jets



European Flight Activity:  
Year-over-Year Change  
Medium Jets



European Flight Activity:  
Year-over-Year Change  
Large Jets



Source: U.S. FAA; JETNET

# Crude Oil and Jet Fuel Prices

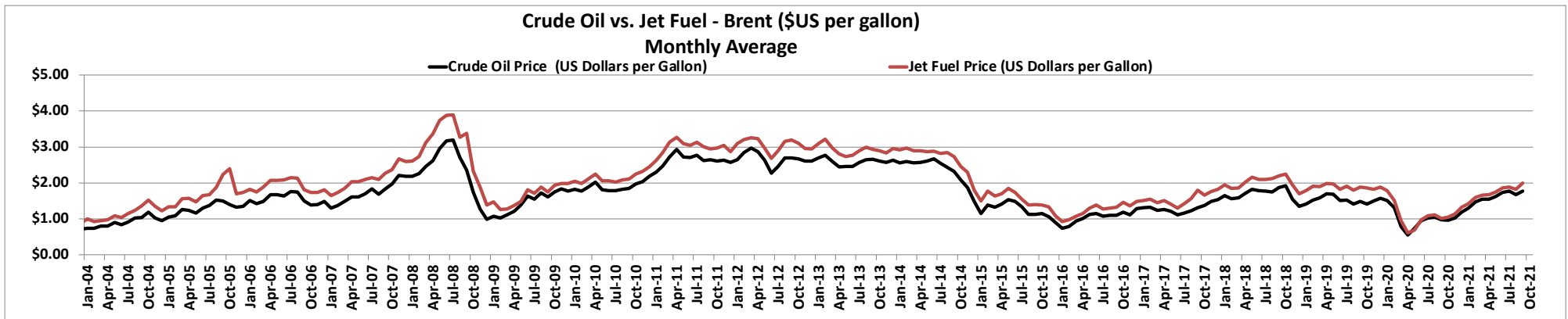
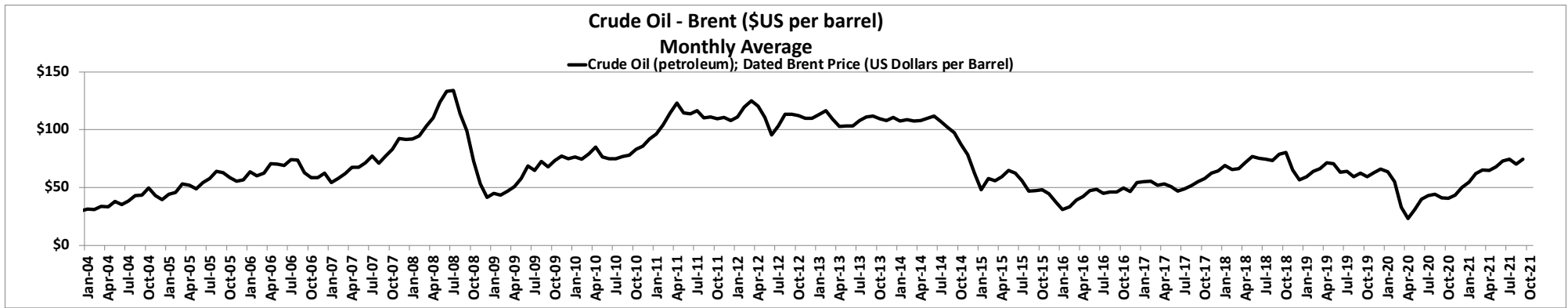
| IATA Fuel Price Monitor<br>Oct 22 2021 | Share in<br>World Index | \$/US gallon    | \$/barrel       | Index Value<br>2000=100 | vs. 1 week<br>ago | vs. 1 month<br>ago | vs.1 yr ago   |
|--|-------------------------|-----------------|-----------------|-------------------------|-------------------|--------------------|---------------|
| <b>Jet Fuel Price</b>                  | <b>100%</b>             | <b>\$ 2.304</b> | <b>\$ 96.77</b> | <b>264.55</b>           | <b>-1.3%</b>      | <b>11.9%</b>       | <b>116.8%</b> |
| Asia & Oceania                         | 22%                     | \$ 2.265        | \$ 95.11        | 271.76                  | -0.8%             | 13.0%              | 121.5%        |
| Europe & CIS                           | 28%                     | \$ 2.308        | \$ 96.94        | 261.20                  | -1.3%             | 12.4%              | 121.1%        |
| Middle East & Africa                   | 7%                      | \$ 2.245        | \$ 94.30        | 281.61                  | -1.0%             | 12.6%              | 126.7%        |
| North America                          | 39%                     | \$ 2.329        | \$ 97.84        | 260.10                  | -1.6%             | 10.8%              | 109.4%        |
| Latin & Central America                | 4%                      | \$ 2.350        | \$ 98.70        | 273.41                  | -1.4%             | 10.6%              | 118.9%        |

*Global average price paid at the refinery for aviation jet fuel - IATA*

Source: International Air Transport Association (IATA) from PLATTS

*JETNET iQ Snap!: 3rd Quarter 2021 - Private & Confidential*

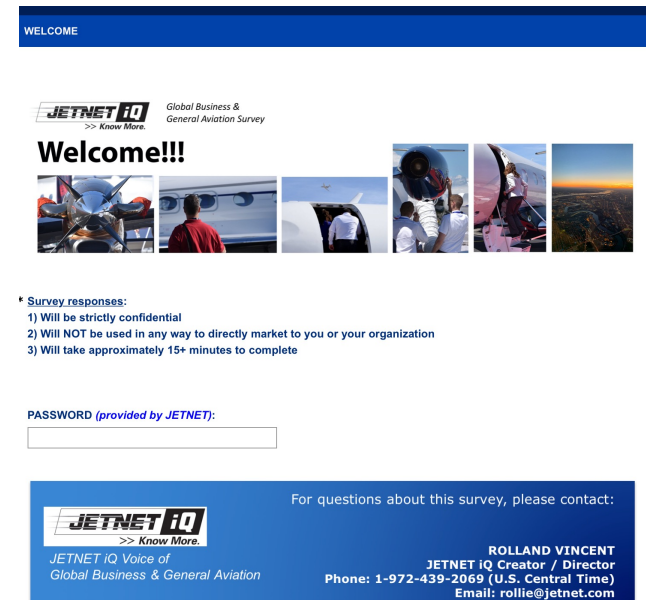
# Crude Oil and Jet Fuel Prices



Source: IndexMundi

## JETNET iQ Quarterly Surveys

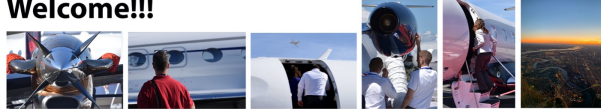
- Multilingual owner / operator surveys
  - Utilization patterns and expectations
  - Brand perceptions
  - Purchase criteria / inhibitors
  - Purchase / selling intentions
  - New product preferences
  - Special topics of interest (examples)
    - New products
    - COVID-19
    - Mood of the market



WELCOME

**JETNET iQ** Global Business & General Aviation Survey  
>> Know More

**Welcome!!!**



\* Survey responses:  
1) Will be strictly confidential  
2) Will NOT be used in any way to directly market to you or your organization  
3) Will take approximately 15+ minutes to complete

PASSWORD (provided by JETNET):

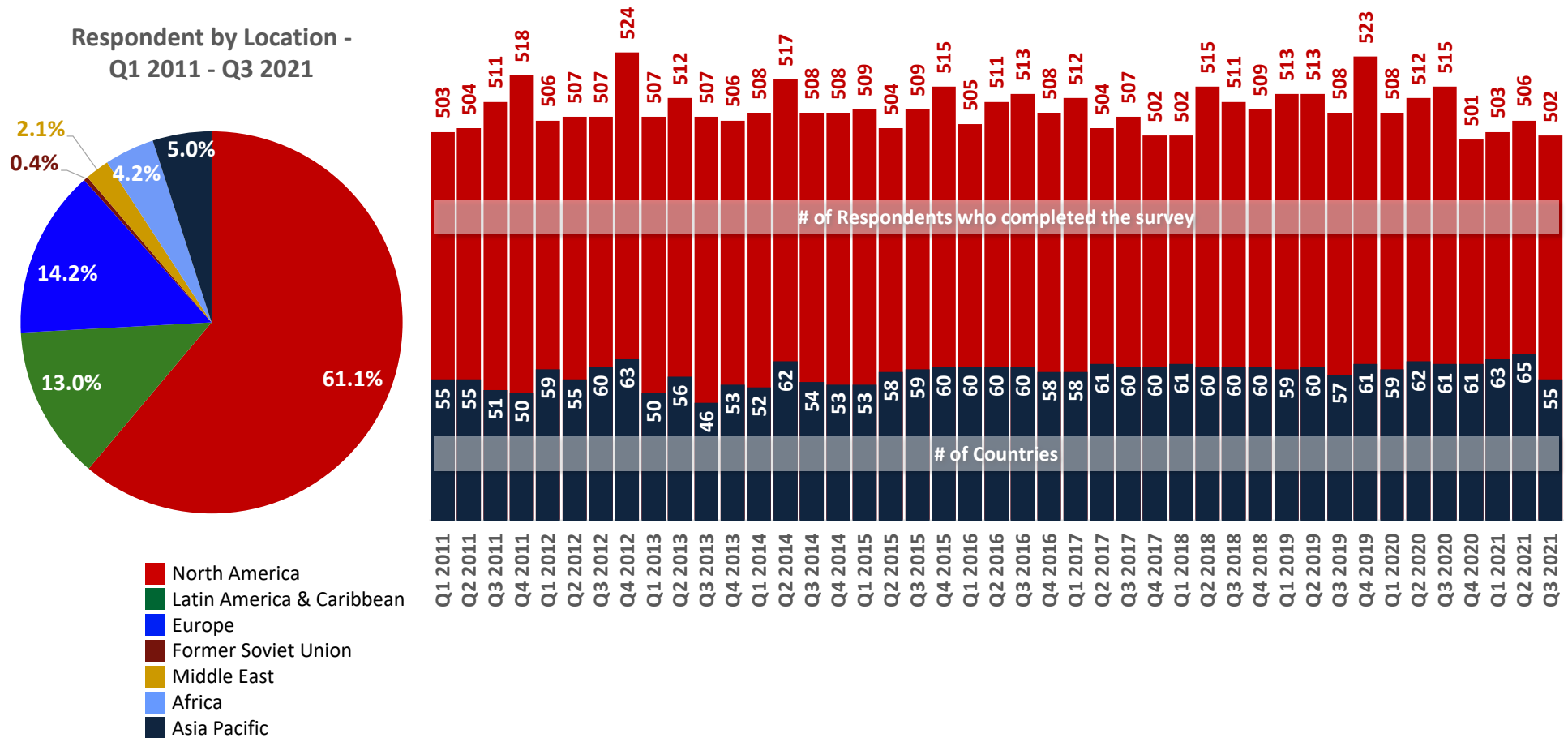
For questions about this survey, please contact:

**JETNET iQ** >> Know More  
JETNET iQ Voice of Global Business & General Aviation

**ROLLAND VINCENT**  
JETNET iQ Creator / Director  
Phone: 1-972-439-2069 (U.S. Central Time)  
Email: rollie@jetnet.com

JETNET iQ Surveys: Quarterly, multilingual, worldwide

## JETNET iQ Survey Respondents



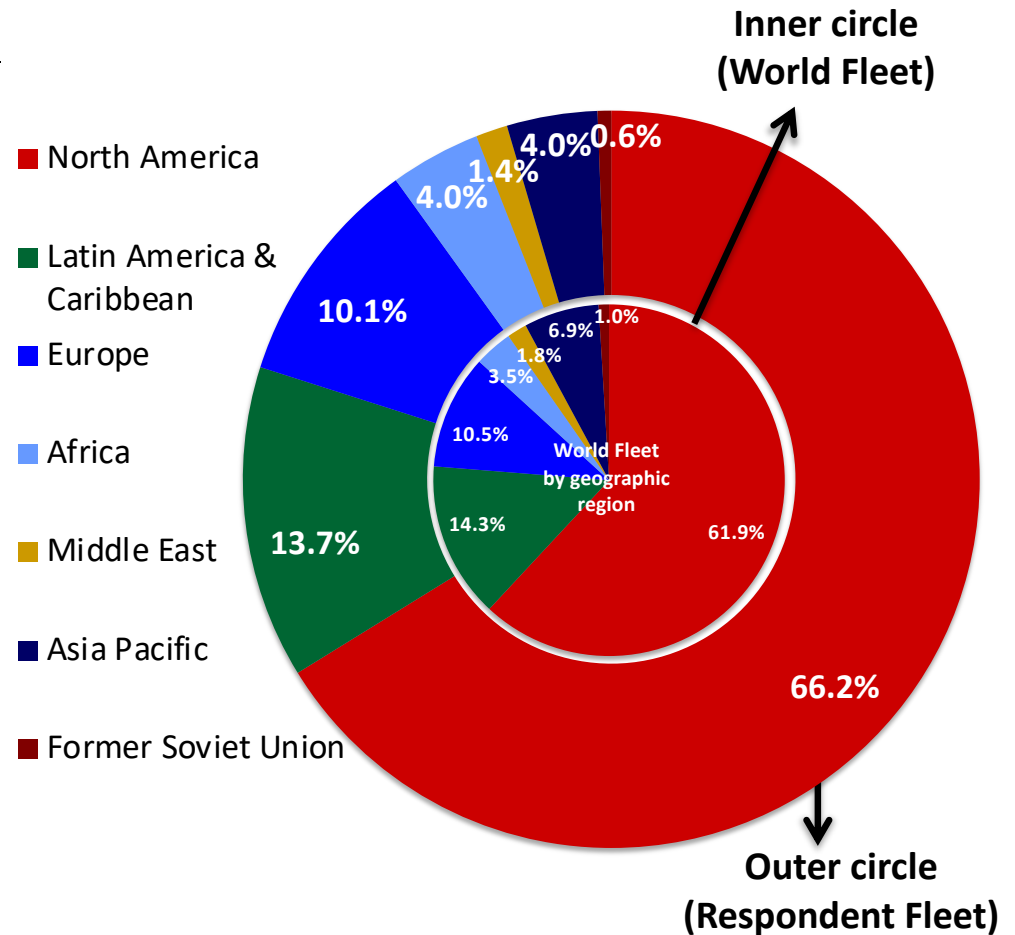
JETNET iQ Surveys: Since Q1 2011, >21,500 respondents from 143 countries

