

**INDUSTRY NEWS JANUARY 2025**  
**COMPILED BY RICHARD PECKHAM**

You can share any industry news and anything else from your journeys watching aviation on our e-group, [laasclub@gaggle.email](mailto:laasclub@gaggle.email), Facebook, LAAS Enthusiasts Aviation Facebook Group, and the various section editors that create our monthly magazine, AVIATION NEWS & REVIEW, and direct to myself at [richmp196324@gmail.com](mailto:richmp196324@gmail.com), or through my new Facebook/Messenger account, Rich Peckham, and for those wishing to use the postal service, my current address is 17A Heol Persondy, Bettws, Bridgend CF32 8TH. Please remember that if you require a postal reply to enclose an SAE. And finally, ANYONE WISHING TO JOIN THE CLUB, for all the latest information and of course the additional benefits of being a club member, more details about the levels available on our website under Membership, and/or wish to send photos for consideration to appear in the magazine, please contact our membership Secretary/send your photos to Michael Tatner [laasint@btinternet.com](mailto:laasint@btinternet.com). I hope you all enjoy this months coverage.

Credits: The Aviationist, Ryanair, All Company Websites

**BRITISH BASED INDUSTRY NEWS**

**SCIENCE AND INNOVATION PARK**, RED BARN LANE, WROUGHTON, SN4 9LT.

<https://my.scienceinnovationpark.org.uk/events> The site is NOT open to the general public apart from pre-booked guided tours of the Hawking Building. This 545-acre multi-purpose site is home to the Science Museum Group Collection. With stunning native woodlands, extensive runways and hangars as well as one of the UK's largest solar farms, the site plays a vital role in the Science Museum Group's sustainability activities as well as hosting a range of research and development projects and commercial activities. At the heart of the Science and Innovation Park is the National Collections Centre, home to around 80% of the Science Museum Group Collection. The National Collections Centre cares for hundreds of thousands of objects in the Science Museum Group Collection. In 2018, they embarked on an ambitious project to create a new purpose-built facility to transform our care for the collection and enable people to explore much more of it than ever before. Around 300,000 historic objects have now been carefully moved to this sector-leading facility, bringing together these historic objects under one roof for the first time for conservation, study and public access. Regular public tours of this building began in late 2024, allowing members of the public to get up close to our world-class collection of objects from science, technology, engineering, medicine, transport and media. Tickets are only available in advance, but sell out very quickly, the latest batch for this year sold out in less than 24 hours, the easiest way to know when they become available, is to sign up to their newsletter.

**LONDON CITY AIRPORT** (LCY) – Has submitted an application to the Civil Aviation Authority (CAA) that would, if approved, enable the Airbus A320neo to operate at the Capital's most centrally located airport. London City is seeking to introduce cleaner, quieter aircraft as part of its plans to grow in the most sustainable way possible. The application, which has been lodged, would enable London City to reach its permitted passenger capacity with fewer flight movements, stimulating economic growth while maintaining operational efficiency. It would open up a range of possible new routes for passengers while incentivising airlines to modernise their fleet from older to newer generation aircraft such as the Airbus A320neo, which are more fuel efficient, more environmentally friendly and quieter. In August 2024, the Government approved London City's plans to increase its annual passenger cap from 6.5 million to 9 million by 2031 as a driver of economic growth. This included no increase to the permitted number of annual flights and no new infrastructure. The airport sees the possible introduction of the A320neo as key to building its leisure offering. The aircraft is able to carry over 180 passengers depending on the preferred seat configuration and can travel over 1,000km, which covers large parts of mainland Europe. The application is specifically asking the CAA to approve a new flight

procedure (RNP AR) which would alter the approach angle for this aircraft at each runway end. The current approach angle limits the type of aircraft that use the airport and requires those that can be certified for a steep approach. Alison FitzGerald, CEO of London City Airport, said: “The potential introduction of the A320neo aircraft at London City Airport is incredibly exciting. It would broaden the range of leisure destinations for our passengers, enable growth without increasing the number of flight movements, deliver much needed economic growth and accelerate re-fleeting to cleaner, quieter, new generation aircraft.”

