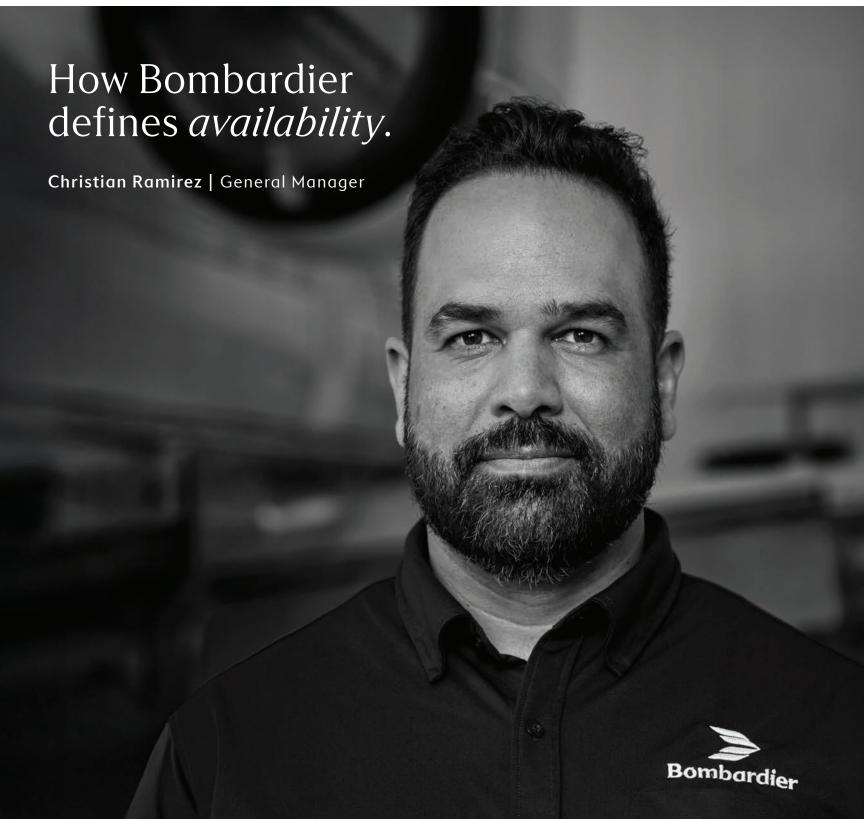


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DUBAI AIR TAXI RACE HEATS UP

By Charles Alcock

Rival eVTOL aircraft developers Joby and Archer are racing to establish their plans for air taxi services in the UAE. The U.S. companies are both getting support from local regulators to establish early use cases in Dubai and Abu Dhabi while they are still working on FAA type certification for their respective four-passenger vehicles.

One of Joby's test aircraft is flying at the Dubai Airshow this week, while Archer is exhibiting a mockup. On November 9, Joby conducted what it said was the first point-to-point eVTOL flight in the UAE when it landed its aircraft at Al Maktoum International Airport after a 17-minute flight from its test base at Margham.

On Monday, Dubai's Road and Transport Authority

and Joby's partner Skyports Infrastructure announced the three sites for the vertiports that will form the initial air taxi network. In addition to Dubai International Airport, the locations are the Dubai Mall shopping and entertainment center, the "Atlantis the Royal" resort in Palm Jumeirah, and the American University of Dubai, which is close to the Dubai Marina and Internet City.

In a media briefing on Friday, Didier Papadopoulos, Joby's president of aircraft OEM, explained that the company's work with the UAE's General Civil Aviation Authority (GCAA) is a "qualification program" that it is conducting while it seeks its FAA type certificate. "We are not necessarily getting a type certificate [in the UAE] before [this is complete with] the FAA," he said. "Our intent is to get approval for specific operations in Dubai."

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GAME ON

Desert upset recovery

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Dassault Aviation has confirmed the news that Ukraine signed a declaration of intent to acquire Rafale fighters. Ukraine president Volodymyr Zelenskyy said it includes 100 Rafales and called the signing "a significant moment, truly historic for both our nations"

Emirates commits to 65 more Boeing 777Xs

By David Donald

Emirates announced yesterday that it has ordered 65 more Boeing 777X airliners, adding to the 205 it previously signed up for. Worth \$38 billion at list prices, the deal currently covers the 777-9 variant but includes options to convert orders into the shorter 777-8 or lengthened 777-10.

As well as being good news for Boeing, which has faced delays with the 777X, the Emirates deal is also welcomed by GE Aerospace, which supplies the GE9X engines. The additional order takes GE's Emirates orders for the powerplant to 540.

"Emirates is already the world's largest Boeing 777 operator, and we are expanding our commitment to the program today," said HH Sheikh Ahmed bin Saeed Al Maktoum, who serves as chairman and CEO of the Emirates Group. "This is a long-term commitment to our partnership with Boeing and to U.S. aerospace. Each of our aircraft on order has been carefully factored into Emirates' expansion plan, which is aligned to Dubai's growth plans."

The airline is keen for aircraft with increased capacity. To that end, it has backed Boeing's feasibility study for the development of a larger 777-10 variant, the companies revealed in Monday's order announcement. With the addition of another four rows of seats, the Dash 10 could accommodate up to 450 passengers, placing it toward the lower end of the A380 capacity bracket and positioning it as a rival to Airbus' proposed A350 stretch.

In other business on the first day of the Dubai Airshow, Ethiopian Airlines agreed to buy 11 Boeing 737-8 narrowbodies to expand routes out of its Addis Ababa hub. The East African carrier already has the continent's largest backlog of 737 Max aircraft, as well as 777X and 787 Dreamliners.