## Survey Respondents' Location

### By Respondent Location

Q3 2021 Survey

| RESPONDENT COUNTRIES FROM Q3 2021 SURVEY |                  |                               |                  |
|--|------------------|-------------------------------|------------------|
| COUNTRIES/TERRITORIES                    | # of respondents |                               | # of respondents |
| ARGENTINA                                | 5                | PAKISTAN                      | 1                |
| AUSTRALIA                                | 10               | PAPUA NEW GUINEA              | 1                |
| AUSTRIA                                  | 3                | PHILIPPINES                   | 1                |
| AZERBAIJAN                               | 1                | POLAND                        | 2                |
| BELGIUM                                  | 1                | PORTUGAL                      | 1                |
| BOLIVIA                                  | 1                | ROMANIA                       | 1                |
| BRAZIL                                   | 28               | RUSSIAN FEDERATION            | 2                |
| BULGARIA                                 | 2                | SAUDI ARABIA                  | 3                |
| CANADA                                   | 25               | SERBIA                        | 1                |
| CHILE                                    | 1                | SLOVENIA                      | 1                |
| CHINA                                    | 2                | SOUTH AFRICA                  | 12               |
| COLOMBIA                                 | 3                | SWEDEN                        | 1                |
| CYPRUS                                   | 1                | SWITZERLAND                   | 8                |
| CZECHIA                                  | 2                | TAIWAN                        | 1                |
| DEM. REPUBLIC OF CONGO                   | 1                | THAILAND                      | 1                |
| DENMARK                                  | 3                | TRINIDAD AND TOBAGO           | 1                |
| DOMINICAN REPUBLIC                       | 1                | TUNISIA                       | 1                |
| FRANCE                                   | 1                | TURKEY                        | 2                |
| GERMANY                                  | 8                | UNITED ARAB EMIRATES          | 2                |
| GREECE                                   | 1                | UNITED KINGDOM                | 9                |
| GUATEMALA                                | 4                | UNITED STATES                 | 307              |
| HONDURAS                                 | 1                | VENEZUELA                     | 4                |
| INDIA                                    | 1                |                               |                  |
| INDONESIA                                | 1                | <b>Total # of respondents</b> | <b>502</b>       |
| IRELAND                                  | 2                | <b>Total # of countries</b>   | <b>55</b>        |
| ITALY                                    | 1                | Africa                        | 20               |
| JAMAICA                                  | 1                | Asia Pacific                  | 20               |
| KENYA                                    | 3                | Europe                        | 51               |
| MEXICO                                   | 19               | Former Soviet Union           | 3                |
| NAMIBIA                                  | 2                | Latin America & Caribbean     | 69               |
| NETHERLANDS                              | 2                | Middle East                   | 7                |
| NEW ZEALAND                              | 1                | North America                 | 332              |
| NIGERIA                                  | 1                | <b>Total</b>                  | <b>502</b>       |

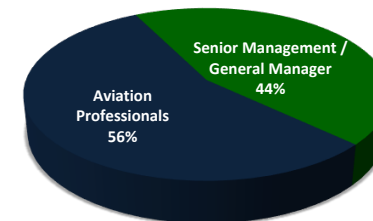
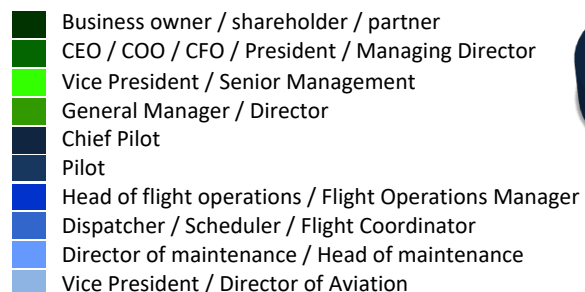
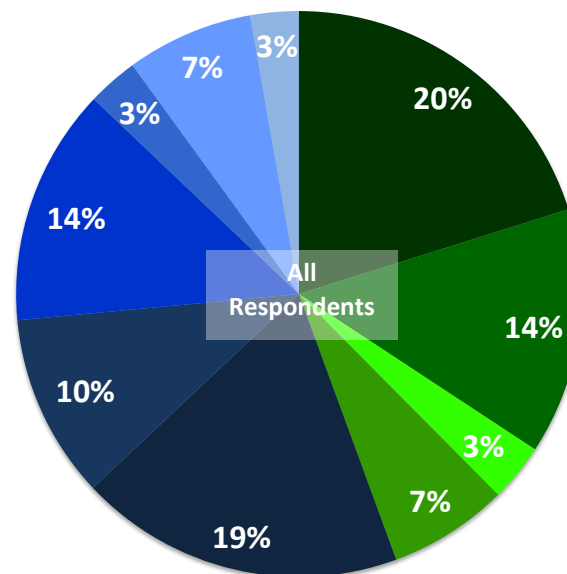


## Survey Respondents' Roles

Q3 2021 Survey

| Title of respondent                                   | Completed  |
|---|------------|
| Business owner / shareholder / partner                | 153        |
| CEO / COO / CFO / President / Managing Director       | 107        |
| Vice President / Senior Management                    | 25         |
| General Manager / Director                            | 52         |
| Chief Pilot   | 141        |
| Pilot   | 80         |
| Head of flight operations / Flight Operations Manager | 103        |
| Dispatcher / Scheduler / Flight Coordinator           | 22         |
| Director of maintenance / Head of maintenance         | 55         |
| Vice President / Director of Aviation                 | 21         |
| <b>Total</b>  | <b>759</b> |

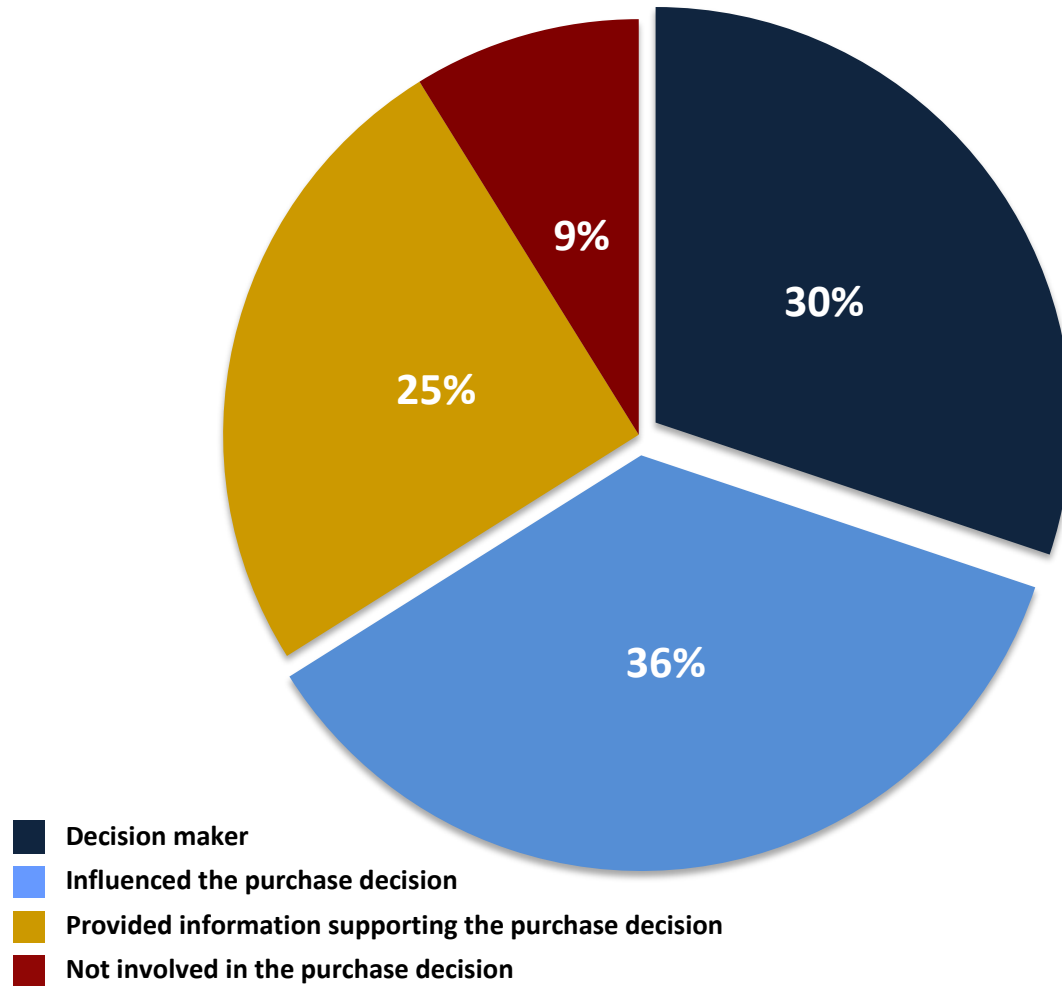
|                                     |     |     |
|-------------------------------------|-----|-----|
| Aviation Professionals              | 422 | 56% |
| Senior Management / General Manager | 337 | 44% |



# Survey Respondents' Roles

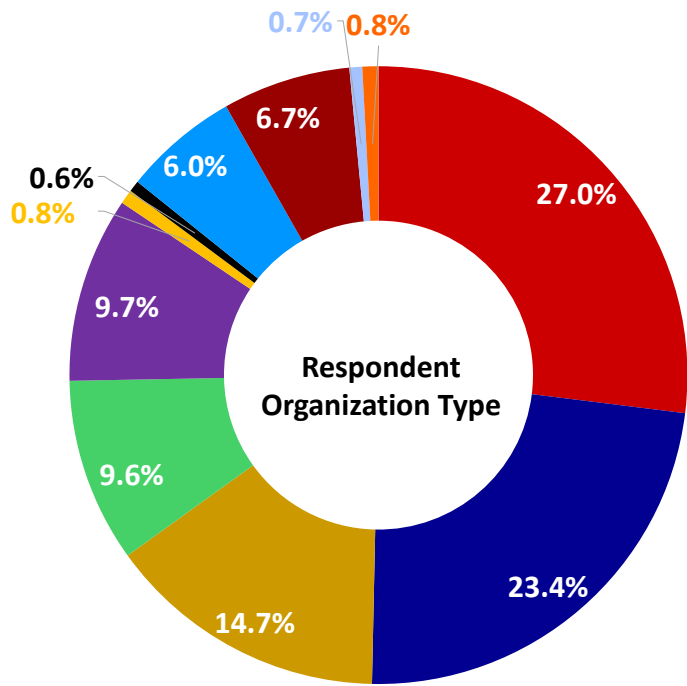
By Involvement in Last Fixed-Wing Turbine Aircraft Purchase

Q3 2021 Survey

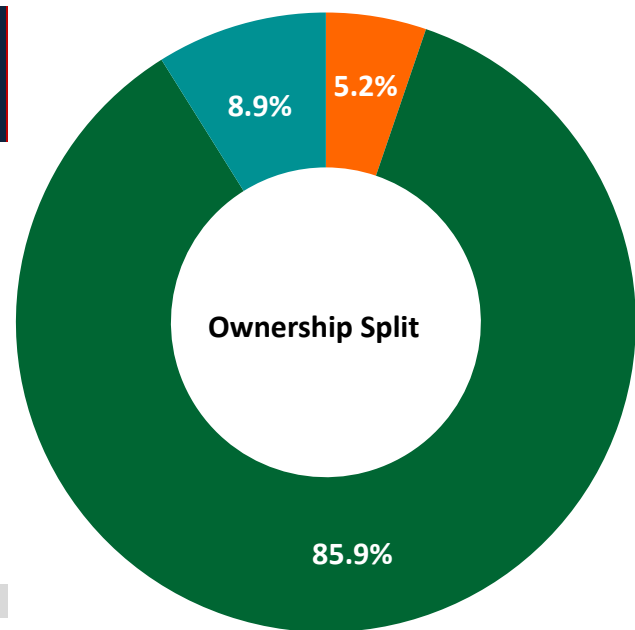


# Survey Respondents' Organization

Q3 2021 Survey



| Please indicate which of the following best describes your organization or company (check as many as apply): |  | All Respondents |
|--|--|-----------------|
| Aircraft owner   |  | 322             |
| Aircraft operator  |  | 279             |
| Flight department  |  | 176             |
| Aircraft management company  |  | 115             |
| Air taxi or charter operator   |  | 116             |
| Fractional aircraft operator   |  | 9               |
| Fractional share / jet card holder   |  | 7               |
| Aircraft MRO   |  | 72              |
| Broker / Dealer  |  | 80              |
| Financial Institution  |  | 8               |
| Government   |  | 10              |
| Other  |  | -               |
| Privately-held   |  | 164             |
| Publicly-traded  |  | 17              |
| <b>Total</b>   |  | <b>1,375</b>    |



