

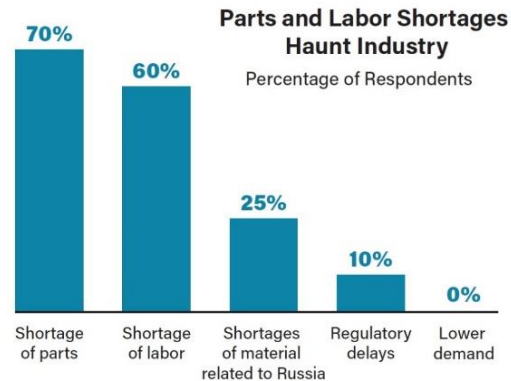
Brèves de l'industrie aérospatiale – 7 novembre 2022

Comac C919 Orderbook

Operator	Order	Option
ABC Financial Leasing Co. Ltd.	65	10
Aercap	20	—
Air China	5	15
Avic International Leasing	15	15
Bank of Communications Financial Leasing	30	—
BOC Aviation Ltd.	20	—
CCB Financial Leasing Corp.	50	—
CDB Leasing Co. Ltd.	10	—
China Aircraft Leasing Co.	20	—
China Eastern Airlines	5	15
China Huarong Financial Leasing	30	—
China Southern Airlines	5	15
Citic Financial Leasing	18	—
Hainan Airlines	20	—
Hebei Airlines	20	—
Huabao Leasing	15	15
ICBC Financial Leasing	100	—
Industrial Bank Co. Ltd.	20	—
Joy Air	20	—
Nuclear Construction Financial Leasing	20	20
Ping An Leasing	50	—
Sichuan Airlines	20	—
SPDB Financial Leasing Co. Ltd.	5	15
TOTAL	583	120

Sources: Aviation Week Network Fleet Discovery and Mellus Research

Sondage Jeffries



Industrie Aérospatiale

Airbus / China Aviation Supplies Holding (4 novembre)

China Aviation Supplies Holding has announced orders worth \$17B for 140 Airbus aircraft. They are all of these are pre-existing order, specifically 132 A320 family aircraft and 8 A350s.

GE Aerospace / Tata Advanced Systems Ltd (4 novembre)

GE Aerospace and Tata Advanced Systems Ltd have signed a multi-year long term contract valued at over \$1 billion and which will extend well beyond 2030. It covers the production of several commercial aircraft engine components for GE's global engine factories.

Airbus- A321XLR (3 novembre)

Airbus a reporté la mise en service de l'A321XLR au 2ème trimestre 2024 au lieu de début 2024 dû à la certification d'un nouveau réservoir de carburant. L'A321XLR, a reçu plus de 500 commandes par plus de 20 clients, parmi lesquels Air Canada, American Airlines, United Airlines, Qantas, LATAM et Wizz Air.

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Leonardo (3 novembre)

Leonardo reported an increase in orders during January-September. They rose by 26.8% year-on-year to 11.719 billion euros (\$11.42 billion), with a backlog equal to 2.5 years of production.

Spirit AeroSystems (3 novembre)

Spirit AeroSystems is to initiate a cost reduction program as production rates of the Boeing 737/MAX remain around 31 per month. Boeing Chief Financial Officer Brian West has said that the rate might not increase to the low forties before the end of 2023.

Parker Aerospace Systems -Fiscal 2023 First Quarter Results (3 novembre)

First quarter sales by Parker's Aerospace Systems Segment increased 26% to \$746.0 million compared with the same period in the prior year and operating income was \$92.2 million compared with \$118.3 million. Orders increased 5% on a rolling 12-month average basis.

De Havilland Canada DHC-515 (2 novembre)

La France va investir 250 M€ pour l'acquisition de 16 DHC-515 (version modifiée du Bombardier (Canadair) CL-415) d'ici 2027. Les moyens aériens de la Sécurité Civile comprennent aujourd'hui 12 CL-415 et 7 Dash-8 Q400.

Boeing (2 novembre)

Boeing delivered 27 B737s in October (37 in September) and forecasts delivery of about 375 in 2022. Boeing expects to deliver between 400 and 450 next year, along with 70 to 80 B787 Dreamliners and plans to produce 50 B737s per month by mid-decade. Around 25% of the 2022 B737 deliveries are believed to be stored aircraft.

Tekna (1 novembre)

Canada-based Tekna has won an order worth more than CAD\$9 million (US\$ 6.6 million) to supply a PlasmaSonic wind tunnel facility to a leading aerospace OEM for use in hypersonic flight research. Delivery is scheduled for 2024.

Airbus Helicopter (28 octobre)

During the first nine months, Airbus Helicopters's revenues increased year-over-year by nine percent, to \$4.51 billion, up from \$4.13 billion in the same period last year. Helicopter orders in the first nine months increased 33 percent from the year-ago period to 246 units, while the order backlog increased by 21 percent to 792 aircraft.