**PREDANNACK AIRFIELD** - An expansion of unmanned operations is underway at the Royal Navy airfield, which could soon be used by General Atomics MQ-9 and Leonardo AW09 (Proteus) type aircraft. Located in the far south-west of the United Kingdom, and only around three miles from mainland Britain’s most southerly point, Predannack Airfield has operated since 1958 as a satellite airfield of nearby Royal Naval Air Station (RNAS) Culdrose. Since the formation of 700X Naval Air Squadron (NAS) at RNAS Culdrose as a specialist remotely piloted air systems (RPAS) unit in 2014, Predannack has supported extensive operational trials of various unmanned aircraft of varying sizes. An expansion of unmanned operations is underway at the Royal Navy airfield, which could soon be used by General Atomics MQ-9 and Leonardo AW09 (Proteus) type aircraft. Located in the far south-west of the United Kingdom, and only around three miles from mainland Britain’s most southerly point, Predannack Airfield has operated since 1958 as a satellite airfield of nearby Royal Naval Air Station (RNAS) Culdrose. Since the formation of 700X Naval Air Squadron (NAS) at RNAS Culdrose as a specialist remotely piloted air systems (RPAS) unit in 2014, Predannack has supported extensive operational trials of various unmanned aircraft of varying sizes. In partnership with Wholeship Limited and the wider Ministry of Defence, the airfield is now home to the National Drone Hub, which offers a facility for unmanned aircraft development by government, commercial, and educational customers. Planning documents from the second half of 2024 reveal a significant move to expand the facilities available. Current hangar facilities, approved for construction in 2022, comprise one 70.2 square meter and one 47.2 square meter hangar. Under newly approved plans, these will be supplemented by an additional 47.2 square meter box hangar alongside two new 485.8 square meter hangars – designated Alpha hangar and Beta hangar. As illustrated by computer renderings, the hangars will be of a sufficient size to house aircraft of a size up to and including an MQ-9 Reaper. Noise impact assessments conducted for the planning application also make direct reference to this type: “The expansion includes the testing of AW09 Leonardo UAS helicopters, MQ9 drones, and the current operation of eVTOL aircraft.” The assessed noise impact of the new development is minimal, as all proposed platforms generate significantly less noise than the AW101 Merlin helicopters which already use Predannack as a relief landing ground and training area. The mention of an AW09 UAS from Leonardo refers to the Proteus unmanned helicopter demonstrator under construction for the Royal Navy. Given the helicopter’s maritime role, Predannack’s proximity to the coast and various training areas already used by Royal Navy ships and aircraft would make it an excellent choice for operational flight testing. The eVTOL (electric Vertical Take Off and Landing) aircraft mention likely refers to the existing array of quadcopter-type UAVs currently utilized by 700X NAS, as well as by commercial operators. 700X NAS has tested commercially available eVTOL platforms like those sold by DJI as well as military specific and bespoke vehicles. A 20-kilogram eVTOL nicknamed ‘Walrus’ was designed and constructed from scratch by squadron personnel in 2022. Commercial customers have already used the airfield for their own eVTOL trials work. This includes Gravitilab, who have developed LOUIS, a pod dropped from a UAS platform that can be used for affordable microgravity experiments. The Royal Navy does not currently operate any systems in the class of the MQ-9 Reaper, but the aircraft type is currently operated by the Royal Air Force in the standard MQ-9A Reaper guise as well as the MQ-9B Protector RG1. With the latter being based directly in the UK at RAF Waddington, it would be possible for the aircraft type to detach to Predannack for potential future trials work. Future Royal Navy acquisition

plans, which might involve similar aircraft like the General Atomics Mojave, could also be facilitated. Predannack Airfield already supported drone trials with HMS Prince of Wales in 2023 when a Windracers Ultra UAS flew from the base and landed on the aircraft carrier, which was sailing in waters just off the Lizard Point approximately 4-5 miles south of the base. Letters of Agreement (LoA) are in place with airspace users HM Coastguard and Flag Officer Sea Training to establish procedures for managing the use of the airspace, and in the case of HM Coastguard coordinate measures to allow for unimpeded search and rescue operations when required. Interestingly, HM Coastguard is developing a UAS capability of its own with the Schiebel Camcopter S-100. The Camcopter design has undertaken trials with the Royal Navy's 700X NAS under the name Peregrine. One interesting capability that has already been demonstrated by Wholeship Ltd at the National Drone Hub is SADIE, or Ship-Air Digital Integration Equipment. Appearing essentially as a vehicle trailer with a helicopter landing platform, SADIE is in fact a complex system that can replicate the rolling landing deck of a ship at sea with 6 axis movement. This type of facility would be vital for developing larger VTOL aircraft intended for deployment at sea, like Proteus.

**BAE SYSTEMS** – 28 January 2025 - BAE Systems has been awarded a £285m contract by the Ministry of Defence to support the Royal Navy's Shared Infrastructure, Combat Management Systems (CMS) and warship networks. RECODE is an eight-year programme ensuring the Navy's fleet is armed and ready for evolving military challenges. It is tailored to meet the Royal Navy's future operational needs and will deliver a modernisation programme at pace to enable the agile deployment of capabilities. The contract award builds on 13 years of collaboration with the Royal Navy in which the BAE Systems' CMS is used across a wide range of naval assets. The core elements of RECODE include: (1) Maintaining high levels of safety, security and availability of combat systems across 20 Royal Navy ships. Architectural and capability changes delivered directly to the fleet to keep pace with the operational tempo. (2) Delivering BAE Systems' CMS on the Queen Elizabeth Class aircraft carriers, Type 45 destroyers and Type 26 frigates. The whole RECODE enterprise will adopt the engineering principles of DevSecOps1, with security integrated at every phase of the software development and operational lifecycle. This agile methodology will deliver the best CMS capability in the shortest amount of time. (3) A new collaborative working philosophy with DE&S Maritime Combat Systems and Navy Command which will mean closer working, joint decision-making and increased communication and collaboration between both parties. RECODE will support more than 200 highly-skilled jobs at BAE Systems' Naval Ships business across the Company's sites in Filton, Dorchester, New Malden, Frimley and Portsmouth. It will also create additional investment in UK SME and high-tech suppliers across the UK.

**EUROFIGHTER** - The UK is the only lead nation of the multinational Eurofighter programme not to have placed an order for additional aircraft in 2024, following the commitment to purchase 25 aircraft each by Spain and Italy late last year and Germany's ongoing Quadriga acquisition. A collaborative effort between Airbus, BAE Systems, Leonardo, and the partner nations of the UK, Germany, Spain, and Italy, the Eurofighter is intended to remain operational beyond 2060. Beginning development in 1989, the first of the Tranche 1 aircraft arrived in service among the core nations from 2003-2005. However, while the UK's European partners were busy concluding or progressing on the delivery of new aircraft in 2024, the UK's own commitment to additional airframes appears uncertain. The German Quadriga programme will see 30 single-seat and eight twin-seat latest generation Tranche 4 Eurofighters acquired to replace 38 older Tranche 1 aircraft, with the aircraft to be delivered between 2025-2030. Spain's Halcon programme will deliver 20 new Tranche 4 Eurofighters under Halcon I to the Spanish Air Force from 2026-2030. A follow up agreement for an additional 25 Eurofighters under Halcon II was formally concluded in December 2024. The same month, Italy confirmed a contract for 24 Eurofighters to replace current in-service Tranche 1 aircraft, with the new variants offering upgrades in avionics, weaponry, and operational capabilities, and will be equipped to handle Brimstone III and Meteor