Breakdown for Respondents who indicated ownership

|  |   |  |   |
|--|---|--|---|
| <span style="color: red;">●</span> Aircraft owner                | <span style="color: purple;">●</span> Air taxi or charter operator      | <span style="color: red;">●</span> Broker / Dealer             | <span style="color: orange;">●</span> Government    |
| <span style="color: blue;">●</span> Aircraft operator            | <span style="color: yellow;">●</span> Fractional aircraft operator      | <span style="color: lightblue;">●</span> Financial Institution | <span style="color: green;">●</span> Privately held |
| <span style="color: gold;">●</span> Flight department            | <span style="color: black;">●</span> Fractional share / jet card holder | <span style="color: orange;">●</span> Government               | <span style="color: teal;">●</span> Publicly held   |
| <span style="color: green;">●</span> Aircraft management company | <span style="color: lightblue;">●</span> Aircraft MRO                   | <span style="color: grey;">●</span> Other                      |   |

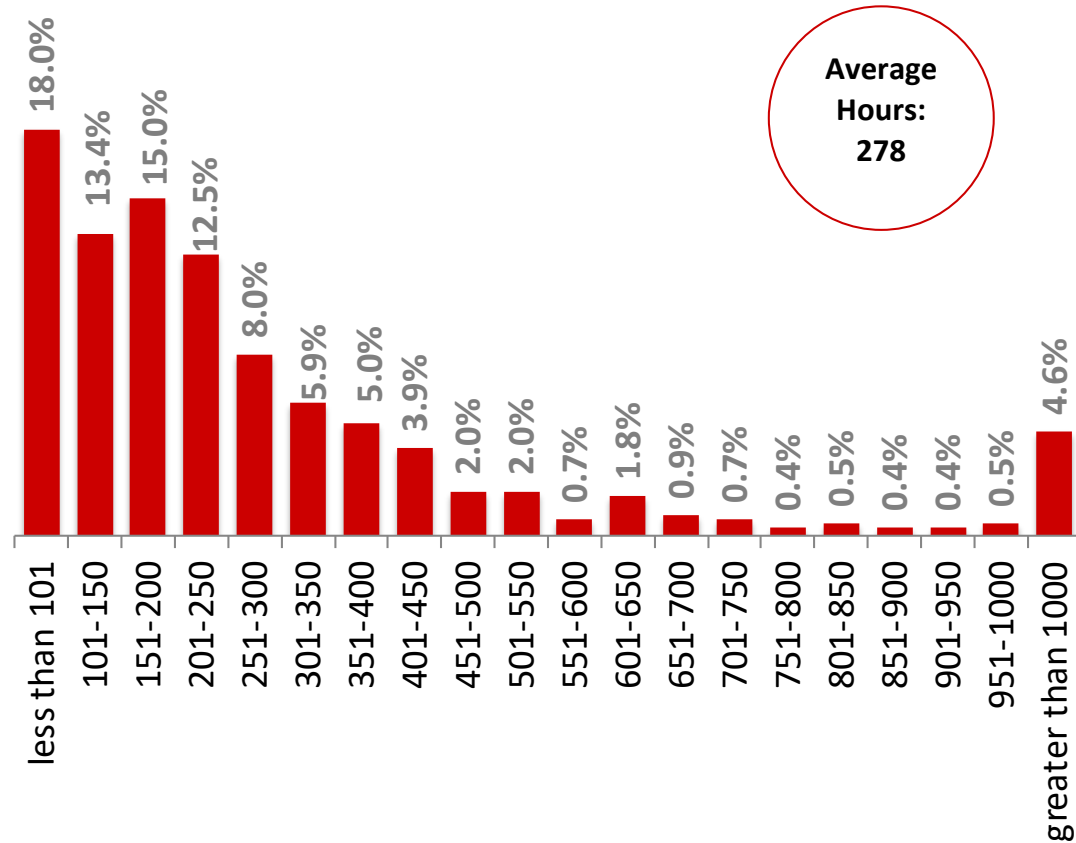
Note: Respondents may have chosen multiple organizational types

# Survey Respondents' Flight Operations

Last 12 Months – World (Fixed-Wing Business Jets and Turboprops Only)

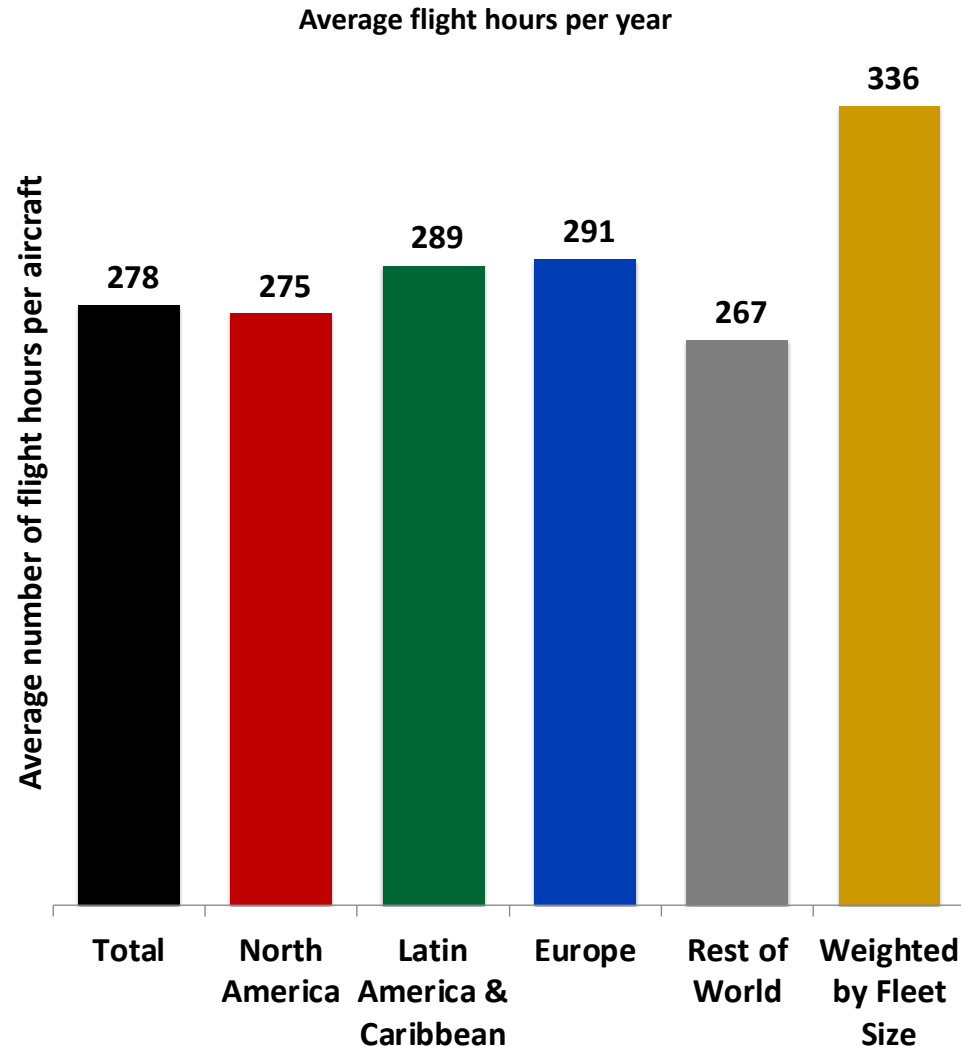
**Annual Flight Hours Per Aircraft**

Q3 2021 Survey



# Survey Respondents' Flight Operations

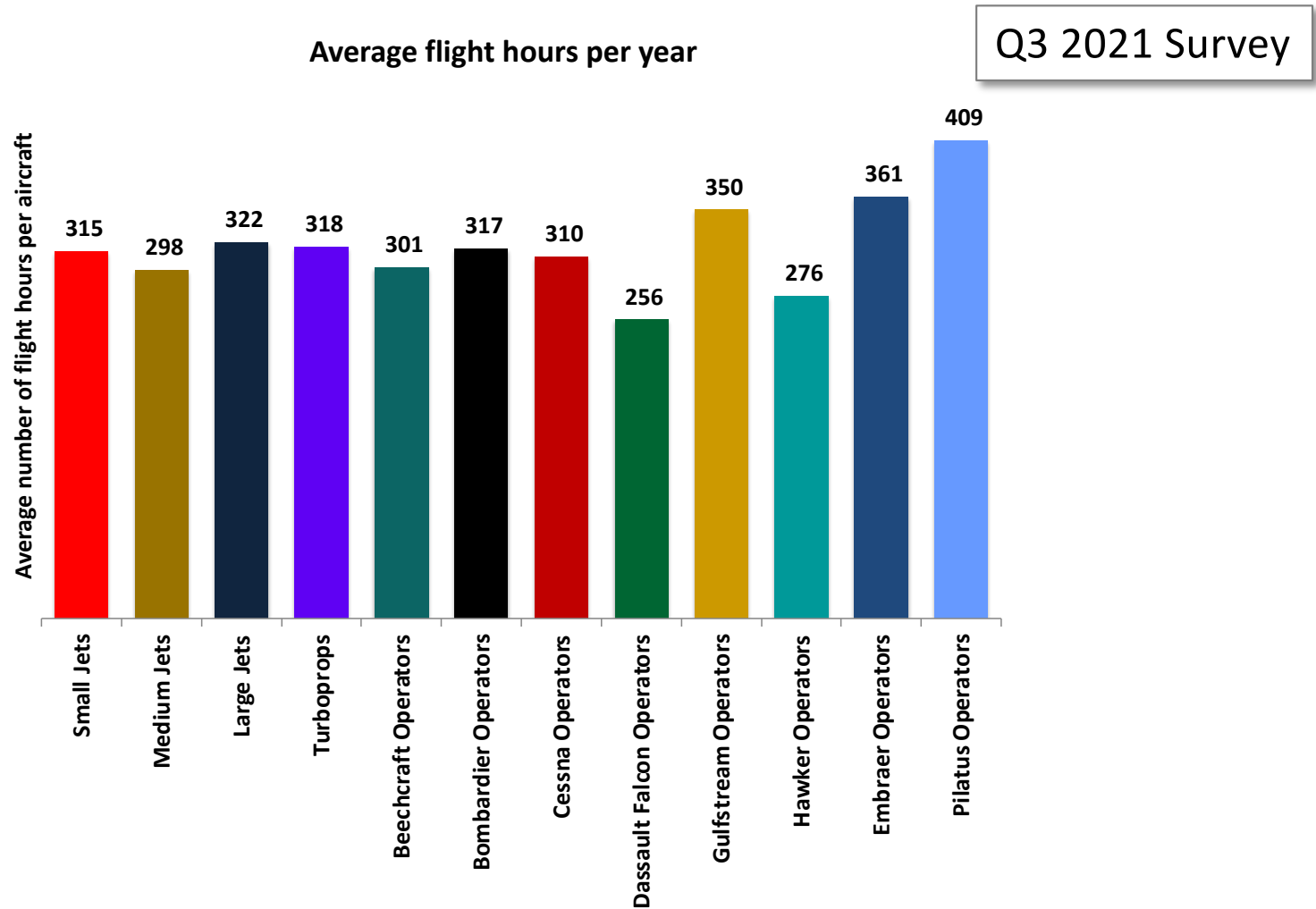
Regional Average Utilization per Aircraft in Prior 12 Months