Embraer lands orders from Air Côte d'Ivoire and Helvetic

By Charlotte Bailey

In its first two commercial orders of the show, Embraer yesterday announced agreements with returning customer Helvetic Airways and new client Air Côte d'Ivoire for up to eight E-195-E2s and four E175s, respectively.

Helvetic Airways' firm order for three E-195s is complemented by five additional purchase rights, with the first aircraft scheduled for delivery at the end of 2026. The order will enable the Swiss carrier to grow its Embraer E2 fleet from 12 to up to 20 aircraft, which Helvetic Airways CEO Tobias Pogorevc believes will "enhance [the airline's] ability to serve various European customers through [its] ACMI [wet lease] operations."

Meanwhile, the flag carrier of the Republic of Côte d'Ivoire has also signed a firm order for three E175 jets with eight additional options. The first 76-seat-configured unit is scheduled to be delivered in the first half of 2027 and will gradually replace the airline's aging Dash 8-Q400 turboprop fleet. Arjan Meijer, president and CEO of Embraer's commercial division, described the airframer as being "firmly established as the market leader in the up to 150-seat segment" in Africa, with the E175 a "proven performer on the continent."



Air Côte d'Ivoire signed an agreement for four F175s, its first order for Embraer aircraft

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Russia's Sukhoi Su-57E 'Felon' makes Dubai debut

By David Donald

Having earlier appeared at shows in Zhuhai, China, last November and Bengaluru, India, in February, the Sukhoi Su-57 "Felon" is making its third international appearance at the Dubai Airshow. Starved of many options to showcase the products of its aerospace and defense industries on the global stage, Russia has seized the opportunity in Dubai to display a wide portfolio of systems, with the Su-57 being the most noteworthy.

A fifth-generation fighter with stealth characteristics, the Su-57 achieved its first flights in 2010 and entered service with the Russian Aerospace Forces in December 2020. Production for the Russian Aerospace Forces has been limited, with an announced 76 aircraft to be procured by the end of 2028. The type has seen limited operational evaluation in Syria in 2018 and has reportedly been employed against Ukraine, firing long-range missiles from within Russian airspace. Currently, the operational fleet is likely to number around 20.

On show in Dubai is T-50-9, the ninth development aircraft, which flew directly into the show from Russia. It is being presented in the form of the Su-57E, an export-specific variant. A major co-production program with Indiawhich would have brought much-needed investment to accelerate development—foundered, although India remains a firm target for the Su-57E, along with several non-aligned nations.

For now, it appears that Algeria is the Su-57E's

first customer, as announced by the state's media and supported by repeated Russian claims of a sale to an unnamed country. An initial batch of six aircraft has been mentioned. Deliveries were due to start this year, but there has been no further news concerning this acquisition.

During its display routine, T-50-9 reveals its open forward internal weapons bay, the first time this feature has been demonstrated in public. The bays can accommodate longrange air-to-air and air-to-surface missiles. In Dubai, the aircraft carries two representative Kh-58UShK supersonic anti-radiation missiles. This version of the defense suppression weapon is tailored for internal carriage and has a reported range of approximately 150 miles when fired from long range.

The T-50-9 is also being presented alongside two R-74M2 short-range air-to-air missiles. These are carried internally in "quick-launch" stealthy compartments under each leading-edge root extension. As seen during the Dubai Airshow's flying displays, the missiles and their launch rails extend from the compartment out into the airflow, where their seekers can acquire the target.

While the Su-57 boasts an impressive level of air-to-air capability, it may be intended more for long-range attack missions with standoff missiles. It has also been designed to pair with uncrewed combat air vehicles, notably Sukhoi's stealthy S-70 Okhotnik-B.

Gogo SD signs Eclipse as authorized reseller

Eclipse Global Connectivity is now an authorized reseller for Gogo's SD Government division. Under the reseller agreement, Eclipse will be able to deliver Gogo Galileo low-earth-orbit (LEO) satcom systems to its French and EMEA military and government VIP transport customers.

Gogo Galileo runs on Eutelsat's OneWeb LEO constellation, and three antenna and terminal products are available from Eclipse: the HDX and FDX, with electronically steered antennas and terminals manufactured by Hughes Network Systems, and the FDX-r, using Gilat's ESR2030 antenna and terminal. Eclipse can also sell Gogo's suite of cabin

networking equipment and Galileo Government airtime plans.

For installation of the Galileo system, Eclipse will propose and develop supplemental type certificate upgrades for various crewed and uncrewed aircraft types.

"At a time when the market is moving towards LEO solutions, becoming a Gogo authorized dealer will help us offer even more solutions to our French and EMEA-based clients, equipping them with additional ways to increase their ability to achieve mission success," said Eclipse CEO Marc Pinault. "Our mission is to deliver secure, future-ready solutions that effectively meet our clients' needs." M.T.



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Honda to fly first fullscale eVTOL prototype in **March 2026**



Honda plans to finish building its inaugural full-scale eVTOL prototype by the end of this year and to conduct the first flight in March 2026.

By Charlotte Bailey

Following more than 400 flights of its onethird-scale demonstrator, Honda is planning to fly its first full-scale eVTOL prototype in March 2026, with the build of the inaugural aircraft expected to be completed by the end of this year. The company hopes to have an FAA type certificate in hand by the early 2030s.

Although Honda has been relatively secretive about its upcoming eVTOL since announcing the program in 2021, the company's inaugural presence at the Dubai Airshow is "good timing for us to showcase the progress of our research," said Honda eVTOL vice president and executive chief engineer Susumu Mashio.

Joking that the company has been in so-called "stealth mode" for the last few years, Mashio explained that Honda hasn't felt the need to "proactively announce [its progress] to the public in a very immature state." However, the company "is now confident [its] technology is here."

