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# New models underpin 2018 aircraft deliveries

The bizjet delivery figures for 2018 point to just one overwhelming conclusion – it is new aircraft models that are keeping the figures in positive territory. The most-delivered aircraft in 2018 was the Cirrus SF50 Vision – a total of 63 of the very light single were handed over to customers, closely followed by the Challenger 350 with 60 deliveries and the Citation Latitude with 57.

The year saw a total of 703 aircraft delivered – an increase from 677 in 2017. By comparison, the most-delivered jet in 2017 was the Challenger 350 with 56, followed by the Embraer Phenom 300 with 54 – the latter model having held the top spot for the previous five years.

It is likely that the momentum for 2019 deliveries will be sustained by further new models being delivered to customers. OEMs currently have a swarm of new designs coming to market. Following FAA certification in November, Bombardier delivered a single Global 7500 in 2018, a figure set to rise to rise to up to 20 in 2019. Similarly, Gulfstream will continue to see growing number of G500 deliveries, along with the start of G600 units from mid-year.

The year is also expected to see the first examples of the Citation Longitude, which will supplement the increasing numbers of Latitudes in service. The innovative niche Pilatus PC-24 will continue deliveries in ever-greater numbers, particularly among fractional operators in the US. Finally, it is expected that the Cirrus SF50 Vision will continue to vie for the top spot in 2019 as production rates increase.

Analysis of the 2018 figures by Alud Davies of Corporate Jet Investor suggests that without the Cirrus SF50 Vision and PC-24, overall deliveries would have declined by some 5% YOY.

Some manufacturers have faced complications – Gulfstream's well-publicised engine nacelle issues that delayed deliveries of the G500, for example. The impact of the partial US government shut down is also difficult to quantify but there is certainly evidence that it has caused delays to the certification process for the G600. As a caveat, Gulfstream and Dassault do not separate their deliveries by type, but the overall perspective is clear.

### Used bizjet inventory to grow

The number of used corporate jets available for sale looks set to rise after a ten-year period of inventory retraction. In a report produced by Brian Foley Associates, which specialises in strategic research and guidance for aerospace companies, it is suggested that the used inventory will increase from 9% to 12% of the bizjet fleet.

According to the report, economic uncertainty in the US is one of the major reasons for the impending increase. Another is the looming 1 January 2020 deadline for ADS-B out equipment, which Foley believes will force many owners to put aircraft up for sale rather than invest in the necessary modifications. The third and more speculative conclusion is the notion of historical trends influencing the extent of used inventory; the market is cyclical and a correction to contracting inventory usually takes place after six or seven years. The current squeeze has lasted three years in excess of this in what is essentially a cyclical market.

#### Dassault expands MRO network further

Hot on the heels its acquisition of the MRO (maintenance, repair and overhaul) facilities of Luxaviation's ExecuJet subsidiary, Dassault Aviation has further expanded its sector presence by buying the maintenance operations of TAG Aviation Europe. The deal includes TAG's principal facility in Geneva, along with maintenance centres at Farnborough, Sion, Paris Le Bourget and Lisbon. Dassault's chairman and CEO Eric Trappier said: "The acquisition of TAG Aviation, a major MRO provider, will allow Dassault Aviation to reinforce its European service centre network."

#### Bombardier looks back and forward

Canadian manufacturer Bombardier confirmed its performance for 2018 in a recent investor call and looked forward to the year ahead. The flagship Global 7500 received FAA certification in November 2018 and the company expects to deliver between 150 and 155 business jets in 2019 as production moves into gear. In 2018 Bombardier delivered a total of 137 business jets – down from 138 in 2017. The breakdown for 2018 comprised one Global 7500, 41 Global 5000/6000, 23 Challenger 650, 60 Challenger 350 and 12 Learjet 70/75. Revenues at Bombardier Business Aircraft climbed \$61 million last year to \$4.994 billion, while profits rose by \$36 million to \$430 million.

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# AIRBORNE

### Business aviation utilisation increases

Worldwide business aircraft utilisation increased by 4.7% in 2018, according to the Business Aviation Index published by Jet Support Services Inc. (JSSI). The figure rose by 4.9% overall in Q4. Flights operated under FAA Part 91 (i.e. small non-commercial) rules fell by 1.5% in Q4 while commercial operations under Part 135 surged by 9.5%. The JSSI report described 2018 as "one of the strongest years in a decade." In terms of methodology, JSSI monitored 2,000 corporate jets, turboprops and helicopters for average monthly flight hours by industry, region and cabin type. On a regional basis, African utilisation rose by 17.4%, European by 8.8% and North American by 2.8%.