Q3 2021 Survey

# Survey Respondents' Flight Operations

Operator Size and Brand Utilization per Aircraft in Prior 12 Months

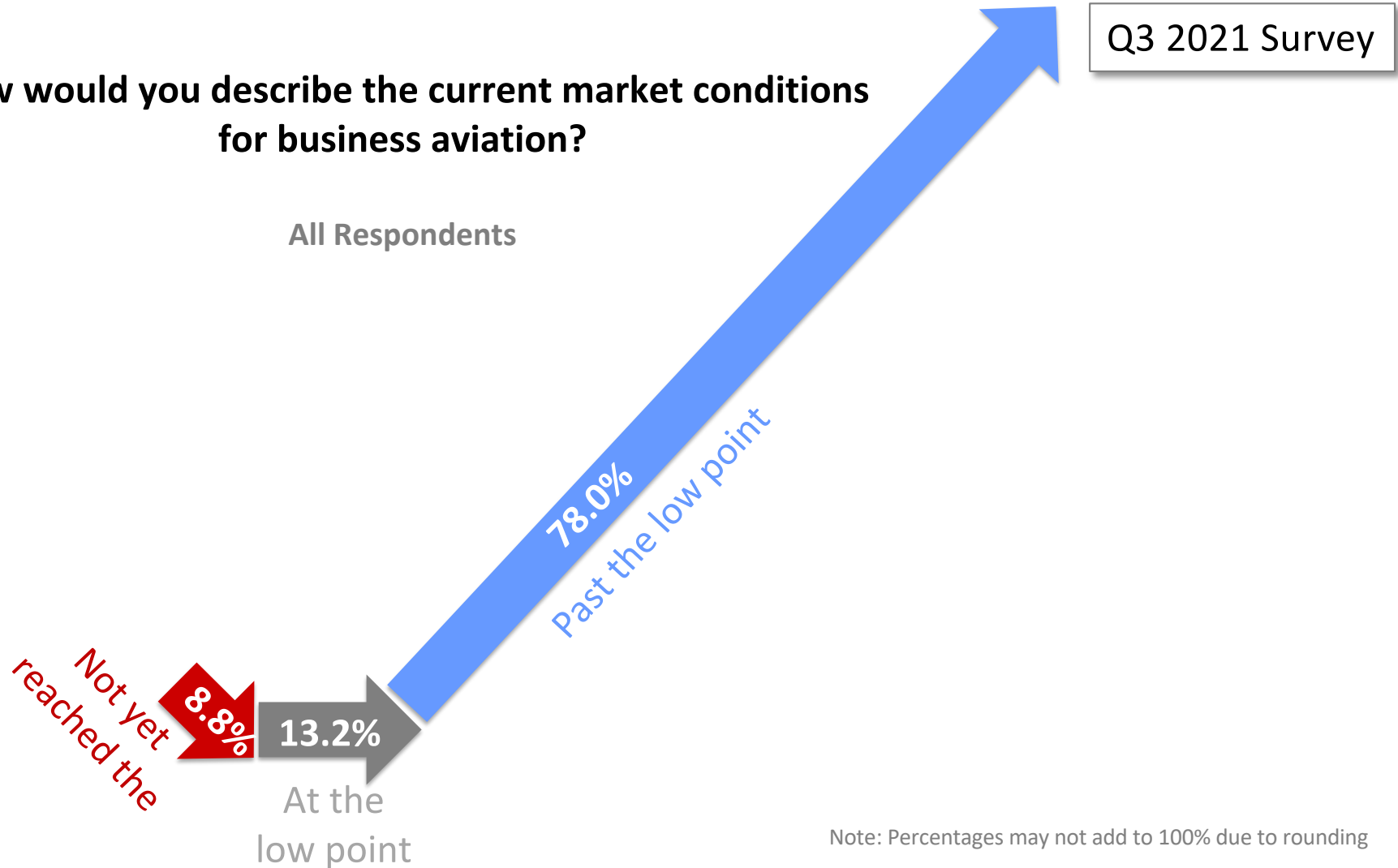


Note: Respondents may operate aircraft from multiple manufacturers and size categories

# Survey Respondents' Sentiment

## Current Market Sentiment

How would you describe the current market conditions for business aviation?



Note: Percentages may not add to 100% due to rounding

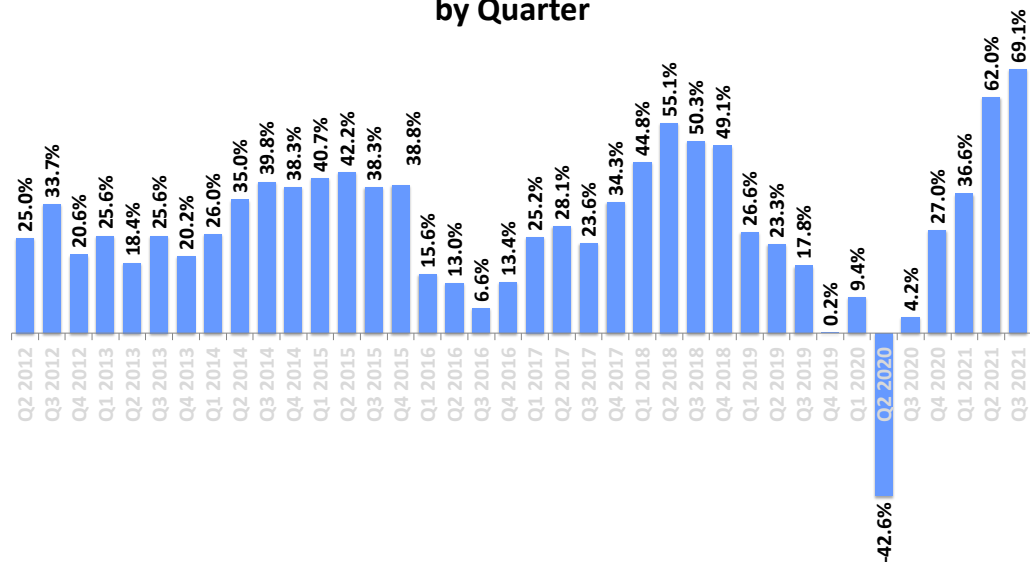
# Survey Respondents' Sentiment

## Current Market Sentiment

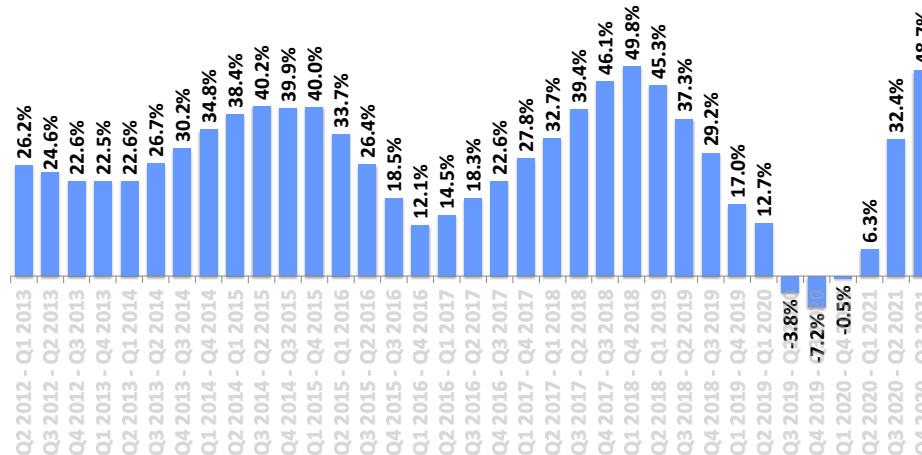
Q3 2021 Survey

Net optimism = "Past the low point" minus "Not yet reached the low point"

Overall Worldwide Net Optimism by Quarter



Overall Worldwide Net Optimism 4-quarter Rolling Average



Net optimism has rebounded smartly from the low of -42.6% in Q2 2020 to +69.1% in Q3 2021

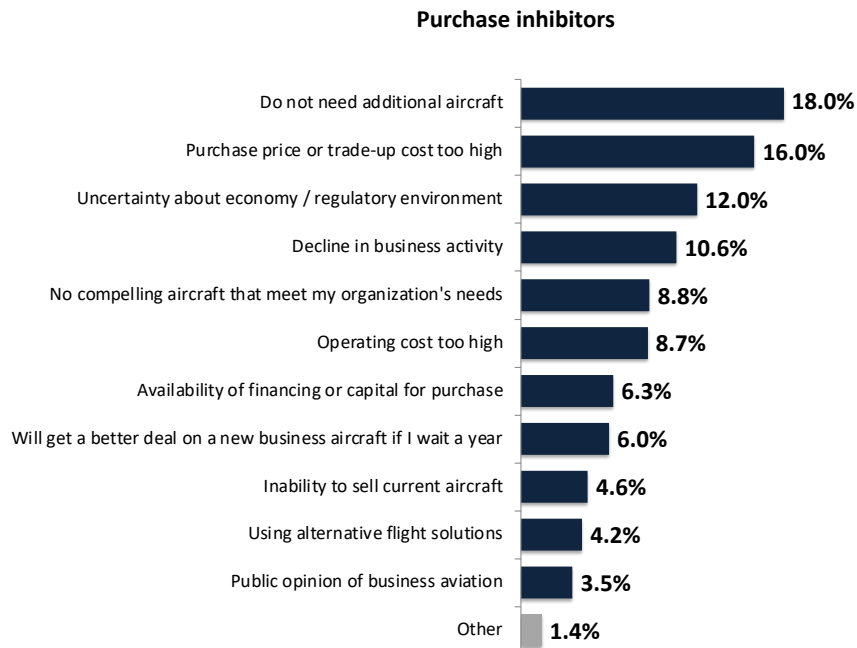
# Aircraft Purchase Inhibitors

## Inhibitors – Weighted Average

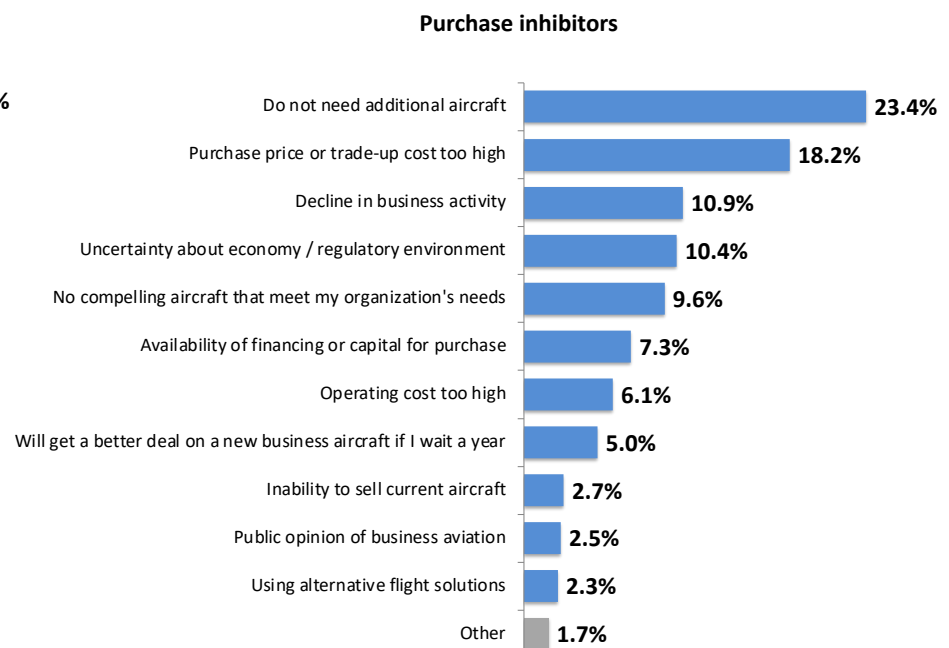
Q3 2021 Survey

*“Which of the following factors are most likely to prevent or delay your organization from purchasing a business aircraft over the next 12 months?”*

**Weighted Average Importance of Factors**



**Chosen as “Most Important” factor**



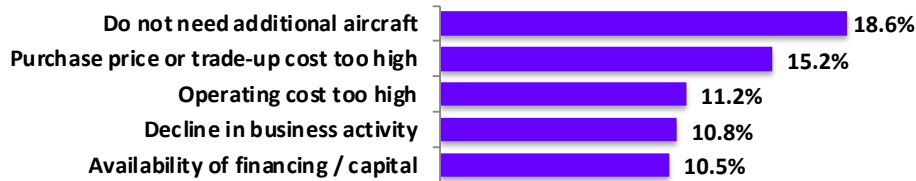
# Aircraft Purchase Inhibitors

## Top 5 Inhibitors – Weighted Average

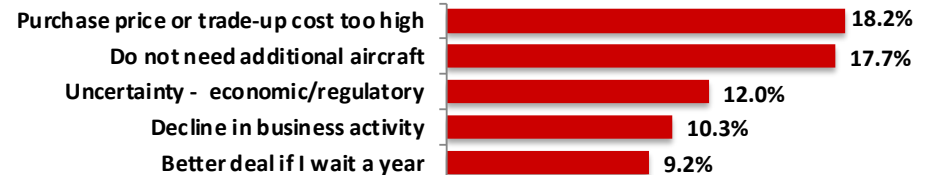
Q3 2021 Survey

*“Which of the following factors are most likely to prevent or delay your organization from purchasing a business aircraft over the next 12 months?”*