missiles. The UK is a full Tranche behind, only recently moving to integrate an active electronic scanning array radar (AESA) into its 40 Tranche 3 airframes. Unlike the other Eurofighter partners, the UK has not yet committed to replacing its oldest airframes, with the RAF due to lose its 30 Tranche 1 fighters in 2025, leaving just 107 Tranche 2 and Tranche 3 aircraft in service. By comparison, the German Air Force operates around 140 Eurofighters and will likely commit to the programme throughout its life span given the level of industrial participation. GlobalData analysis from 2024 indicates that Italy operates 95 Eurofighter multirole fighters, while Spain has a fleet of 70 aircraft. In March 2024, Airbus stated that in order to maintain expertise and the capability to develop and produce fighters in Germany and bridge a potential decade-long production gap, an additional order of around 100 new Tranche 5 Eurofighters would be required. Of these, 50 aircraft will be produced by Airbus in Manching, Germany, with the remaining 50, coming from potential export orders, to be assembled in Italy (Leonardo), Spain (Airbus), and the UK (BAE Systems). In December 2024, Qatar reportedly came to the rescue of UK industry with the purchase of 12 additional Eurofighters for a fee of around £6bn (\$7.4bn), a move that brought some much-needed certainty to BAE Systems' share of the fighter programme. Qatar is a designated UK export country for the Eurofighter. It is uncertain whether the UK will look to acquire anymore Eurofighters, with the RAF's Tranche 1 fleet out of service this year and focus increasingly turning to the sixth-generation Tempest concept, part of the Global Combat Airforce Programme in collaboration with Italy and Japan. UK Minister for Defence Procurement Maria Eagle sought to make light of the situation during a House of Commons question and answer session on 6 January, stating domestic and export orders were "very important" and that the government was "working hard" on unnamed export campaigns. "The rest of the spend in such matters is part of the [Strategic Defence Review] and once that is completed there will be conclusions. Perhaps it will not be a Christmas present, but... a present at some time later on," Eagle said.

**ROLLS ROYCE** – (Both articles included for interest and finally some good UK news from a British jobs opportunity point of view) 13 January 2025 – Both AtkinsRéalis and Mott MacDonald are globally renowned engineering and development consultancies that bring with them a wealth of experience working on major, complex and high-profile projects. In June 2023, it was announced that Rolls-Royce was planning to double the size of its Submarines site in Derby to meet the growth in demand from the Royal Navy, and as a result of last year's AUKUS announcement. This increase in demand will see new manufacturing and office facilities being built and will create 1,170 skilled roles across a range of disciplines, including manufacturing and engineering. As the work will take place within the nuclear licensed site at Raynesway, the design and construction of fissile facilities adds a level of complexity and rigour above and beyond that of traditional builds. Working as the PROPEL joint venture, it will be AtkinsRéalis and Mott MacDonald's role to design these new facilities and work with the incoming fissile construction partner to deliver them. Rolls-Royce Submarines currently employs more than 5,000 people and designs, manufactures and provides in-service support to the pressurised water reactors that power every boat in the Royal Navy's submarine fleet. Rolls-Royce is currently supporting the existing Astute and Dreadnought boat build programmes through the delivery of reactor plant and associated components. It also provides frontline support across the world for reactor plant equipment from its Operations Centre in Derby and supports the submarines when in the Barrow-in-Furness shipyard and the naval bases at Devonport and Faslane. In addition, there are technical specialists working in offices in Glasgow and Cardiff, with a unique test facility operating in Thurso, Scotland.

\*\*\*\*\* 24 January 2025 – Rolls-Royce has signed the biggest UK Ministry of Defence (MoD) contract in its history. The Unity contract stretches over eight years and brings together all elements of research and technology, design, manufacture and in-service support of the nuclear reactors that power the Royal Navy's fleet of submarines. This contract between Rolls-Royce Submarines Ltd and the UK MoD, forms a single, harmonious capability portfolio. Unity

will enable improved focus on simplification and efficiency and better outcomes for the UK Royal Navy. It represents a significant undertaking and investment by the UK government and industry, providing thousands of highly skilled jobs across the country and an enduring commitment for the decades ahead. This is truly a national endeavour. Rolls-Royce designs, builds and maintains all of the nuclear reactors that power the Royal Navy's fleet of submarines. This eight-year Unity contract is worth circa £9 billion and will provide full support of the in-service UK Royal Navy submarine fleet throughout the period. It also includes continued support of the build and commission of Dreadnought Class submarines and the beginning of the previously announced SSN-AUKUS contracts. The contract is the first of its kind awarded by the UK MoD and is the culmination of years of planning between Rolls-Royce and UK MoD, potentially creating a new way of doing business between Government and industry. It signposts the UK's commitment to the continuous at sea nuclear deterrent and Rolls-Royce's continuing dedication to the UK Royal Navy and the Defence Nuclear Enterprise. With a long-term commitment across the Rolls-Royce Submarine programmes, Unity draws together current and upcoming work into one portfolio. It is designed to incentivise an even more collaborative working relationship between Rolls-Royce and the UK MoD. Meeting the growing requirements of the UK Royal Navy is of the utmost importance to Rolls-Royce Submarines, enabled through a highly skilled national workforce. This provides resilience and proactive collaboration more broadly across the UK nuclear industry and nurtures home-grown talent. Investing in nuclear expertise is critical for the UK, as demand for this talent increases across both defence and civil industries. The Unity contract also brings opportunities to the supply chain, the vast majority of which is in the UK. The ability to develop long term, strategic relationships with long lead times means more capability, a longer look-ahead and more competition in the supply chain, bringing enhanced benefit to the UK economy. The Unity Contract will create an additional 1,000 new roles within Rolls-Royce Submarines by the end of the contract. This will predominantly be seen in Derby but also includes recently announced satellite offices in Glasgow and Cardiff.