The technology demonstrator on display at the Dubai Airshow has been conducting a flight test campaign in California, augmenting learnings gleaned from wind tunnel testing. "This vehicle is specifically for the flight control verification," Mashio explained. Flight profiles include forward and hovering elements, although the demonstrator has yet to complete a full transition from hover to cruise. "We're confident we can achieve this transition in [the] full-scale aircraft," he added.

The upcoming test vehicle will be remotely piloted and is set to commence flight testing in the U.S. around March 2026. Notably, the design of both the subscale demonstrator and the fuselage mockup on display has moved away from the more elliptical fuselage profiles of earlier visualizations and now includes a constant cross-section.

"It's still in the design process, and we're discussing which [final shape] is the right one for us," confirmed Mashio. "It's the combination of the design of the cabin, the aerodynamics, and also the other structural components of the vehicle that all have to come together." The supplier list has not yet been finalized, but Honda is "watching the market," he said.

While other competitors in the eVTOL space are increasingly looking toward hybrid powertrains for their own aircraft, Honda is a notable exception; its eVTOL was intended to be hybrid-electric from the outset. "We are an automobile company; we know the battery technologies," said Mashio. "When we decided to start this project, we knew that battery technology might not be there as much as we had hoped."

A hybrid-electric powertrain presents additional FAA certification challenges; no such aircraft has been certified so far. However, Honda is able to leverage its heritage of the HondaJet to inform lessons of critical redundancy, safety, and certification challenges from early on in its eVTOL research phase. Ultimately, the company appears not to be rushing to be among the first to commercialize its product, although conversations are ongoing with potential operators.

Fokker offers GPS jamming/spoofing protection

Fokker Services Group has rolled out a new solution for protecting civil aircraft from the growing threat of GPS jamming and spoofing. Introducing the technology at the Dubai Airshow this week, the Dutch company said it actively counters these threats rather than simply detecting them.

According to Fokker, the unspecified active countermeasures provide a "full-spectrum" defense that maintains uninterrupted navigation and enhanced situational awareness for pilots. The company said the modification kits can be integrated with existing avionics suites, and it does not require additional pilot training.

GPS jamming and signal spoofing events have become a more common threat to civilian aircraft, especially in the Middle East and along Europe's border with Russia. Multiple flight crews have experienced disruptions to their navigation and communications capabilities.

The electronic warfare threats can impact systems such as flight management, ground proximity warnings, traffic collision avoidance, and terrain avoidance warnings. They can also interfere with satellite communications and air traffic control systems.



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Boeing continues working to restore customer trust

By Matt Thurber

"Boeing has been making quite a few changes," said Stephanie Pope, CEO of Boeing Commercial Airplanes (BCA), during a briefing on the eve of the Dubai Airshow. "We have new leadership. We reset with our labor, we reset with our financials and our balance sheet, and then, obviously, we reset how we build airplanes."

During this "reset," the company has endeavored to restore its reputation after a series of accidents that called into question its long-standing quality and credibility. "We've also underpinned all that with focus on restoring trust, with our customers, with our suppliers, with our employees, and with our regulator," she said. "That was all driven by changing our culture, and we rolled out new values and behaviors, and have been focused on culture change at BCA."

At the beginning of the year, BCA focused on three priorities: executing its safety and quality plan, delivering safe and high-quality airplanes to customers on time, and executing development programs. "[This was] all underwritten on a foundation of culture change and driving our new values and behaviors," Pope explained.

While there's still work to be done, she said, "the safety and quality plan teams have done a phenomenal job. We were defining the plan last year with the FAA, so this year's all been about execution. We'll continue to go into next year focused on execution, but we are transitioning into what I'll call a continuous improvement phase."

Regaining FAA Trust

A positive step has been the resumption of FAA delegation for Boeing's in-house designees for two programs. The company lost the delegation on the 737 Max in 2019 and on the 787 in 2022. "That talks to the results that our regulator was seeing from the investment in the safety and quality plan," she said.

That plan covers four "big elements:" training and increasing employee proficiency, especially with new hires; simplifying procedures and processes; eliminating defects; and elevating safety and quality culture.

An example of one of these elements includes rewriting work instructions on the shop floor, testing those instructions on newly hired mechanics as well as more experienced mechanics, and assessing their feedback. "It's all about simplification and making it easier for the mechanic," she said.

Much of this work went into Spirit AeroSystems, a company that builds major componormally start work at Boeing's Renton, Washington facility at position one. But due to the quality problems, Boeing created a position zero at Renton, Pope explained, "which was all about inspecting the Spirit fuselage to find all of the defects...and then we would fix those as they went through our factory."

Fixing Problems at the Source

When an Alaska Airlines 737 lost a door plug after takeoff from Portland International Airport in Oregon on Jan. 5, 2024, change became imperative. "We pretty quickly, in the year after the door-plug incident, moved position zero to Spirit so that when their fuselages come off their line, they are inspected by Boeing. [Then] that work is completed at Spirit, with the experts that do that work before anything is shipped to Seattle or to Renton. We've



nents and that Boeing is acquiring. "This is also around our move-ready criteria, and taking the safety management system [SMS] down to the floor," she said. "We put criteria from every position, what work has to be done to move the airplane to the next position, and focusing on making sure our teammates do the work in position. We've done thousands of those new assessments using the SMS, and it's driving a change in how we build airplanes and a much better quality product."

Spirit has had significant quality escapes identified by at least one whistleblower, and Boeing has been addressing these issues even before the acquisition goes through. Fuselages made at Spirit's operation in Wichita would

seen a 75% improvement in the quality coming out of Spirit.

"There's a lot of work to be done," Pope acknowledged, "but many of our customers have noted getting airplanes early, for the first time in years. The improved quality is the most important to me."