Aviation Commerciale

WestJet (3 novembre)

WestJet has announced a three-month commitment to operating all of its flights from San Francisco International Airport to Calgary International Airport with SAF produced by Neste, the world's leading producer of renewable fuels.

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Emirates (3 novembre)

Emirates has begun a two-year aircraft retrofit programme and is investing around US\$2 billion. This includes premium economy class cabins in 120 aircraft and the latest interiors in all cabins.

Porter Aviation / Ottawa (1 novembre)

Porter Aviation and the Ottawa International Airport Authority are investing over \$65 million in Ottawa airport. This includes the construction of two new hangars and related infrastructure to maintain Porter's growing fleet of new Embraer E195-E2s and the existing De Havilland Dash 8-400 fleet. Ottawa will be a primary maintenance base for the E195-E2.

Aeroitalia (1 novembre)

Privately-owned Italian airline Aeroitalia is leasing three Boeing 737-800 aircraft from Air Lease Corporation to be delivered in 2023 and 2024.

Aviation d'affaires

Bombardier Q3 report (3 novembre)

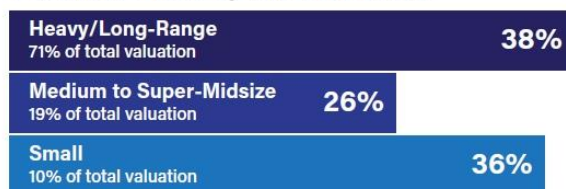
In the third-quarter, Bombardier revenues rose slightly to \$1.46 billion from a year earlier, helped by a 20% year-over-year increase in aftermarket revenues, which rose to \$372 million. Bombardier's order backlog grew 23% by \$300 million to \$15 billion, and it has maintained a book-to-bill ratio of 1.3:1. Bombardier said its plan for expansion will continue as previously disclosed, with a 15 to 20 per cent production increase next year.

NetJets (2 novembre)

NetJets is on track to have nearly 1,000 business jets in its fleet by the end of next year. It will receive another 25 to 30 new aircraft by end of 2022, bringing the total fleet additions this year to about 75 aircraft. Next year, it expects to add more than 100 new aircraft. At these rates, NetJets accounts for approximately 12 percent of the industry's business jet production.

Honeywell (Rappel)

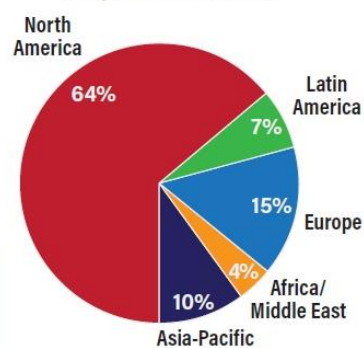
Purchase Plans by Aircraft Class



Aircraft Deliveries



Regional Outlook



Source: Honeywell

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Bombardier (31 octobre)

Bombardier has opened its service center at the Miami-Opa Locka Executive Airport comprising two hangars with capacity for up to 18 Global 7500 and capabilities for interior refurbishment, heavy maintenance, aircraft modifications and avionics installations.

Défense

Korea Aerospace Industries (KAI) (3 novembre)

KAI has received a 438-billion-won (\$US 308 million) contract from the South Korea's Defense Acquisition Program Administration to develop amphibious attack helicopters for the Republic of Korea Marine Corps. KAI will develop three prototypes in 46 months. The helicopter will be a derivative of the KUH-1 Surion which KAI co-developed with Eurocopter (Airbus Helicopters).

Italian Ministry of Defense / KC-46 tankers (3 novembre)

The Italian Ministry of Defense will acquire six new KC-46 in-flight refuelling aircraft to replace its current four KC-767As to boost the multi-role transport capabilities of the Italian Air Force.

UK Ministry of Defence (2 novembre)

The UK Ministry of Defence has selected four manufacturers Airbus, Boeing, Leonardo and Lockheed Martin to participate in the next phase of its £1 billion (\$1.15 billion) New Medium Helicopter (NMH) acquisition. The program currently specifies a requirement for up to 44 helicopters to replace the RAF's Puma HC.2 fleet and some smaller helicopters.

Bell / Royal Jordanian Air Force (1 novembre)

The Royal Jordanian Air Force will purchase 10 Bell 505s to train new pilots at its King Hussein Air College in Mafraq, Jordan.

MRO

Keystone Turbine Services (KTS) (2 novembre)

KTS, a unit of Atlanta-based Precision Aviation Group (PAG), has successfully calibrated and certified both of its all-digital engine test cells to support the Rolls-Royce RR300 series of gas turbine engines. The development builds on Pennsylvania-based KTS's OEM-approved aftermarket MRO services for the Rolls-Royce M250 and RR300 engines.

Proficient Market Insights Report – Aerospace MRO Market (1 novembre)

Due to the COVID-19 pandemic and the impact of the Russia-Ukraine war, the global market for Aerospace MRO, estimated to be US\$ 33,700 million in 2022, is projected to reach a value of US\$ 46,700 million by 2028, growing at a CAGR of 5.6% during the forecast period.