**RYANAIR** – is reducing flights to Spain due to "excessive charges". Compared to the previous summer, the carrier will reduce capacity on 12 routes by 18% and cancel approximately 800,000 passenger seats. Ryanair is eliminating connections with the cities of Jerez and Valladolid and will also reduce the number of flights to and from Vigo, Santiago de Compostela, Zaragoza, Santander, and Asturias Airport. Ryanair's decision may significantly impact local tourism and the economy. However, the airline plans to increase the number of flights from major Spanish cities and redirect some traffic to other countries. Ryanair's CEO, Eddie Wilson, explains that the cuts are a response to the "excessively high charges" levied by the Spanish airport operator Aena. Aena, which manages Spanish airports, has rejected Ryanair's accusations. A statement emphasised that the average passenger charge of £9 is one of the lowest in Europe. Spain recorded 94 million foreign tourists in 2024, and the country's tourism ministry expects further increases. The increases in charges would result in an additional £45 per ticket, and with further restrictions to areas in Spain for British tourists, the figure relating to cancelled flights may well increase, but at time of closing this month's section, exact details are not yet known.

#### **CIVIL AVIATION NEWS**

**EBACE 2025** – 31 January 2025 – As part of its commitment to reimagining EBACE, EBAA has made the strategic decision **NOT to have a static display at 2025's show** while redefining the strategy of the event going forward. EBACE25 will instead concentrate on delivering quality conference content and maximising networking opportunities for attendees, exhibitors, sponsors and the media. Holger Krahmer, Secretary General at EBAA, said: "2025 marks a transitional year as EBAA takes on the running of EBACE and we have an exciting vision for the show's future. Whilst there will be no static display this year, we are actively exploring

opportunities for the future to be as flexible as possible in meeting the ever-changing needs of our industry.” “As the leading show for Business Aviation in Europe, we want to ensure our format delivers for everyone who is present at EBACE. We have listened carefully to feedback from our community and those calling for change. We often hear attendees praise the unparalleled networking opportunities and quality conference content on offer at EBACE, with real business happening on the show floor. As part of our commitment to amplifying our value proposition for visitors, we’ve made the strategic decision to continue with the exhibition but not to have a static display at EBACE25.” EBACE25 will see the integration of its popular AIROPS conference for the first time, as well as the return of the Innovation Zone, for startup companies. Krahmer continued: “As well as a completely different floorplan, we’re investing to realign EBACE with our core vision, providing a strengthened conference programme that spotlights the latest market intelligence and developments in Business Aviation in Europe. In addition, we’re designing an opening event that will bring energy to the start of EBACE25 and offering a targeted meetup programme for attendees to connect with like-minded individuals in specialised areas of interest. With more developments to come, we’re making the show what it needs to be: the premier place for the European Business Aviation industry to come together and do business.”

**AIRBUS** – 9 January 2025 – STARLUX Airlines of Taiwan has placed a firm order with Airbus for five more A350F freighters. This doubles an initial order from the airline last year for five of the all-new cargo aircraft. The A350F fleet will be operated by STARLUX Cargo on some of the world’s busiest freight routes. “The cargo market is set to become a key element in our business model and will benefit from the advantages offered by Taiwan’s geographical location,” said STARLUX CEO Glenn Chai. “The A350F is the perfect choice for STARLUX, offering a similar payload-range capability as previous generation freighters, but with very significant reductions in fuel consumption and carbon emissions.” To date STARLUX Airlines operates a fleet of 26 Airbus aircraft including the A321neo, the A330neo and the A350-900. Currently under development, the A350F can carry a payload of up to 111 tonnes and can fly up to 4,700 nautical miles / 8,700 kilometres. Powered by the latest Rolls-Royce Trent XWB-97 engines, the aircraft will bring a reduction in fuel consumption and carbon emissions of up to 40% when compared to previous generation aircraft with a similar payload-range capability. The A350F features the largest main deck cargo door in the industry, with fuselage length and capacity optimised around the industry’s standard pallets and containers. Over 70% of the airframe is made of advanced materials, resulting in a 46 tonne lighter take-off weight than the competing derivative. The A350F is also the only freighter aircraft that will fully meet ICAO’s enhanced CO<sub>2</sub> emissions standards, coming into effect in 2027.

\*\*\*\*\* 9 January 2025 – Airbus reports that it delivered 766 commercial aircraft to 86 customers around the world in 2024. The Commercial Aircraft business registered 878 gross new orders. As a result, its 2024 year-end backlog stood at 8,658 aircraft.

\*\*\*\*\* 30 January 2025 – Credit **Executive Traveller** – With over a hundred A380 superjumbos in its fleet, Emirates remains a staunch champion of the double-decker plane, which Airbus scrapped in 2021. Emirates president Sir Tim Clark wants Airbus to bring the A380 back to the skies while also taking advantage of the latest technology to give the new jet – which many have dubbed the A380neo – a better chance of success than its predecessor. “I still have a design in front of Airbus as to how they could build a new one which would be 25% cheaper to run, far more fuel-efficient than this one,” Clark told Executive Traveller during a whistle-stop trip to Melbourne. “They said, ‘Well if you give us €20 billion, we’ll do it for you!’” Clark’s riposte was that it was up to Airbus to make that staggering investment, “but if you build them, we’ll buy them.” To make this second-gen superjumbo lighter and more fuel-efficient, the A380neo would use modern composite materials already seen on the Airbus A350 for the wings and fuselage. Clark noted that composites were not widespread when Airbus first developed the A380 in the 2000s. “The (tail) fin is too large, the wings need to be changed... all of this is in the later generation of aircraft.” Higher-efficiency engines would be vital in reducing the A380neo’s thirst