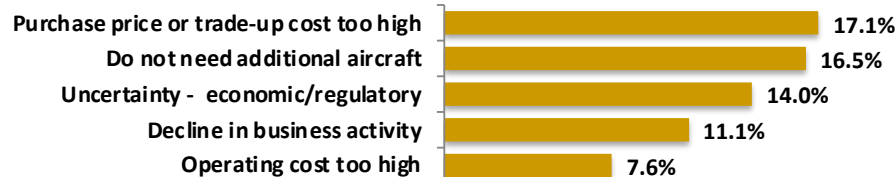
### Turboprop Operators



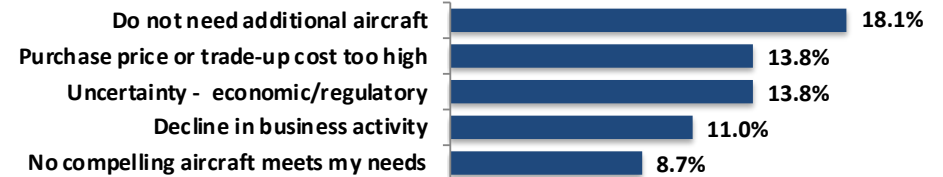
### Small Jet Operators



### Medium Jet Operators



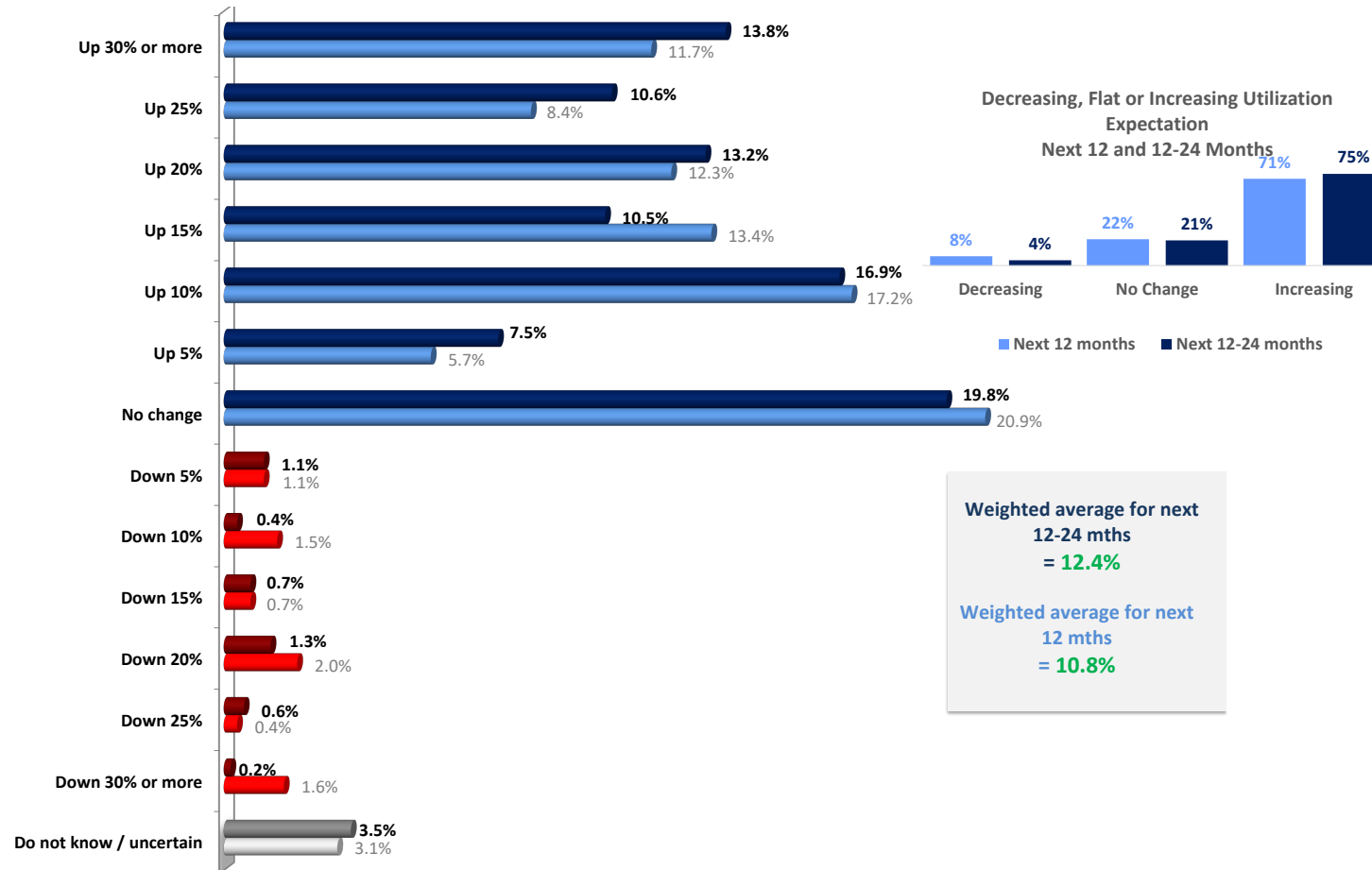
### Large Jet Operators



# Aircraft Utilization

Q3 2021 Survey

## Next 12 and 12-24 Months versus Prior 12 Months

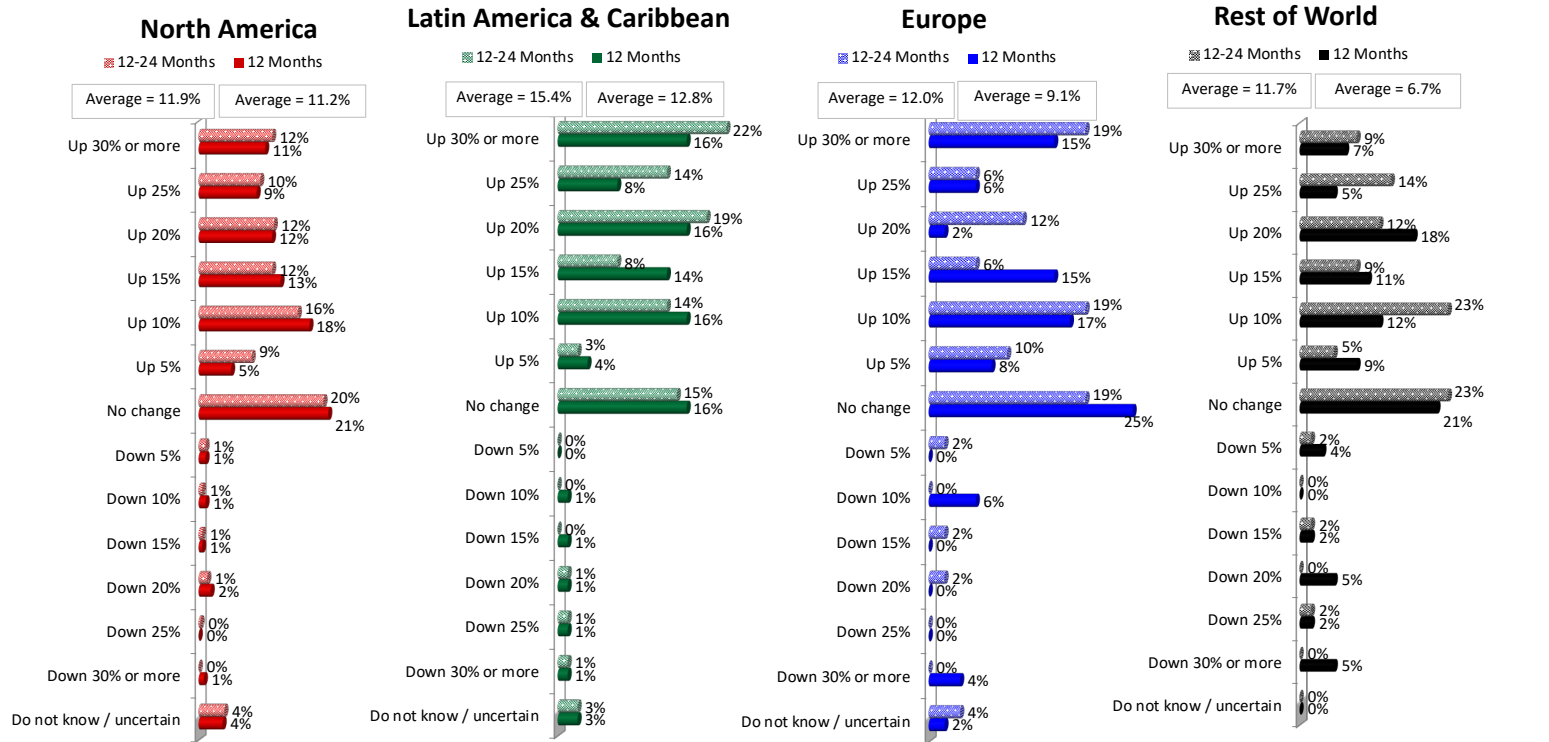


**Respondents expect to fly 10.8% more hours in the next 12 months vs. prior 12 months and 12.4% more in the next 12-24 months**

# Aircraft Utilization

Q3 2021 Survey

## Next 12 Months and 12-24 Months Versus Prior 12 Months by Region



| Region                    | Next 12 months             | Next 12-24 months          | Region                    | Next 12 months             | Next 12-24 months          |
|---------------------------|----------------------------|----------------------------|---------------------------|----------------------------|----------------------------|
| North America             | % Expecting Increase: 69%  | % Expecting Increase: 71%  | Latin America & Caribbean | % Expecting Increase: 75%  | % Expecting Increase: 78%  |
|                           | % Expecting no change: 25% | % Expecting no change: 25% |                           | % Expecting no change: 19% | % Expecting no change: 18% |
|                           | % Expecting Decrease: 6%   | % Expecting Decrease: 4%   |                           | % Expecting Decrease: 6%   | % Expecting Decrease: 4%   |
| (excluding "Do not know") |                            |                            | (excluding "Do not know") |                            |                            |
| Europe                    | % Expecting Increase: 63%  | % Expecting Increase: 71%  | Rest of World             | % Expecting Increase: 61%  | % Expecting Increase: 72%  |
|                           | % Expecting no change: 27% | % Expecting no change: 23% |                           | % Expecting no change: 21% | % Expecting no change: 23% |
|                           | % Expecting Decrease: 10%  | % Expecting Decrease: 6%   |                           | % Expecting Decrease: 18%  | % Expecting Decrease: 5%   |
| (excluding "Do not know") |                            |                            | (excluding "Do not know") |                            |                            |

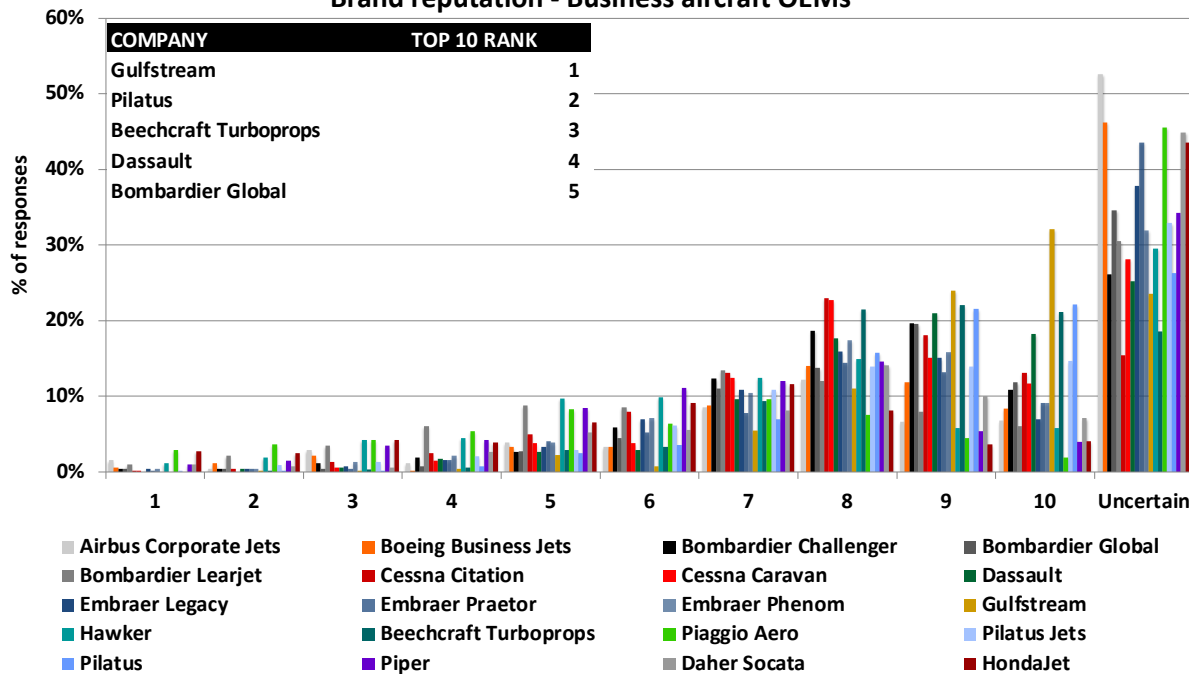
Optimism for future utilization has increased across all regions, led by Latin America & Caribbean and North America over the next 12 months