"Progress is being made. From a culture change perspective, there's a lot of work when you go to change your culture. [...] You can feel the momentum. There is a lot of work to be done, but it's a totally different environment if you were inside our buildings and our factories a year ago. I'm proud of what we've accomplished in a year, and we have a lot more work to do going forward."

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Pratt & Whitney levels up GTF engine reliability

By Matt Thurber

While engine manufacturer Pratt & Whitney (P&W) continues the campaign to improve the reliability of its geared turbofan (GTF) engine series, the problems that airlines are having with their engines are not unusual in a historical context, according to Rick Deurloo, president of Commercial Engines. GTF engines power the Airbus A320neo family, Airbus A220, and Embraer E-Jets E2.

"When you look at the durability of the V2500 eight years into the program versus the GTF, it's not significantly different," he said. "The difference is that the ramp was so much higher. In effectively 10 years of delivering engines to our airframe customers, we've already basically met what the V2500 did in its 30-plus years. The difference this time would be that the ramp at the front end of this program was significantly higher than the V2500, but its time on-wing is effectively the same at this point."

When Deurloo joined P&W (now an RTX company), for an engine like the V2500 to reach 14,000 to 15,000 hours on-wing was a great achievement. "Now you see airlines flying 40,000 hours," he said. "It's evolved over time. I think [the GTF] is not unlike the V2500, the challenges we had early in that program. The difference is that demand is so much greater, but ultimately it'll lead to an incredible program for us that will be twice the size of any legacy program."

Nine airlines have logged more than 46 million flight hours with GTF engines. "We're going to have a program of record that's going to be twice as big as any of our legacy products in our history," he said. "The amount of opportunity on the GTF is just incredible." Of all its engine programs, the GTF is "probably the biggest growth vehicle...within the RTX family," he added.

This year, P&W has announced nearly 1,500 additional GTF orders, bringing its total orders to approximately 13,000.

"What gets talked a lot about is durability," Deurloo said. In the near-term, P&W is targeting durability upgrades that include a redesigned number-three compartment, a waterjet hole-drilling process for combustor panels (which replaces laser drilling), and new turbine hardware. "It's an amazing amount of benefit we've got flying in India today with Indigo, and we're just seeing really good results on that waterjet," he said. All these fixes will be delivered with new engines starting in the first half of 2026.

Updates Extend Time on Wing

Another change is a software update that runs the engine cooler during climb, and Airbus is issuing a service bulletin to incorporate this change. "It's going to add more time on wing," he said. "It's best used on fresh engines...so you get the most benefit from it."

The Hot Section Plus program is going through the certification process, he explained. "What effectively that does is it takes 35 unique parts from the Advantage program and brings it back into the base, so it gives you all the durability—roughly 95% of it—that you'll get in the Advantage now.

"If I look at time on-wing from engines delivered between 2016 and 2019, 2020 and 2022, and 2023 and today, you can see that continued progress as we continue to update those configurations," he said. "The other thing about this configuration is...it takes our existing portfolio of aircraft and engines and effectively puts them into an Advantage-like durability class."

Advantage received FAA certification in February, and EASA also recently approved the program, which will next be certified at the aircraft level in the first half of 2026.

"Not only does it have the durability, which is a 2X time-on-wing improvement, it also offers some thrust goodness at sea level: 4% thrust flexibility; at altitude, 8% thrust flexibility. It'll be important as we start going into campaigns in China, at some of those high, hot airports, you'll see us take advantage of that. And then lastly, it is completely interchangeable between the GTF engines, so you could have an Advantage and a non-Advantage on the same aircraft. We're feeling incredibly good about it. We'll start delivering our first engines to Airbus in the coming months. There'll be roughly an 18to 24-month cutover."



Bird's-eye view of the Dubai Airshow venue

During the opening day of Dubai Airshow 2025, Sheikh Mohammed bin Rashid Al Maktoum (in teal) checks out a scaled-down model of Dubai World Central (Al Maktoum International Airport).



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Emirates adds free Starlink Wi-Fi

By Charles Alcock

Emirates passengers are about to get free access to Starlink's high-speed Wi-Fi connections on two of its widebody airliners. Yesterday, the Dubai-based carrier announced that the platform will be available on some of its Boeing 777s from November 23 and on its Airbus A₃80 fleet in February 2026.

At the Dubai Airshow this week, visitors can

experience Starlink connectivity onboard an Emirates 777-300ER aircraft on static display. The equipment is due to be installed across the airline's entire fleet of 232 A380s and 777s by mid-2027.

The 777-300ER on display (A6-EPF) is due to operate the first Starlink-equipped service after it leaves the airshow. Emirates is equipping around 14 aircraft per month with the new connectivity platform.

Each 777 is equipped with a pair of Starlink antennas, while in an industry first, the larger A380s will get three antennas. Emirates plans to make live TV available via Starlink, at first on passengers' personal devices and then through seatback screens from late December.

The Starlink technology supports streaming, gaming, and video calls. It is part of Emirates' wider investment in upgrading the cabin experience across its fleet.



CAE prepares to train Global 8000 pilots

By Charles Alcock

CAE is preparing to start training pilots for Bombardier's new Global 8000 business jet this year. The Bombardier authorized training provider announced the initiative on Monday, noting that the first pilots will begin preparations for the aircraft to enter service at its Montreal training center in early December.

As the in-service fleet of the long-range aircraft grows, CAE intends to add other training locations with full-flight simulators across its network. The Canadian group has a business aviation training facility in Abu Dhabi and operates two airline centers for Emirates in Dubai.

In addition to pilot instruction, CAE is introducing programs to prepare maintenance technicians to support the Global 8000. These include computer-based training, so that staff working on other Global models understand the technical differences with the 8000.