for fuel and therefore increasing its appeal to airlines. Aviation veteran Clark is bullish on the prospects of the UltraFan engine being developed by Rolls-Royce. "If it's ever allowed to get its head above the water level, this is a revolution in power," Clark said. "It's a much bigger fan requiring less fuel to drive it, with enormous thrust capabilities (so) you've got to get something like that on the A380." Clark's blueprint for the A380neo would deliver "at least a 20-25% reduction in fuel," which he believes would tilt the scales back towards the big, four-engine double-decker jet and its massive passenger-carrying capacity. And there's no doubt that passengers would welcome the return of the superjumbo, which launched a new era in travel – especially for the premium experience of private first-class suites with showers, and a cocktail bar at the rear of the upper deck.

**AIRBUS HELICOPTERS** – 15 January 2025 – The National Police Agency (NPA) of Japan has taken delivery of two Airbus H160 helicopters, making it the first para-public operator of the type in Japan. The first H160 was delivered at the end of last year, with the second delivery in January. "We are very proud of the delivery of the first public service version of the H160 to our long-standing customer in Japan. This is the culmination of two years of outstanding work and dedication of the teams in France and Japan," said Jean-Luc Alfonsi, Managing Director of Airbus Helicopters in Japan. "The unique capabilities of these brand-new aircraft will contribute to expanding the envelope of the NPA's wide-ranging law enforcement missions."

\*\*\*\*\* 27 January 2025 – Airbus Helicopters logged 455 gross orders (net: 450) in 2024, highlighting a steady market growth with a strong performance this year for its light, light twin-engine, and heavy helicopters. The orders came from 182 customers in 42 countries. The Company delivered 361 helicopters in 2024, resulting in a preliminary 57% share of the civil and parapublic market. "Airbus Helicopters' order intake in 2024, with an increase bordering 10 percent in units for the second year in a row, highlights its stable growth in a complex global environment," said Bruno Even, CEO of Airbus Helicopters. "I would like to thank our customers for continuing to place their trust in Airbus Helicopters in 2024," he added. The Super Puma programme performed strongly on both the civil and parapublic and military markets with 58 orders thanks to the German Bundespolizei, the Japan Coast Guard, the Ministry of Defence of the Netherlands, and the Romanian Ministry of National Defence. 2024 saw the launch of a comprehensive upgrade, known as Block 1, for the NH90 as well as the start of flight testing for France's Special Forces Standard 2 configuration, and the delivery of the first Standard 3 configuration to the Spanish Air Force. The H145 and H145M programme welcomed many new defence and security customers such as the Brunei Air Force, the Belgian Ministry of Defence, the Indonesian Air Force, the Bahraini Police Aviation Command as well as the Irish Ministry of Defence. 2024 saw the first flight of Racer and the unique compound helicopter surpassed its 407 KM an hour objective in just seven flights along with the maiden flight of CityAirbus NextGen in Donauwörth. On the civil and parapublic market, the H175 completed its de-icing flight test campaign in Canada and Norway ahead of certification this year and the H160 continued its progressive entry into service around the world with more than 30 helicopters now in service. The Company also ramped up the use of sustainable aviation fuel (SAF) for its own development test flights and training flights in Marignane, Albacete, and Donauwörth to nearly 20%, and added the use of SAF at its facility in Oxford, UK. Airbus' 2024 full year financial results will be disclosed on 20 February 2025.

**ATR** – 10 January 2025 – World's number one regional aircraft manufacturer ATR, and leading turboprop lessor Abelo, have strengthened their partnership with significant fleet updates. Abelo has converted its initial order for 10 ATR 42 STOL (Short Take-Off and Landing) aircraft into a mix of five ATR 42-600 and five ATR 72-600. Additionally, Abelo has expanded its fleet by firming up orders for three ATR 72-600. This strategic decision, finalised in late 2024, underlines the confirmed interest from the regional aviation market for the 50-seater turboprop segment, where Abelo has historically demonstrated a strong presence and anticipates significant replacement opportunities, including among its current lessee base. Further solidifying the

enduring partnership between ATR and Abelo, the three additional ATR 72-600 come from the conversion of options agreed upon during the Dubai Airshow in 2023.

\*\*\*\*\* 21 January 2025 – ATR, the world’s leading regional aircraft manufacturer, continues to elevate the standards of regional air travel by introducing Starlink high-speed internet connectivity onboard its aircraft. After successful test flights carried out on ATR’s 72-600 test aircraft in the past months, the solution has been certified by EASA. Long-standing partner Air New Zealand is poised to be the launch customer, bringing internet to its domestic flights from 2025. Under the agreement, PMV Engineering has developed the necessary modifications for the certification of the Starlink aeroterminal on ATR aircraft, which is now available as a retrofit option on ATR 72-500 and –600 for all ATR operators through a Supplemental Type Certificate (STC). Engineered by SpaceX, Starlink is the world’s first and largest satellite constellation using a low-Earth orbit to deliver broadband internet capable of supporting streaming, online gaming, video calls and more. By adopting this game-changing technology, ATR operators worldwide will be able to provide their passengers with internet services that reflect their home experience.

\*\*\*\*\* 30 January 2025 – ATR have joined forces with France Travail, formerly known as Pôle Emploi, to unlock career opportunities and support professional development in the aviation sector through innovative and inclusive initiatives. This partnership, announced in the presence of Joseph Carles, Mayor of Blagnac, highlights the vital role of local leadership and collaboration in driving impactful workforce initiatives. France Travail is the French public service dedicated to employment; its primary mission being connecting job seekers with potential employers. With a network of 55,000 employees and 900 agencies, France Travail is uniquely positioned to meet the aviation sector’s evolving workforce needs while creating meaningful opportunities for job seekers.