### Dassault reports, forecasts and plans

French manufacturer Dassault Aviation reviewed its performance in 2018 in a recent media briefing, as well as setting out its expectations for the coming year and its perceptions as to the current state of the business jet market.

Dassault delivered 41 Falcons in 2018 and expects to hand over a further 45 in 2019. The company took a total of 42 net orders compared to 38 in 2017. Total revenue generated in 2018 was €5.08 billion in 2018 against €4.876 billion in 2017, while operating profit surged to €669 million against €357 million in 2017, an increase of 87.4%.

Chairman and CEO Eric Trappier noted a slight recovery in the global market saying: "It is not a boom in this market because the world economy is uncertain, but the US, Europe and Russia remain quite dynamic. And Asia too, except China."

### Avionics sales at record levels

Worldwide avionics sales for business and general aviation reached a record \$2.7 billion in 2018, according to the Avionics Market Report published by the Aircraft Electronics Association. This figure represents a 17% increase over the previous year. Included in this tally is a total of \$1.5 billion in retrofit sales – largely explained by the looming deadline for ADS-B Out, which comes into effect on 1 January 2020. Some 78% of the sales were made in North America, an increase from 74% in 2017.

### Corporate aircraft news

Bombardier's new flagship Global 7500, which received EASA certification in February, undertook what the Canadian manufacturer described as "the world's longest mission flown by a purpose-built business jet". On 4 March the aircraft – registered C-FXAI – departed Singapore at 07.12lt and landed in Tucson, Arizona, at 08.19 after a flight of 8,152nm (15,098km). As well as setting a new speed record for the destination pair, the aircraft also landed with sufficient fuel for a further 90 minutes of flight.

Bombardier Business Aircraft president David Coleal said: "The Global 7500 was built to break all the records. It achieved the industry's longest mission ever in business aviation after only two months in service. We've demonstrated its unequalled long-range and high-speed capabilities, but also its ability to break records confidently with healthy fuel reserves remaining, once again, confirming its unsurpassed performance to customers."

Gulfstream's flagship G650ER is also in record-breaking mode. It set another city-pair speed record covering the 7,475nm (13,844km) distance between Singapore and San Francisco in 13 hours and 37 minutes at an average speed of Mach 0.87 (1,066kmh).

French manufacturer Daher has unveiled an improved version of its TBM 930 turboprop single. The TBM 940 offers an automatic de-icing system, cabin enhancements and an integrated auto-throttle. Daher expects the TBM 940 to receive EASA and FAA certification next month.

Following the surprise announcement last month that Boeing is to partner Aerion Corp. in the development of the AS2 supersonic business jet (SSBJ), Aerion has now confirmed that Spirit AeroSystems will collaborate on the forward pressurised fuselage of the AS2. Spirit, based in Wichita, currently manufactures the forward fuselage of all current Boeing commercial airliners including the 737 and 787 Dreamliner. The AS2 is due to make its first flight in 2023.



#### AIRCRAFT FACT FILE \\

Gulfstream GIV-SP



#### **CATEGORY**

Large size jet

#### **MANUFACTURER**

Gulfstream Aerospace, USA

#### **ENGINE**

2 x Rolls-Royce Tay 611-8 turbofans

LENGIH	WINGSPAN
26.92 m	23.72 m
RANGE	MAX. SPEED
7,815 km	935 kmh

**SEATING CAPACITY** 

NO. OF CREW

MAXIMUM TAKE-OFF WEIGHT (MTOW)

33,838 kg

#### DESCRIPTION

Development of the Gulfstream IV, a wholesale redesign of the popular GIII, began in 1983. The GIV featured a stretched fuselage, a redesigned wing, greater fuel capacity, increased range and new engines. It was also the first business jet to offer a fully glass cockpit. The new aerodynamic wing offered considerable reductions in cruise drag and an increase in range over the earlier model. The GIV was equipped with new Rolls-Royce Tay engines, replacing the less efficient Spey powerplant featured on the earlier models.

The GIV made its first flight on 19 September 1985 and received FAA certification on 22 April 1987. Gulfstream further enhanced the GIV in 1992 with the GIV-SP (Special Performance), which offered higher payload, payload-range performance and higher landing weights. The manufacturer began working on another development of the GIV-SP, which saw the aircraft renamed as the G450 while the GIV was rebranded as the G400. Production of the G450 ceased in 2018.