The company operates computer-based ground schools in partnership with ERT for all Global aircraft, covering engine run, taxi, and crew resource management for aircraft maintenance technicians. These courses are delivered at all of CAE's centers worldwide, at customers' bases, and in remote-learning hybrid training rooms.

"The Global 8000 is a significant advancement in business aviation, and CAE is proud to support Bombardier by delivering world-class pilot training for this aircraft," said Alexandre Prévost, CAE's civil aviation president. "Developed in close collaboration with Bombardier, our Global 8000 training program leverages next-generation simulator technology, advanced courseware, expert instruction, and CORe training powered by CAE Rise to reflect the performance and sophistication of Bombardier's newest flagship aircraft."

According to CAE, the Middle East region will need 155,000 new aviation professionals by 2032, including 2,000 air traffic controllers. The company collaborates with air navigation service providers to address this skills gap through its advanced air traffic services training program, which utilizes competence-based training and assessment. Its CAE Rise technology platform uses analytics, biometrics, and adaptive learning, and the company is also exploring the use of eye-tracking systems to prepare controllers.

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Gamebirds prep cadets for upset recovery

By Charles Alcock

Since May, the Emirates Flight Training Academy (EFTA) has been using a pair of Gamebird GB1 light aircraft as part of its efforts to prepare ab initio airline pilots. The singlepiston model, on display at the Dubai Airshow, has joined the academy's fleet, which also includes 32 Cirrus, Embraer Phenom, and Diamond aircraft.

UK manufacturer Game Composites developed the GB1 mainly for aerobatic use. EFTA utilizes it for upset recovery training, leveraging its ability to operate with a load factor of plus or minus 10 gs to prepare cadets to handle emergencies by recovering from unusual flight attitudes.

Powered by a Lycoming AEIO-580-B1A engine, the two-seater has a cruise speed of 200 knots and flight endurance of up to 7 hours 30 minutes (or 90 minutes in aerobatic mode). The cockpit features the Garmin GX3 avionics suite with a GFC 500 autopilot.

At EFTA, trainee pilots complete five hours of upset recovery training. The academy recently graduated 85 cadets, and its cohorts of 300 trainees come from 26 countries.

The academy is based at Dubai World Central and opened in 2017, initially to train Emirati students and then to recruit cadets from other countries. Since 2020, it has graduated 273 students, and most of them are now flying as first officers with Emirates Airlines.

In addition to the GB1s, the fleet includes 20 Cirrus SR22 G6s piston singles, five Diamond DA42NG piston twins, and five Phenom 100EV light jets. The facility also has 36 classrooms and six full-motion flight simulators. Flights are conducted from a dedicated 5,900foot runway and with support from an independent air traffic control tower.

"We've adopted a game-changing approach with our training: equip our cadets with the latest tools and technology, recalibrate regularly to prepare for future challenges, and ensure there are zero gaps," commented Captain Abdulla Al Hammadi, EFTA's divisional vice president. "We are committed to ensuring our cadets are fully prepared and can contribute in their aviation careers from day one."

Cargo carrier SolitAir grows Boeing fleet

When China's President Xi Jinping met with his U.S. counterpart Donald Trump last month in South Korea, part of the subtext for his messaging was, in so many words, "never mind your tariffs, we're growing our trade with the so-called Global South and we don't need America." The prospect of yet more goods moving around the vast markets spanning the Far East to Latin America was music to the ears of Hamdi Osman, founder and CEO of Dubai-based freight carrier SolitAir, because that is exactly the business opportunity he is looking to exploit.

The carrier began taking delivery of Boeing 737-800 aircraft in October 2024 and now has seven in its fleet, with three of these on wet leases and four on dry leases. SolitAir obtained its air operator certificate from UAE officials in April and is already operating scheduled services to more than 30 locations.

The growing route network already spans Africa, the Middle East, and Asia, with flights to India, Turkey, Iraq, China, Kuwait, Bahrain, Saudi Arabia, Lebanon, Bangladesh, Pakistan, Tanzania, Kenya, Libya, South Africa, Zambia, and Zimbabwe. The 737 freighters—one of which is on display at the Dubai Airshow—are keeping busy, sometimes making refueling stops after six hours to continue on the longer routes.

In many cases, Osman explained to **AIN**, SolitAir is flying for major express delivery groups including FedEx, DHL, UPS, and Amazon. "For today's customer, it's more about how fast the service can be rather than how much it costs," commented Osman.



SolitAir now has 7 Boeing 737-800 aircraft.



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SkyCourier misses its Dubai Airshow debut

By Charlotte Bailey

Textron Aviation had planned for the Cessna SkyCourier to make its Dubai Airshow debut this year, but a last-minute regulatory hurdle prevented the turboprop twin from reaching the show. The aircraft would have flown to Dubai after completing a tour of Africa but failed to obtain the necessary overflight permits, according to the U.S. manufacturer.

The demonstrator aircraft has spent the last two months touring Africa, giving prospective operators the chance to see what Textron says is its rugged design, ease of maintenance, special missions versatility, and ability to operate on rough runways. It is currently on the continent's east coast.

"Due to current geopolitical environment factors, the aircraft has so far been unable to secure the necessary overflight permits to reach the Dubai Airshow on schedule," a spokeswoman told AIN. It will instead continue its tour of Africa.

Bob Gibbs, v-p of special mission sales for Textron Aviation, described the SkyCourier as a versatile and "very dynamic" aircraft suitable for civil and military applications. The clean-sheet, high-wing turboprop has proved popular worldwide since receiving FAA type certification in March 2022. As the "first new 19-passenger aircraft in decades," he highlighted that customers are drawn toward its reliability, comparatively low operating costs, and ease of reconfigurability.