\*\*\*\*\* 31 January 2025 – On the occasion of the Aerospace Training and Careers Expo (SFMA – 31 January-2 February, Le Bourget, France), ATR and AéroPyrénées, a renowned pilot training school since 1970, have signed a memorandum of understanding, collaborating to attract and train the ATR pilots of tomorrow. Our mission as an aircraft manufacturer extends beyond building planes; it includes inspiring and informing young and future generations of pilots about the unique features of our aircraft, the essential role of regional aviation worldwide, and the diverse career opportunities it offers. Starting in 2025, AéroPyrénées and ATR will introduce initiatives to enhance the learning experience of AéroPyrénées’ pilot students. These initiatives will leverage ATR’s expertise, offering workshops and conferences conducted by ATR experts on the specifics of our aircraft, their missions, the career opportunities and prospects in the regional aviation sector. Students will have the opportunity to visit the ATR Training Centre in Toulouse, equipped with state-of-the-art educational tools and cutting-edge flight simulators. Tailored training modules will be provided, ranging from system awareness to advanced Multi-Crew Cooperation (MCC)/Type Rating training, upon completion of the Commercial Pilot Licence with Instrument Rating on Multi Engine aircraft (CPL-IR/ME) course. “This partnership between ATR and AéroPyrénées is built on common values such as a passion for aviation and the pursuit of excellence. It combines our educational and technical expertise to train the pilots that our operators will require in the years ahead. Promoting ATR and its significance in the aviation landscape will guide the choices of future pilots and establish connections with ATR operators,” said Christian Commissaire, Head of the ATR Training Centre.

**BAE SYSTEMS** – 8 January 2025 – Has signed an agreement with Airbus to provide the energy storage system for Airbus’ microhybridization demonstration project for commercial aircraft. The two companies will advance sustainable aviation by maturing and integrating electrification technologies that can reduce aviation’s carbon footprint. BAE Systems will develop, test, and deliver energy storage packs for electric aircraft in the megawatt power class, offering two hundred-kilowatt-hour energy capacity to enhance energy efficiency and performance. The energy storage system will provide electric propulsion assist to the engine during various phases of flight. As part of the agreement, BAE Systems will provide energy storage systems to

Airbus for lab testing and system integration for hybridization technology demonstration. “Our collaboration with Airbus will help future developments in air travel—advancing sustainable aviation with leading-edge energy management solutions,” said Ehtisham Siddiqui, vice president and general manager of Controls and Avionics Solutions at BAE Systems. “BAE Systems’ experience in flight-critical systems and vehicle electrification equips us to meet aerospace’s unique demands, allowing us to optimize performance, work towards more responsible aircraft operations, and address safe electric flight.” BAE Systems has made investments in aircraft electrification and energy management, leveraging its expertise in safety-critical systems to mature technologies that meet energy storage system performance and certification requirements. The company’s technology is certifiable, fault-tolerant, and designed to address the highest levels of safety, including solutions for thermal runaway mitigation and containment. The company has developed solutions to meet key challenges of energy storage in electric aviation, providing the optimum balance of energy and power for the next generation of aircraft. Its family of energy storage products offers a roadmap to 300 Wh/kg energy density using high-volume standard format cells. This gives aircraft a cost-effective and scalable upgrade path as battery technology matures. Work on the energy storage system will be performed at BAE Systems’ state-of-the-art engineering and manufacturing facility in Endicott, New York.

**BOEING** – 21 January 2025 – Boeing [NYSE: BA] has become a key project development partner of Norsk e-Fuel, supporting one of Europe’s first industrial scale Power-to-Liquids (PtL) facilities. Boeing’s investment will accelerate the production and availability of sustainable aviation fuel (SAF) in the Nordics and globally. It is also intended to support the commercial aviation industries and ICAO member states’ common goal to achieve net-zero carbon emissions by 2050. Norsk e-Fuel will produce jet fuel known as electro-SAF, or e-SAF. This involves the PtL process: using fossil-free power to generate green hydrogen and combining it with recycled CO<sub>2</sub> from biogenic sources. This fuel can reduce the lifecycle greenhouse gas emissions of air travel by over 90% compared to conventional jet fuel. “Our support of and collaboration with Norsk e-Fuel underscores the importance of using fossil-free energy to accelerate SAF production, which is key to reducing aviation’s carbon emissions towards 2050,” said Steve Gillard, Boeing’s regional sustainability director for Europe, Middle East, Türkiye, Africa and Central Asia. “Our partnership to advance e-fuels will help mobilize the commercialization of SAF in the Nordics and across the world, increasing accessibility and availability for our customers as we help build a robust SAF ecosystem.” It is estimated that SAF accounted for only 0.53% of the global commercial fuel use in 2024. In Europe, the RefuelEU SAF initiative’s proposed mandate aims to gradually increase the share of SAF, reaching a target of 6% by 2030, and 70% by 2050. There are also sub-mandates for e-SAF, such as that produced by Norsk e-Fuel, with targets of 1.2% in 2030 increasing to 35% in 2050. Boeing’s investment will contribute to achieving the SAF volumes needed by the EU commitments and strengthen national energy security across the Nordics. The partnership will also inform policies that enable the economic viability of the global SAF industry, while supporting long-term competitiveness of the aviation industry in the region. “Our goal is to make e-fuels competitive with and eventually replace fossil fuels in critical infrastructures as SAF needs to become readily accessible and affordable for advancing aviation’s decarbonization,” said Lars Bjørn Larsen, CCO of Norsk e-Fuel. “Boeing’s investment will further accelerate our project pipeline and will facilitate the broader aviation industry’s transition to net-zero emissions.” The strategic partnership combines Boeing’s SAF industry leadership and fuels expertise with Norsk e-Fuel’s technology know-how and strong network of partners, including Norway’s largest air carrier, Norwegian.