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Drones – Advanced Air Mobility

Plana / Electric Power Systems (EP Systems) (3 novembre)

Plana and EP Systems have signed a LOI to deploy EPS's battery system for Plana's commercial hybrid eVTOL aircraft, which is targeted for service entry in 2028.

VoltAero (2 novembre)

VoltAero has completed a €32 million (\$32 million) funding round to support its plans to develop its Cassio family of hybrid-electric aircraft. The round was led by strategic investor Technologie e Servizi Innovativi (TESI), which will manufacture the prototype for the five-seat Cassio 330, which is expected to make its first flight in 2023.

Landing Zones Canada / Shearwater Aerospace / Lockheed Martin (2 novembre)

Landing Zones Canada, Shearwater Aerospace, and Lockheed Martin Canada CDL Systems have initiated a strategic collaboration to enhance the route planning and flight endurance of remotely piloted aircraft systems (RPAS). The collaboration combines Landing Zones Canada's novel uncrewed aerial vehicle, Shearwater's Smart Flight™ AI technology, and Lockheed Martin Canada CDL Systems' next generation VCSi ground control station software.

Pipistrel Aircraft / University of Waterloo (2 novembre)

Pipistrel Aircraft, a division of Textron Aviation, has delivered an all-electric two-seat high-wing Velis Electro aircraft to the Waterloo Institute for Sustainable Aeronautics (WISA) at the University of Waterloo, Canada. The institute's partner, Waterloo Wellington Flight Centre (WWFC), will use the aircraft for research and in "a collaborative capacity to evaluate battery powered electric flight in Canada,".

Archer / Mecaer Aviation Group (2 novembre)

Archer and Mecaer Aviation Group have entered into an agreement for the design, development, qualification and supply of landing gear for Archer's eVTOL Midnight Aircraft.

Eviation Aircraft (2 novembre)

Eviation Aircraft 's order book for its nine-seater all-electric Alice airplane now exceeds US\$ 2 billion. Customers for the Alice include U.S. regional airlines Cape Air and Global Crossing, and German airline EVIA AERO.

EHang Holdings / HAECO Group (31 octobre)

Ehang Holdings has signed a MoU with HAECO Group to cooperate in multiple areas such as manufacturing and assembly, continued airworthiness, digital platforms, aircraft maintenance and talent training. This is in preparation for commercial operations of the EH216-S, Ehang's passenger-carrying autonomous aerial vehicle.

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Ampaire / Monte Aircraft Leasing Limited (25 octobre)

Monte Aircraft Leasing Limited has placed a firm order for 25 Ampaire Eco Caravans. The Eco-Caravan is a hybrid-electric upgrade of the Cessna Grand Caravan. It has also placed purchase options for an additional 25 aircraft.

Spatial

Virgin Galactic (2 novembre)

Virgin Galactic has reached agreement with Bell and Qarbon Aerospace to manufacture key subassemblies for its new Delta class spacecraft. Production is planned to begin in 2023.

Lockheed Martin / Terran Orbital (31 octobre)

Lockheed Martin is increasing its investment in small satellite manufacturer Terran Orbital with an additional \$US 100 million investment that increases its total equity from 9.4% to 33.5%. Lockheed Martin has selected Terran Orbital to produce 42 satellites for the U.S. Space Force's Space Development Agency under a \$700 million contract.

Innovation

Dassault / Michelin AirCaptif (4 novembre)

Michelin AirCaptif a réalisé une cage de Faraday gonflable, sur-mesure, pour permettre à Dassault de réaliser les essais électromagnétiques de la certification du Falcon 6X. Cette structure de 8 m de haut et 900 m², inspirée des ailes de kitesurf, dont la structure gonflable a été conservée, mais avec un tissu métallique entre les structures, a été brevetée conjointement par Michelin AirCaptif et Dassault Aviation.

Agence spatiale européenne (ESA) / Airbus (2 novembre)

L'ESA mène avec Airbus le projet Solaris qui vise à capter l'énergie solaire dans l'Espace via des panneaux photovoltaïques, à l'envoyer sur Terre sous forme de micro-ondes et à la transformer en électricité. Le projet prévoit un démonstrateur aérien dans 3 ans et un autre dans l'Espace dans 5 ans, puis une première ferme solaire spatiale dans 10 ans et une installation de puissance équivalente à une centrale nucléaire en 2040.

Centre de développement des composites du Québec (CDCQ) (1 novembre)

Le projet industriel réalisé par le CDCQ, en collaboration avec Texonic et IND Group (Robox et Effman), a remporté le prix de meilleure innovation canadienne à la Conférence internationale des textiles intelligents et la personnalisation de masse qui se tenait à Montréal. Ce projet, financé par TechniTextile Québec, permet d'optimiser la fabrication des pièces en composites en positionnant de façon précise les fibres de renforts de manière à augmenter significativement la performance (rigidité) de la pièce et avec un taux de rejet de 1%.