Also available as a dedicated freighter variant with a 2,721-kilogram (6,000 pounds) capacity, the "combi" version certified by the

sold out for over a year, he said. Following the first sale of two aeromedical-equipped variants to an Algeria-based operator in June, Textron delivered its inaugural units to Brazil this summer and received multiple Asian orders. These include "an interesting group of new customers that have never owned one of [Textron's] products," said Gibbs, who cited low operating costs and the aircraft's flexibility as having swayed previous loyalties from rotary-wing or larger fixed-wing aircraft.

Within the Gulf region, Textron identifies additional use cases in the tourism market,



The Cessna SkyCourier was unable to make it to the Dubai Airshow because the necessary overflight permits couldn't be obtained

U.S. regulator in 2024 is a factory-fitted solution in demand by the majority of the type's operators, Gibbs explained. This "pretty unique" nine-seater makes the operator-configurable platform ideal for roles such as casualty evacuation and disaster relief support.

From "the Amazon to the Arctic," Gibbs' confidence in the product's versatility is underpinned by an order book that has been potentially including seasonal transportation for the annual Hajj pilgrimage. Although all deliveries to date have been commercial, the "amount of military attention has been huge," Gibbs said.

Despite particular attention from South America, he believes this is a rising worldwide trend, with a lot of military and governmental organizations "not [having previously] thought of our product in that market space." These missions could include logistics, transportation of maintenance equipment and personnel, surveillance, and maritime patrol. The manufacturer is already undertaking development work in support of the latter.

Textron is creating a door that can be opened mid-flight to facilitate parachute jumps, a modification set to fly in the first half of 2025 with a targeted certification date of 2027. Aeromedical supplemental type certification is also underway. "I think you'll see a big shift in the next five years [toward] a lot more than just the military transport market," Gibbs said.

Boeing launches Virtual Airplane training

Boeing has launched its latest training platform, Virtual Airplane, which it describes as an accessible and customizable tool to augment pilot training outside of traditional environments. The 737 Max Procedures Trainer is the first element to go live, with the OEM promising "additional Boeing models coming soon."

Virtual Airplane is powered by cloud

computing platform Microsoft Azure and Microsoft Flight Simulator. According to Boeing, the platform is "designed to empower pilots and flight training teams with immersive, accessible, and customizable tools." Boeing intends to help "reduce simulator familiarization time and [improve] readiness before working with flight training devices."



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Black Box in the Sky captures data on the fly

By Charlotte Bailey

Honeywell Aerospace is trying to overcome the limitations of legacy hardware-focused flight data recorders with the development of a system it calls "Black Box in the Sky" (BBITS), a digitally connected solution that can stream flight data in near real-time. The intention is to deliver more than just the mandatory data that aircraft operators are currently required to store.

This work was prompted in part by the upcoming international Timely Recovery of Flight Data mandate, which is expected to take effect by the end of the decade. The project is being driven by Honeywell's facility in Brno, Czech Republic, which holds design authority for all of the company's in-production recorders.

The Brno research-and-development hub is a hive of innovation activity. Other technologies that Honeywell's Brno team is advancing include improved methods to address pilot fatigue and GPS signal jamming, as well as drone operations management and hydrogen propulsion.

According to Honeywell, BBITS simplifies flight data collection by uploading and streaming it via a cloud-based portal rather than from the aircraft itself. During a recent briefing in Brno, Tomas Kral, senior engineering manager of the recorders team, said that initial customer reaction to the new approach has been positive.

Kral said the BBITS system can monitor predefined events, such as turbulence or hard landings, stream data during a distress event, or provide additional information to maintenance personnel. Honeywell's 25-hour Connected Recorder (HCR-25) serves as the hub of the system, which, according to the company, is the first connected recorder to stream data out of the box to the ground infrastructure.

Simplifying Data Downloads

The enhanced BBITS system aims to significantly simplify how to handle data from the recorder, according to Honeywell. A single software program will integrate multiple modules to enable customers to gain maximum insight from the wealth of available information.

Flight Data can be streamed in near real-time via satellite from Honeywell's Connected Recorder system, which forms the backbone of its Black Box in the Sky initiative.

The U.S.-based aerospace group has already developed a prototype system that can be deployed in prospective airline customers' data centers. Near real-time analysis can also be conducted mid-flight, with data streamed via satellite communications.

Prospective customers, including Boeing and Airbus, are actively discussing BBITS with Honeywell. As well as ongoing analysis aboard Honeywell's Boeing 757 test aircraft, the Brno team is also participating in Eurocae working group 118 to help define the form and function of the group's concept for a lightweight flight recording system.

New Approach to Tackling GPS Jamming

Honeywell recently launched its new Alternative Navigation Architecture (HANA) software solution, designed to ensure resilient navigation in environments where satellite signals may be spoofed, jammed, or inaccessible. Although the group has been developing methods to support non-GPS navigation for about a decade, the latest technology is its response to a growing threat to aviation safety and security.

"What we're seeing in terms of the kind of conflict and the war going on in Eastern Europe is the need for alternate navigation," explained Mike Vallillo, Honeywell Aerospace's international vice president of defense and space.

HANA is designed to provide precise information on the aircraft's position, velocity, and orientation when Global Navigation Satellite System (GNSS) signals are unavailable. According to Matt Picchetti, vice president of navigation and sensors, HANA is applicable to crewed and uncrewed aircraft as well as to military surface vehicles. It can run on the operator's current computing platform or on a Honeywell-provided platform.

The initial iteration of the system includes vision-aided navigation, using live camera feeds to match ground imagery with map databases. Honeywell also aims to integrate magnetic anomaly and low-Earth-orbit satellite solutions into the layered-architecture system next year.