\*\*\*\*\* In January, the 777X program resumed FAA certification flight testing, and the company still anticipates first delivery of the 777-9 in 2026. Year-end figures for commercial aircraft

deliveries are shown as 348 deliveries in 2024, compared to 528 in 2023 and recorded 279 net orders. Total company backlog grew to \$521 billion, including over 5,500 commercial airplanes

\*\*\*\*\* 31 January 2025 – Boeing [NYSE: BA] delivered the first of four 787 Dreamliner airplanes to TAAG Angola Airlines, debuting the airline's new livery. The 787-9 and subsequent deliveries of the fuel-efficient widebody jet will advance the airline's fleet modernization plans and long-haul capabilities, bringing more travellers and trade to Angola with the industry's most advanced commercial airplane. The airline's first 787 Dreamliner, which is on lease from AerCap, arrived in Luanda just ahead of Angola's Liberation Day on February 4, marking nearly 50 years since the delivery of TAAG Angola's first airplane, a Boeing 737-200. TAAG Angola Airlines currently operates five 777-300ER (Extended Range) airplanes, three 777-200ERs, and seven Next-Generation 737s, connecting Angola to 12 destinations across Africa, Europe, South America and China. The introduction of the 787 Dreamliner will enable the carrier to expand its long-haul network, with plans to launch new routes to Europe and explore opportunities in Asia and North America. The 787 Dreamliner, which TAAG Angola Airlines ordered in 2023, is a core part of the operator's modernization efforts. Recognized for its advanced technologies, fuel efficiency, and exceptional passenger experience, the 787 Dreamliner reduces fuel consumption and CO2 emissions by up to 25% compared to the airplanes it will replace. Coinciding with the delivery of TAAG Angola Airlines' first 787 Dreamliner, the airline is working with Boeing to purchase CO2 emissions reduction associated with blended Sustainable Aviation Fuel (SAF) through an accounting process called book-and-claim. Distributors will deliver the blended SAF made available through these purchased certificates to nearby airports for use by airlines and other carriers.

**BOOM** – 28 January 2025 — Boom Supersonic, the company building the world's fastest airliner, Overture, announced the successful first supersonic flight of its XB-1 demonstrator aircraft, N990XB, at the Mojave Air & Space Port in California. Boom designed, built, and flew the world's first independently developed supersonic jet—the first civil supersonic jet made in America. Flown by Boom Chief Test Pilot Tristan “Geppetto” Brandenburg, XB-1 entered the supersonic corridor and reached an altitude of 35,290 feet before accelerating to Mach 1.122 (652 KTAS or 750 mph) – breaking the sound barrier for the first time. Historically, supersonic aircraft have been the work of nation states, developed by militaries and governments. XB-1's supersonic flight marks the first time an independently developed jet has broken the sound barrier. “XB-1's supersonic flight demonstrates that the technology for passenger supersonic flight has arrived,” said Boom Supersonic founder and CEO Blake Scholl. “A small band of talented and dedicated engineers has accomplished what previously took governments and billions of dollars. Next, we are scaling up the technology on XB-1 for the Overture supersonic airliner. Our ultimate goal is to bring the benefits of supersonic flight to everyone.” The first supersonic jet built from airliner technology, XB-1 incorporates many of the key features found on Overture, such as carbon fibre composites, digital stability augmentation, and an augmented reality vision system for landing visibility. Following its inaugural flight in March 2024, XB-1 completed a rigorous series of 11 human-piloted test flights under increasingly challenging conditions to evaluate systems and aerodynamics. Over the course of the flight test campaign, the XB-1 team systematically expanded the flight envelope through subsonic, transonic, and supersonic speeds—while taking smart risks and maintaining safety as top priority. “It has been a privilege and a highlight of my career to be a part of the team that achieved this milestone—every single member of this team was critical to our success,” said Tristan “Geppetto” Brandenburg, Chief Test Pilot for Boom Supersonic. “Our discipline and methodical approach to this flight test program created the safety culture that made a safe and successful first supersonic flight possible. With the lessons learned from XB-1, we can continue to build the future of supersonic travel.” XB-1 provides the foundation for Overture, validating key technologies while establishing a safety-first culture. Technologies proven through XB-1's test program that will also apply to Overture include augmented reality vision system: XB-1 and Overture both have a long nose and a high

angle of attack for take-off and landing, which makes it difficult for pilots to see the runway in front of them. Both aircraft leverage an augmented reality vision system to enable excellent runway visibility—without the weight and complexity of a moveable nose like Concorde's. Digitally optimized aerodynamics: Engineers used computational fluid dynamics (CFD) simulations to explore thousands of designs for XB-1. The result is an optimized design that combines safe and stable operation at take-off and landing with efficiency at supersonic speeds. CFD is also used extensively in the Overture program. Carbon fibre composites: Both XB-1 and Overture are almost entirely made from carbon fibre composite materials, resulting in a sophisticated aerodynamic design with a strong, lightweight structure. Supersonic intakes: XB-1's engine intakes slow supersonic air to subsonic speeds, efficiently converting kinetic energy into pressure energy, allowing conventional jet engines to power XB-1 from take-off through supersonic flight. Learnings from the development of XB-1's specialized intakes are being applied to Overture and its purpose-built turbofan engine, Symphony. XB-1's supersonic flight took place in the same historic airspace where Chuck Yeager broke the sound barrier for the first time in 1947, among many other historic firsts. The first supersonic flight of XB-1 marks the first human-piloted civil supersonic flight since Concorde's retirement over 20 years ago, paving the way for the return of commercial supersonic flight onboard Overture. Overture will carry 64-80 passengers at Mach 1.7, about twice the speed of today's subsonic airliners, on over 600 global routes. Overture has an order book of 130 orders and pre-orders from American Airlines, United Airlines, and Japan Airlines. In 2024, Boom completed construction on the Overture Superfactory in Greensboro, North Carolina, which will scale to produce 66 Overture aircraft per year. Optimized for speed, safety, and sustainability, Overture and its bespoke propulsion system, Symphony, are designed to run on up to 100% sustainable aviation fuel (SAF).