Q3 2021 Survey

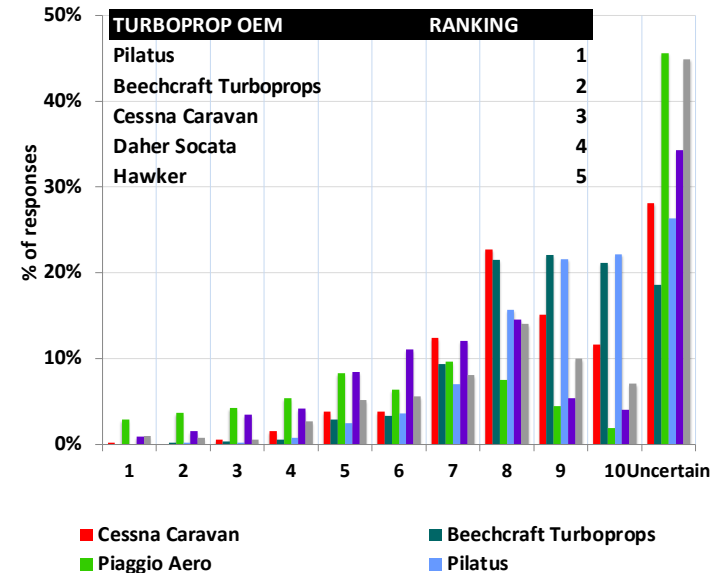
## Brand Reputations

Aircraft Manufacturers on a 1-10 Scale, where “10” = Highest

Brand reputation - Business aircraft OEMs



Brand reputation - Business Turboprop OEMs

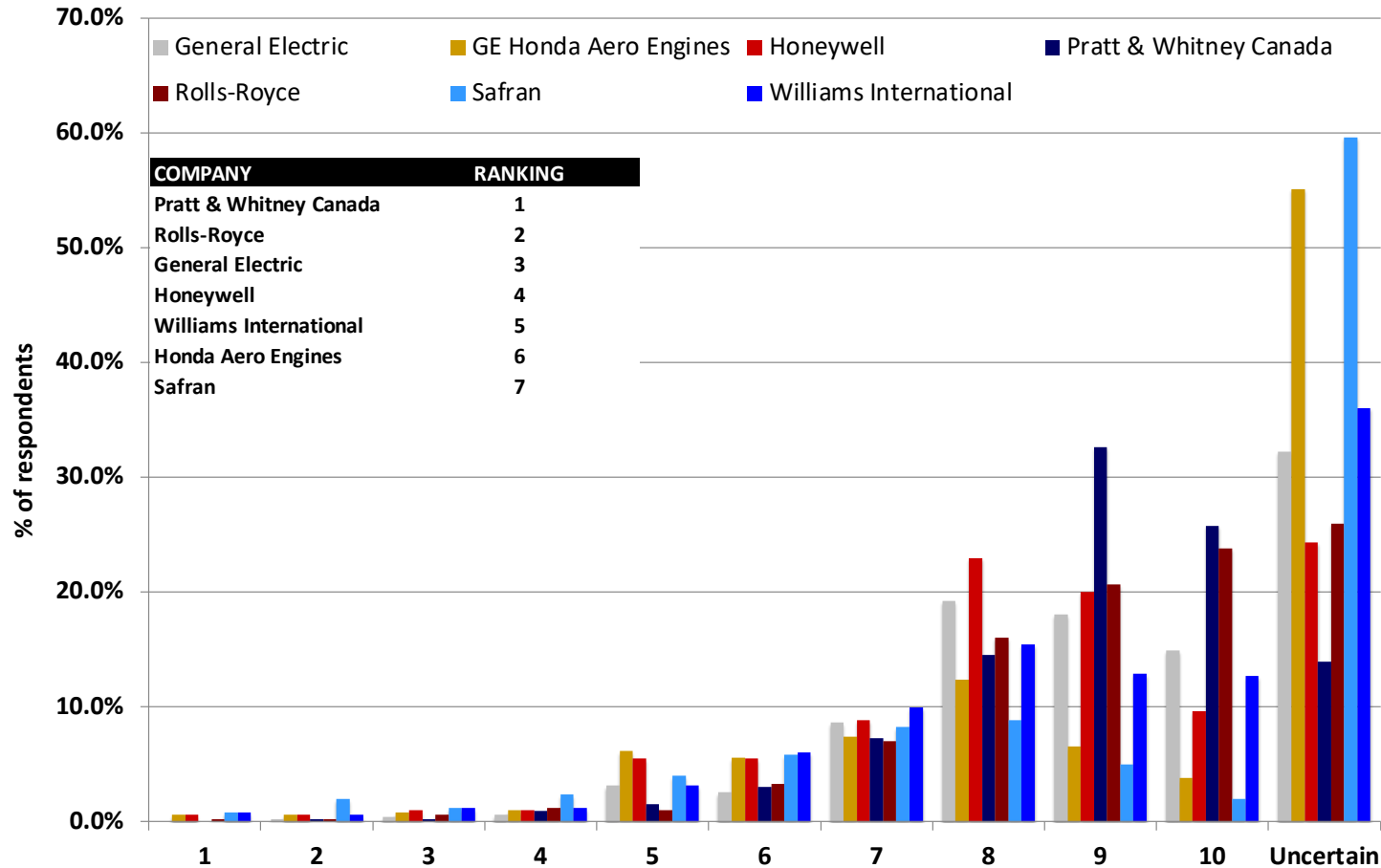


Gulfstream, Pilatus, Beechcraft and Dassault are the top-rated business aircraft brands

Q3 2021 Survey

# Brand Reputations

Jet Engine Manufacturers on a 1-10 Scale, where “10” = Highest

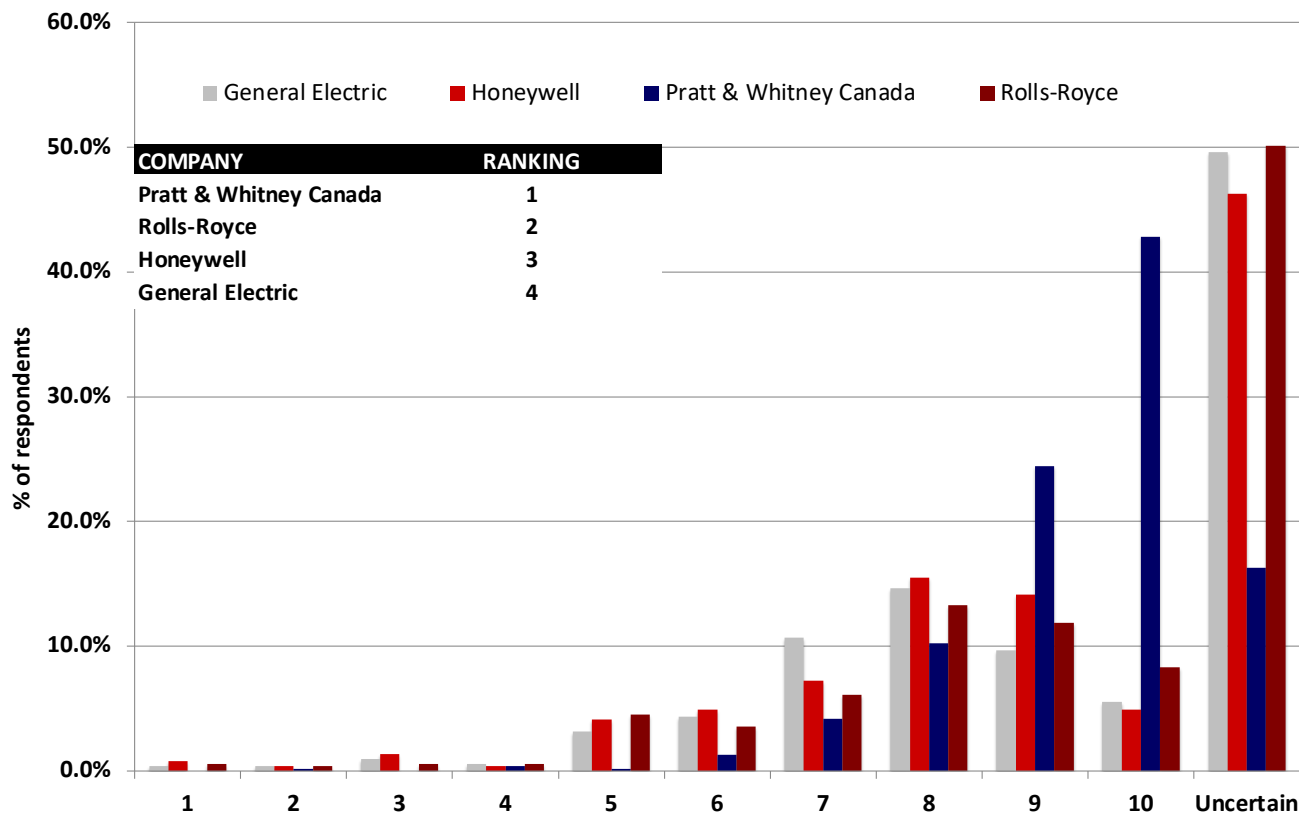


**Pratt & Whitney Canada, Rolls-Royce, and General Electric are the top-rated jet engine manufacturer brands**

# Brand Reputations

Q3 2021 Survey

Turboprop Engine Manufacturers on a 1-10 Scale, where “10” = Highest



**Pratt & Whitney Canada is the highest rated turboprop engine manufacturer brand, well ahead of Rolls-Royce, Honeywell and General Electric**

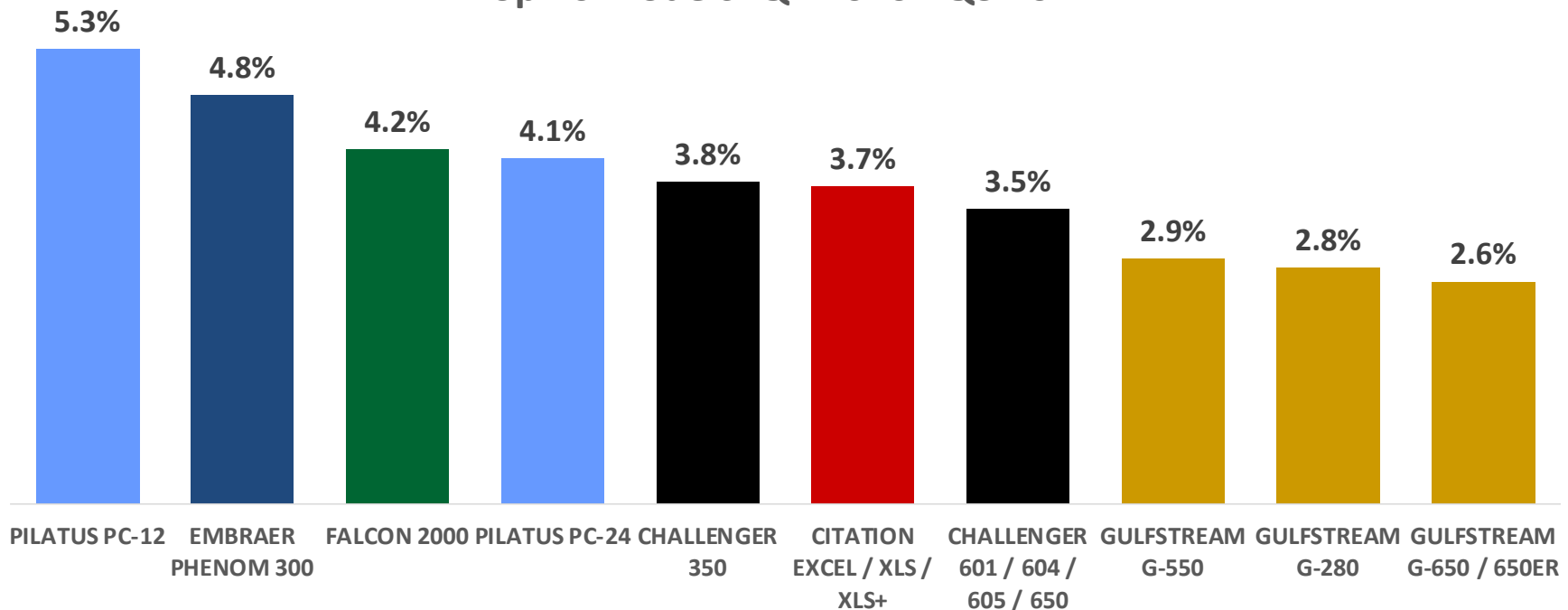
# Aircraft Models for Next Purchase

Which aircraft brand / model are you most interested in for your next business aircraft acquisition?

Q4 2020 – Q3 2021 Surveys

Model most interested in for next purchase - New and Preowned

Top 10 models: Q4 2020 - Q3 2021



The top models of most interest for next purchase (new and preowned) are the Pilatus PC-12, Embraer Phenom 300, Falcon 2000 and Pilatus PC-24

## Aircraft Owner / Operator Opinions

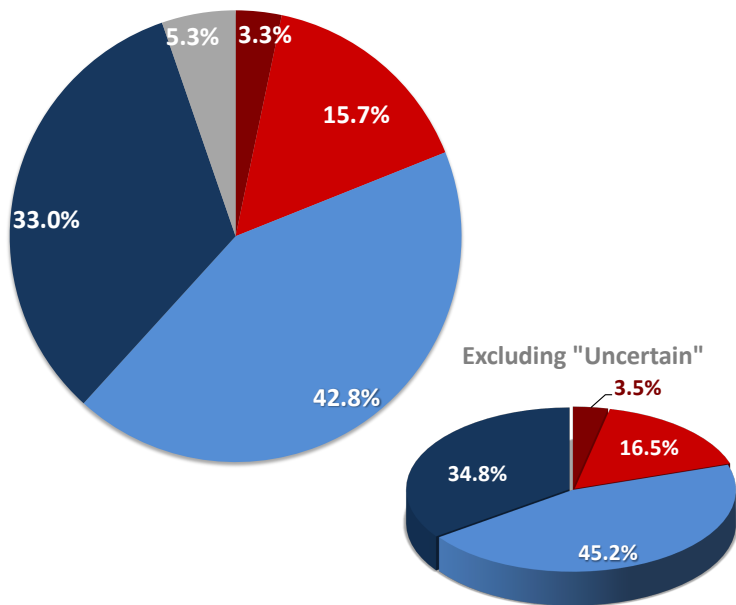
Q3 2021 Survey

Please evaluate these statements and indicate the extent to which you agree or disagree:

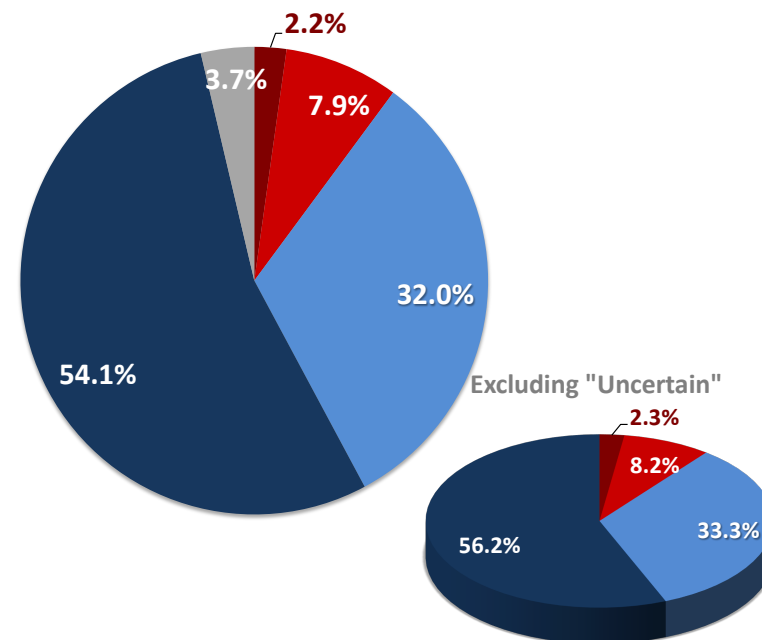
■ Strongly Disagree    
 ■ Somewhat Disagree    
 ■ Somewhat Agree    
 ■ Strongly Agree    
 ■ Uncertain

*I believe that scheduled airline routes and frequencies will return to pre-COVID levels in the **next 2 years** in the regions where I fly most often*

*I believe that scheduled airline routes and frequencies will return to pre-COVID levels in the **next 5 years** in the regions where I fly most often*



80.0% Somewhat / Strongly Agree



89.5% Somewhat / Strongly Agree

## Aircraft Owner / Operator Opinions

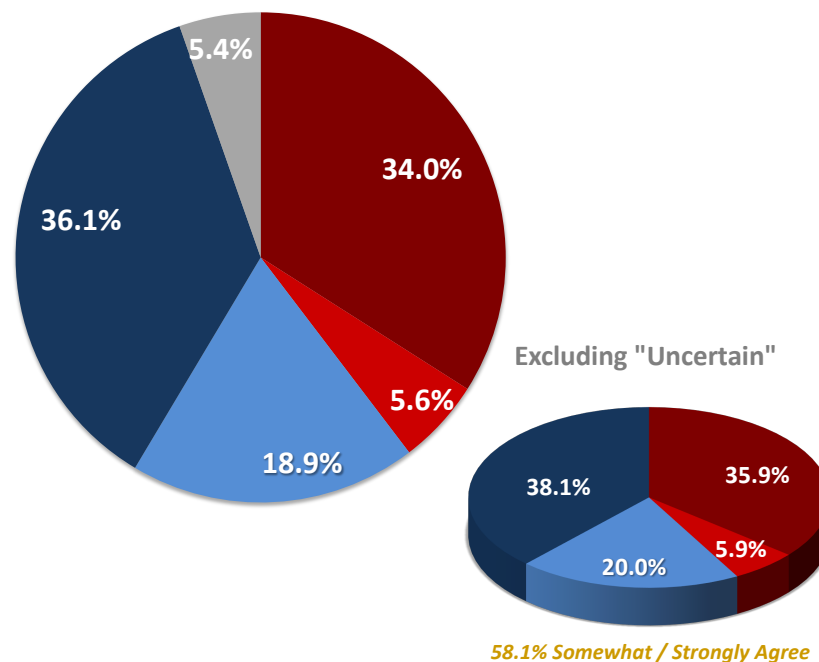
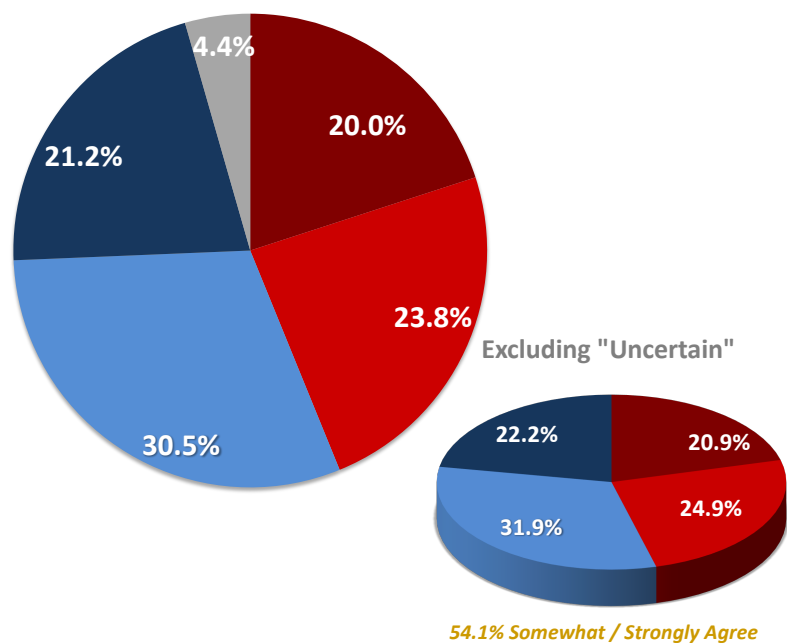
Q3 2021 Survey

Please evaluate these statements and indicate the extent to which you agree or disagree:

■ Strongly Disagree    
 ■ Somewhat Disagree    
 ■ Somewhat Agree    
 ■ Strongly Agree    
 ■ Uncertain

*We have had difficulty scheduling necessary training for our pilots in the last 12 months*

*We have been hiring pilots in 2021*



# Aircraft Owner / Operator Opinions

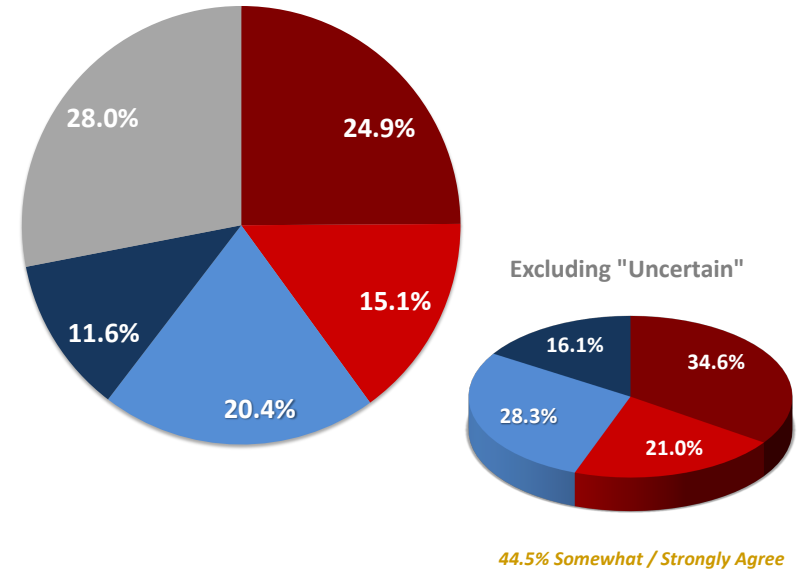
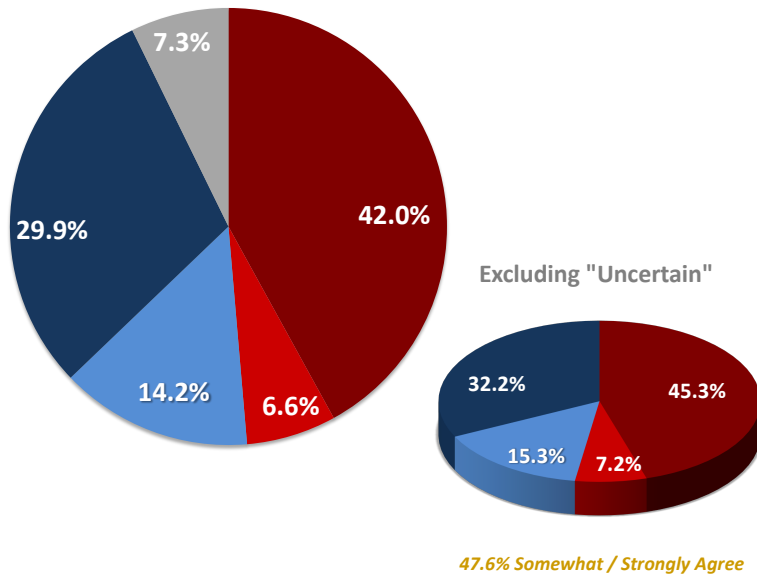
Q3 2021 Survey

Please evaluate these statements and indicate the extent to which you agree or disagree:



*We have been hiring A&P mechanics in 2021*

*I/we will seriously consider flying with sustainable aviation fuel (SAF) in the next 24 months*



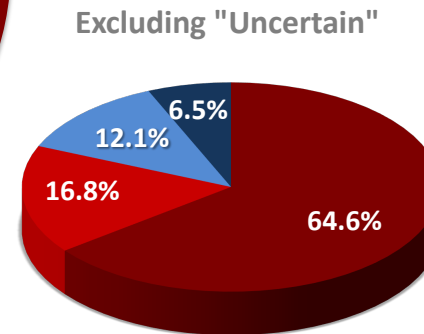
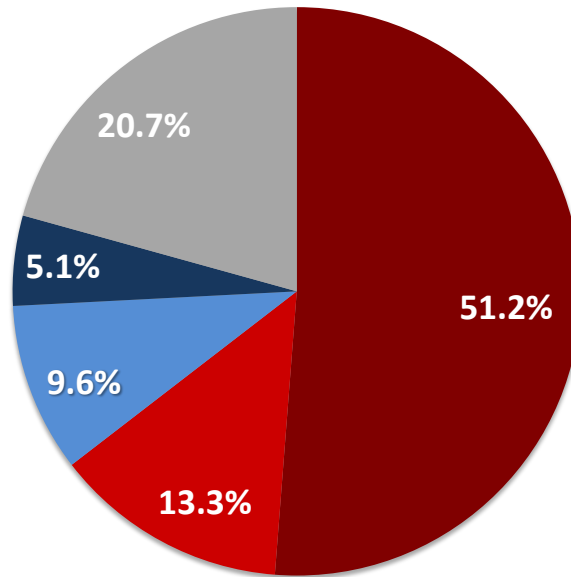
# Aircraft Owner / Operator Opinions

Q3 2021 Survey

Please evaluate these statements and indicate the extent to which you agree or disagree:



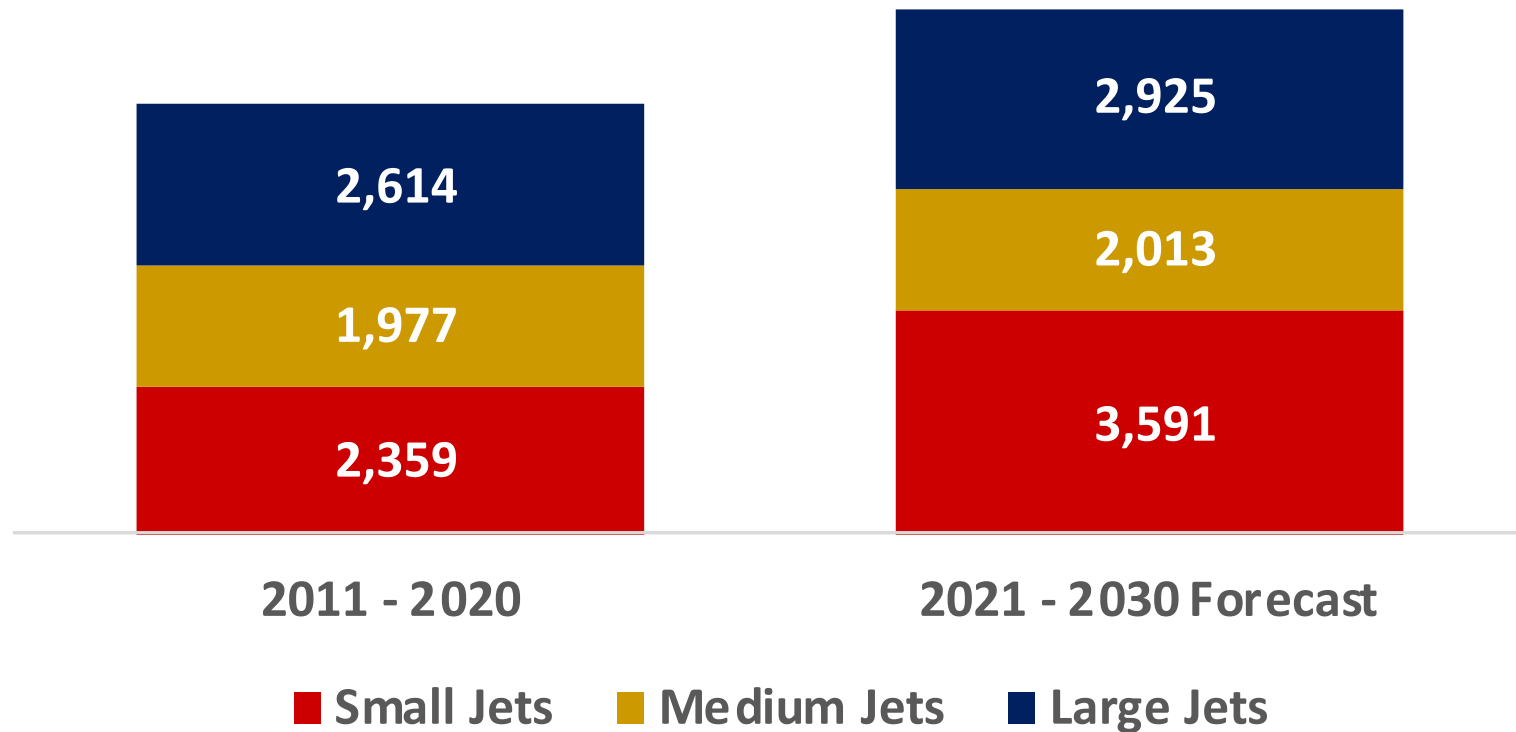
*I believe that eVTOL aircraft will be part of our fleet in the next 5-10 years*