Michal Zavisek, vice president and general manager of Honeywell Technology Solutions EMEA, told reporters that the company currently offers six or seven means of operating in a GPS-denied environment, combining variations of vision, magnetic, and radar-based solutions to provide full coverage—something no single standalone method can offer. "Our key advantage is that we are able to merge those solutions to give [the customer] something that works all the time," he explained. "Navigation with GPS isn't enough for this."

Coping with Pilot Fatigue

Honeywell is addressing concerns about flight deck fatigue with its pilot-state monitoring solution for commercial airliners. The project forms part of the EU-backed SESAR-3 project called "Digital Assistants for Reducing Workload and Increasing Collaboration" (Darwin).

The system combines real-time camera feeds with software that uses artificial intelligence (AI) to detect and process pilot facial cues and potential abnormalities. While the sleep and drowsiness element has already reached technology readiness level (TRL) 6, the ability to detect pilot incapacitation is expected to achieve the same maturity next year, according to Honeywell.

Bohdan Blaha, senior software engineering supervisor for Project Darwin, explained that detecting drowsiness or incapacitation in the flight deck is significantly more difficult than detecting it in car drivers. This, he explained, is because pilots typically shift their focus from instrument panels to other tasks and



Honeywell research into pilot fatigue mitigation measures has resulted in testing of the Pilot State Monitoring system, which uses camera feeds and AI to detect drowsiness or incapacitation. Aural warnings then prompt pilots to be more alert.

have greater freedom to move around or even step away from the aircraft's controls.

Honeywell's Darwin technology uses a monochromatic camera to track real-time facial features, such as eye position, and processes parameters including blinking, the duration of eye closure, yawning, and overall head posture every 30 seconds. An AI algorithm can detect whether the pilot is drowsy, fully asleep, or otherwise incapacitated.

Pilots can then be prompted to be more alert with aural warning alarms. In the interest of confidentiality, Honeywell's real-time system does not share or record incident data. Although Honeywell has experimented with smartwatches and other so-called wearable technologies, Blaha explained that sharing data from these devices can pose privacy concerns. This approach can also be undermined if pilots forget to wear the device or if batteries run out of charge.

As part of ongoing evaluations, Honeywell has combined real-world data from its test aircraft with simulator-based trials. This included inviting a multitude of tired Brno employees to validate the system's alert functionality during various phases of drowsiness and fatigue.

Following successful testing on Honeywell's Beech Bonanza, Falcon F900, and Boeing 757 test aircraft, the project's scope was expanded in 2025 to include an Embraer 170. An unidentified airline has also been testing the pilot monitoring system for 18 months on board its Airbus A321, with the potential for it to enter service after Darwin is completed in 2026.

Bauer signs test systems partnership with Ascential Technologies

Aerospace test stand design and manufacturing company Bauer has partnered with Ascential Technologies to support the global users of its test and measurement products. Ascential Technologies specializes in automated diagnostic, inspection, assembly, and test systems.

The two U.S.-based companies' combined efforts will allow Bauer to focus on designing, manufacturing, and globally deploying advanced test stands for aerospace companies, while Ascential will function as Bauer's exclusive global service and aftermarket support provider. This will be managed under the new Ascential Care platform.

Included in the Ascential Care platform is the company's data analytics platform for capturing, mining, and measuring equipment data. This capability empowers users to "make informed decisions and, ultimately, help[s] enhance the reliability and availability of assets," according to Bauer, which is exhibiting at the Dubai Airshow.

Customers will receive support from installation and launch to service, maintenance, refurbishment, and spare parts services for Bauer's test systems. Ascential Technologies provides field support services in more than 40 locations in 20 countries, with support available onsite and online.

"This partnership allows us to focus on what we do best-engineering world-class test systems—while ensuring our customers receive unmatched global support and predictive



Bauer and Ascential Technologies teams celebrate the new partnership.

service capabilities," said Bauer president and CEO Lou Auletta. "Together, with Ascential Technologies' deep technology expertise and aptitude for delivering rapid and efficient support, we're delivering a smarter, more connected customer experience." E.T.

The G800 anchors **Gulfstream** display in Dubai

By Matt Thurber

Gulfstream has delivered 72 of its flagship G700s since deliveries began in April 2024, including 14 in the Middle East. One of those—a customer-owned airplane—is on display at the Dubai Airshow, along with a company G800 that set another city-pair speed record on its way to Dubai.

Departing from Phuket, Thailand, the G800 made the trip in 5 hours 38 minutes. This is the eighth city-pair record for the G800, which received FAA and EASA certification in April. Another one of its records was a flight from Miami to Riyadh, Saudi Arabia, in 12 hours 33 minutes.

"The G700 has been exceeding performance expectations since it entered service just last year. It is absolutely a differentiator for Gulfstream and for the entire business aviation industry, and it has been the smoothest transition into customer delivery that we have ever experienced," according to the company.

"A major advantage of the G700 is its spacious cabin. This gives customers a lot of versatility when it comes to fully utilizing and configuring the cabin to meet their individual needs. Mixing all the possible seating configurations—with four different galley configurations, seven different crew area configurations, and eight different aft lavatory configurations—offers customers endless ways to design their cabin. Customers are taking advantage of all five zones in ways that best suit their personal preferences,



The G800 just set its eighth city-pair record with a flight from Phuket, Thailand, to Dubai in 5 hours 38 minutes. Gulfstream also has a customer-owned G700 on display at the airshow.

reflecting the uniqueness of each customer."

For the Middle East market, ultra-longrange jets such as the G700 and G800 are "hugely" important, said Scott Evans, director of demonstration, airborne customer support, and corporate flight operations. "We're seeing tremendous interest in the Middle East. Some G700 customers are already looking for another G700. This is a multi-continent connector. Whether it's the G700 or G800," he added, sometimes political considerations require flying around global hotspots. "We just change the Mach a little bit and we keep going." In terms of flexibility and security, he added, "Everything is a positive when connecting two intended cities without a stop."

The G800 model replaces the G650 in Gulfstream's lineup and can fly 8,200 nm at the long-range cruise speed of Mach 0.85, compared to 7,500 nm for the latest version of the G650. "We're doing things that the G650 did, even though it's 10 feet longer," Evans said, "and it's 6% to 9% more efficient. It's amazing to see in one short generation what we're able to drive into these airplanes in terms of efficiency."

"We've now got a fantastic product line," added Paul Robinson, director, technical sales support. The ultra-long-range jets will be joined by the G400, with a range of 4,200 nm, and the G300, which will replace the super-midsize G280. The latter's Collinsbased avionics are being upgraded to Gulfstream's Harmony suite, which adopts features common to the longer-range jets' Honeywell-based Symmetry flight deck. Harmony is also Honeywell-based, but with three flight displays instead of the larger jets' four and no data concentrator network.

"Harmony is a great name for all that amazing safety and workload-saving [technology]," Evans said. "[It adds] a harmonized flight deck airplane into our family," hence the new name. "This is a huge part of our drive to create the safest business aircraft in the industry.

"The G650 created the foundation of where we are now," Evans concluded. "The G550 changed the world, and the G650 added another thousand miles of capability. The current market wants to go faster for long distances, and the G700 and G800 give customers the ability to do just that."



Emirati rotary-wing power is on display in Dubai

The UAE's Joint Aviation Command boasts an impressive array of helicopter types, which are represented in the daily flying display. Boeing AH-64 Apache gunships lead Bell 407GX armed scouts, Airbus Helicopters Dauphins, Sikorsky UH-60 Black Hawks, and a Boeing CH-47 Chinook heavy-lift helicopter.

Elie Saab to design cabin for Global 8000

By Matt Thurber

Bombardier and Elie Saab are collaborating on a unique cabin design for the business jet manufacturer's ultra-long-range Global 8000. The design will be unveiled next year.

"Our commitment is to offer an unparalleled and unmatched customer experience at every stage of the journey, and today we take that commitment to a new level," said Bombardier president and CEO Éric Martel. This is "our first-ever design collaboration with a luxury fashion house, creating a uniquely refined passenger cabin design exclusively for the Global 8000.

"As two iconic family businesses and two world-class brands, we share a profound commitment to heritage and excellence, driven by our high-performing teams and fueled—both of us-by innovation," he added. "By combining engineering and craftsmanship expertise with Elie Saab's iconic design vision, we are offering our customer something truly unique, an aircraft that will reflect the pinnacle of elegance and a spectacular attention to detail."

Elie Saab Jr., vice chairman and CEO of Elie Saab Group, said the two companies share a "passion for excellence, craftsmanship, and heritage. Design is our core language, one of emotion, beauty, and precision. Today, our vision takes off to new horizons. Together with Bombardier, we are crafting a bespoke jet interior that captures the spirit and aesthetic of Elie Saab. Every line, every material, every detail is being imagined to create a unique experience above the clouds aboard the exceptional Global 8000.

"At Elie Saab, we built our global reach on the conviction that luxury is personal, human, and lasting. These are the same values that drive Bombardier and the reason this collaboration feels so natural."



Elie Saab Jr. discussed the company's work with Bombardier to develop a Global 8000 cabin.



Dubai air taxi race

> continued from page 1

Midnight Flies in Abu Dhabi

Also on Friday, Archer announced that it has completed an "in-country" flight test campaign with its Midnight aircraft in Abu Dhabi. The flight profile included vertical takeoff, transition, and wingborne flight as part of a campaign supervised by Abu Dhabi's Integrated Transport Centre, with the support of the GCAA.

Archer said that the milestone in its plans for its "Launch Edition" air taxi services in the UAE means that it has started to receive payments from its local customer, Abu Dhabi Aviation. The aircraft now in Abu Dhabi is the same test vehicle the company has previously flown in the U.S.

"It's playing an important role now here in the UAE, ensuring the Midnight platform delivers the results we expected while flying in challenging weather environments like the UAE with its sand and heat," an Archer spokeswoman told AIN. "Additionally, this aircraft is helping our partners and the GCAA get initial experience familiarizing themselves with our flight operations."

Archer said other preparations for the planned launch of commercial services include work on eVTOL pilot training with Etihad Aviation Training, while Abu Dhabi Aviation personnel are involved in the operational flight trials now being conducted with the demonstrator aircraft. The company has backing from the Abu Dhabi Investment Office and has approval to build vertiports with partners at locations including the Abu Dhabi Cruise Terminal and the Cleveland Clinic.

According to Eric Allison, Joby's chief product officer, Dubai's growing population, burgeoning tourism industry, and "horrific" road traffic make it an ideal early use case for eVTOL flights, with the manufacturer having a six-year exclusive agreement covering these services in the emirate. The company and its partners are purposely starting with connections between Dubai's main airport and popular tourist sites, with Allison hinting that the new casino, due to open in Ras Al Khaimah in 2027, could be another vertiport location.

Papadopoulos explained that the GCAA is following an almost identical process for type certification as the FAA. "They will give us credit for everything we do with the FAA, and they are also engaging with us with our company testing as well, so it is a parallel process," he told reporters who had questioned how plans for operations could start being put in place before the U.S. regulator issues a type certificate, which is not anticipated until sometime in 2026.

Joby now intends to expand the scope of flight testing in the UAE to include pointto-point trips over populated areas. Papadopoulos indicated that there could be some passenger-carrying flights in the country prior to type certification being complete.

In early November, Joby began power-on ground testing with the first of its FAA-conforming aircraft built for the agency's type inspection authorization process that concludes the path to certification. Archer has not yet built a conforming example of the Midnight.



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