**18.6% Somewhat / Strongly Agree**

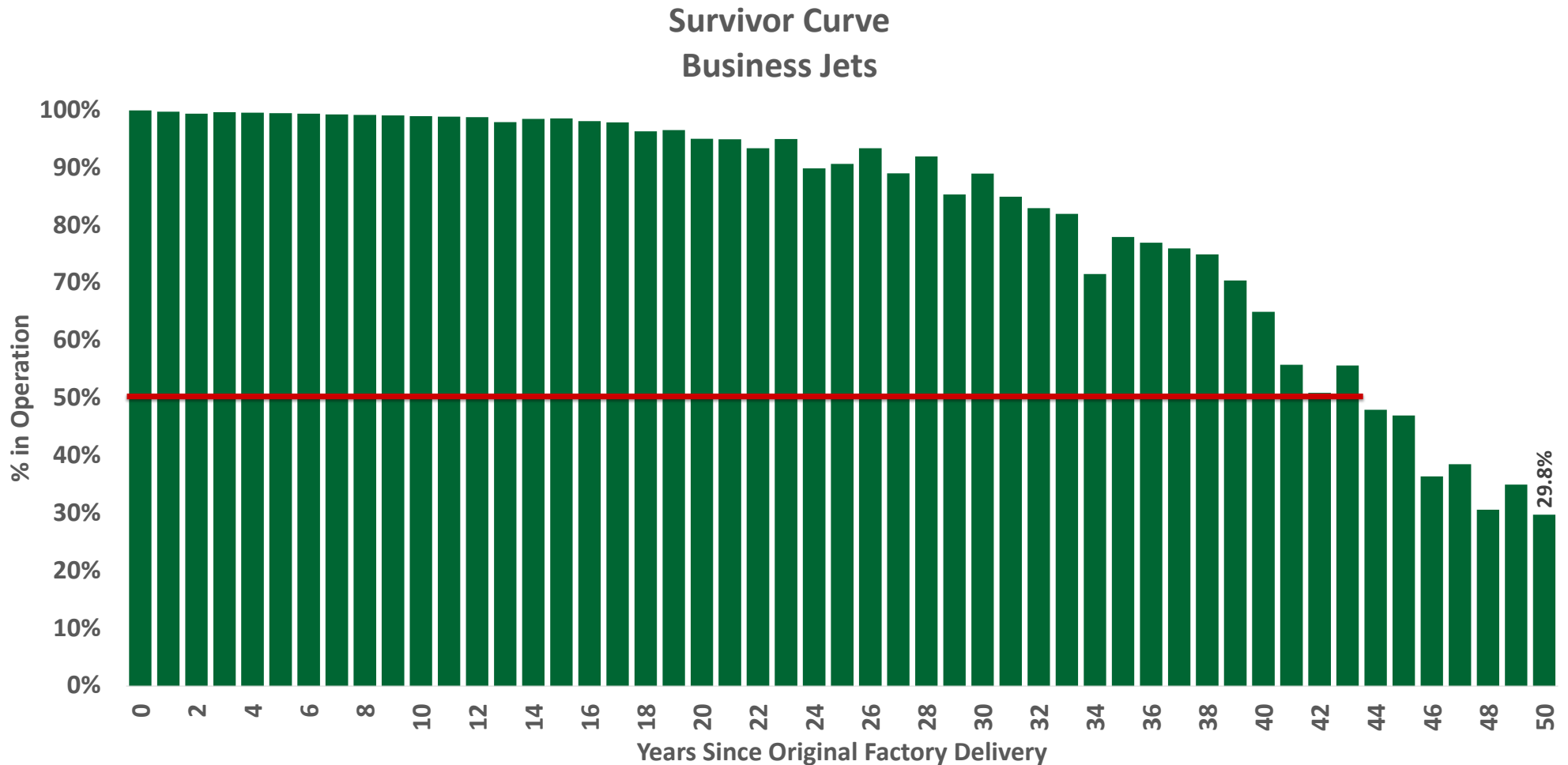
# Business Jet Delivery History & Forecast

Business Jet Deliveries by Size



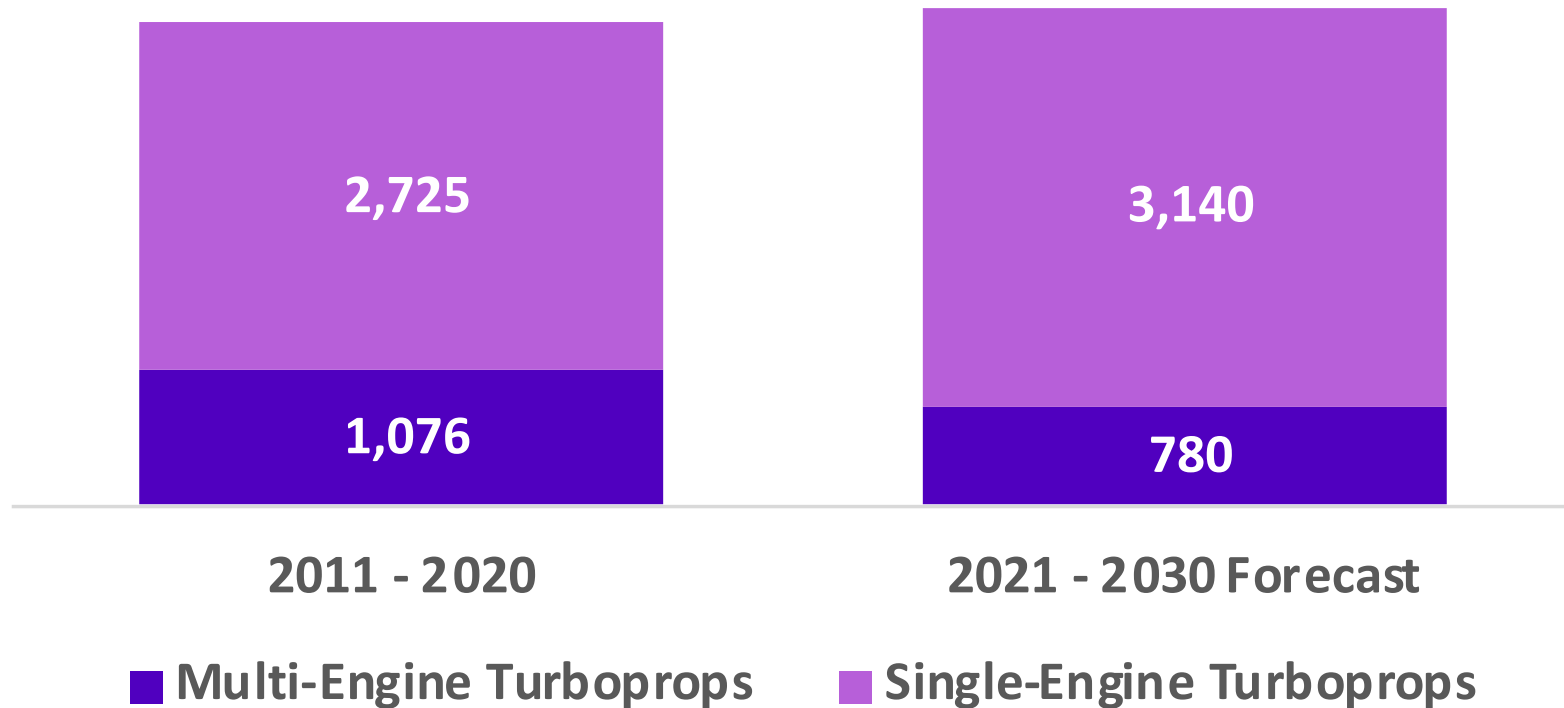
JETNET iQ 10-year forecast for 2021-2030 is for 8,529 new business jet deliveries (including single-engine Personal Jets) valued at \$245 billion (\$U.S. 2021)

# Business Jet Survivor Curve



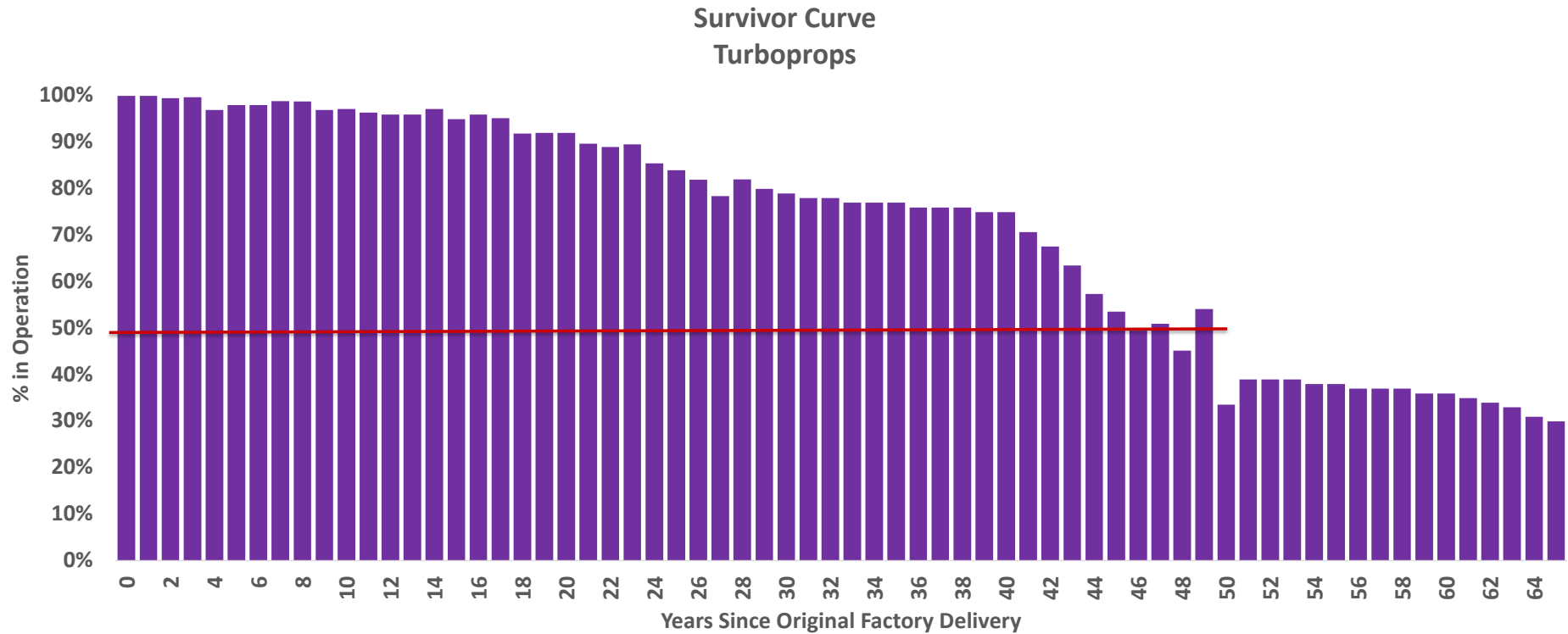
# Turboprop Delivery History & Forecast

Turboprop Deliveries by Size



**JETNET iQ 10-year forecast for 2021-2030 is for 3,920 new turboprop deliveries valued at \$19 billion (\$U.S. 2021)**

# Turboprop Survivor Curve



## About JETNET iQ

Launched in January 2011, JETNET iQ is a forecasting and premium advisory service for the business aviation market, designed to help customers “Know More”. Available on an annual subscription basis, JETNET iQ has 3 main elements:

- 1) JETNET iQ REPORTS are the definitive analytical reference for the business aviation industry, incorporating state-of-the-industry analyses, proprietary aircraft owner/operator surveys, and detailed 10-year delivery and fleet forecasts, updated quarterly.
- 2) JETNET iQ SUMMITS provide fast-paced thought-provoking insights into the state of the industry, and unique networking opportunities.
- 3) JETNET iQ ADVISORY serves the needs of clients with customized research and analysis requirements on a project-by-project basis.

For more information on JETNET iQ, please log on to [www.jetnetiq.com](http://www.jetnetiq.com) or contact Rolland Vincent, JETNET iQ Creator / Director at 1-972-439-2069 or [rollie@jetnet.com](mailto:rollie@jetnet.com).

## About JETNET

Since 1988, JETNET has delivered the most comprehensive and reliable business aircraft research to its exclusive clientele of aviation professionals worldwide. JETNET is the ultimate source for information and intelligence on the worldwide business, commercial, and helicopter aircraft fleet and marketplace, comprised of more than 110,000 airframes. Headquartered in its state-of-the-art facility in Utica, NY, JETNET offers comprehensive user-friendly aircraft data via real-time internet access or regular updates.

For more information on JETNET LLC, please log on to [jetnet.com](http://jetnet.com) or contact Paul Cardarelli, JETNET Vice President of Sales, at 800-553-8638 (USA) or [paul@jetnet.com](mailto:paul@jetnet.com); for International inquiries, please contact Karim Derbala, JETNET Managing Director of Global Sales, at 41.0.43.243.7056 or [karim@jetnet.com](mailto:karim@jetnet.com).