**CIRRUS** – 3 January 2025 – The Cirrus Arrivée Special Edition is back, reimagined with a bold new aesthetic that redefines the Art of Arrival in the SR Series G7. This exclusive edition introduces new exterior colours and premium leather interior options, creating a refined, luxurious experience for the pilot and passengers. With these new design enhancements, the Arrivée Special Edition sets a new standard for elegance and craftsmanship. Explore the unique possibilities and customize your own Arrivée through our configurator at [https://configurator.cirrusaircraft.com/?\\_gl=1\\*19y8ahk\\*\\_gcl\\_au\\*MTI3ODg2OTI4LjE3MzQzODIxMjcuNzU5ODM5NzIxLjE3MzQzODIxNDcuMTczNDM4MjQyMA.\\*\\_ga\\*NDIwMDMyNzc2LjE3MzQzODIxMjI.\\*\\_ga\\_M0M312ZBMT\\*MTczODUzMDY0OC4zLjEuMTczODUzMDkyMS42MC4wLjE1OTI1OUEyMzQ](https://configurator.cirrusaircraft.com/?_gl=1*19y8ahk*_gcl_au*MTI3ODg2OTI4LjE3MzQzODIxMjcuNzU5ODM5NzIxLjE3MzQzODIxNDcuMTczNDM4MjQyMA.*_ga*NDIwMDMyNzc2LjE3MzQzODIxMjI.*_ga_M0M312ZBMT*MTczODUzMDY0OC4zLjEuMTczODUzMDkyMS42MC4wLjE1OTI1OUEyMzQ)

\*\*\*\*\* Cirrus, the innovator in personal aviation, today announced the relaunch of the Cirrus Approach app, the premier digital mobile tool for flight training in a Cirrus. The Cirrus Approach app offers seamless mobile access to comprehensive training courses, student progress tracking and essential flight instruction tools—all optimized for Apple iPad devices. “The Cirrus Approach app is a valuable flight training resource for owners and flight instructors by increasing accessibility to content that keeps pilots current and safe,” said Zean Nielsen, CEO of Cirrus. “With the app refresh, we are now able to digitally connect more people to an array of flight training materials accessible at home or in the hangar.” One of the key features of the relaunch is the integration of state-of-the-art Augmented Reality (AR) technology, setting a new standard for pre-flight training. The Cirrus Approach app provides an immersive, interactive environment where users can master crucial pre-flight procedures and safety checks specific to the SR Series and Vision Jet. This realistic virtual experience is designed to equip pilots with the skills and confidence they need for real-world operations. “The opportunities are endless with the integration of Augmented Reality and flight training – setting a new benchmark in aviation education,” adds Nielsen. “AR is set to transform the flight training experience for Cirrus aircraft owners. We now offer pilots an immersive, interactive way to master essential pre-flight procedures and safety checks in a realistic virtual environment. This innovative approach not

only improves learning efficiency but also ensures that pilots are thoroughly prepared for real-world flying.”

**DASSAULT AVIATION** – 7 January 2025 – Announced its unaudited figures for 2024 in the following: Aircraft Delivered In 2024 - 21 Rafale (14 France, 7 Export) were delivered, while 20 had been guided, versus 13 Rafale (11 France, 2 Export) delivered in 2023. 31 Falcon were delivered, while 35 had been guided, versus 26 Falcon delivered in 2023. Aircraft Ordered In 2024 - 30 Export Rafale were ordered versus 60 Rafale (42 France, 18 Export) in 2023. 26 Falcon were ordered versus 23 Falcon in 2023. Aircraft In Backlog as of 31 December 2024, the backlog includes: 220 Rafale (164 Export, 56 France) versus 211 Rafale as of 31 December 2023, 79 Falcon versus 84 Falcon as of 31 December 2023.

**DEUTSCHE AIRCRAFT** – 20 January 2025 – Cyient, a global Intelligent Engineering services company, is proud to announce that it has expanded its strategic partnership with Deutsche Aircraft, a leading German regional aircraft manufacturer. Cyient has been awarded a multi-year contract to manage the advanced technical documentation to support the product lifecycle of safety-critical aviation systems for the 40-seater regional turboprop the D328eco. The solution will support Deutsche Aircraft's global customer base with a modular and scalable architecture, personalized user experience, faster time to market, and worldwide access through any device. It will take advantage of Cyient AI products embedded in the solution. The collaboration further strengthens Cyient's position as a trusted partner in the Indian and European aerospace markets, while for Deutsche Aircraft, it marks a significant stride in the “Make in India” mission.

**EMBRAER** – 7 January 2025 – Embraer (NYSE: ERJ / B3: EMBR3), one of the global leaders in the aerospace industry, delivered 75 aircraft in 4Q24 – or 27% higher than in the previous quarter (3Q24), when 59 aircraft were delivered, and equal to the volume of the same period of 2023 (4Q23). For the full year, 206 aircraft were delivered in 2024 – a number 14% higher than the 181 recorded in 2023. With 31 deliveries in the last three months of the year, Commercial Aviation reached 73 new aircraft in 2024 (at the top of the revised 70-73 guidance range for the year, and inside the original 72-80 guidance). Meanwhile, Executive Aviation was responsible for another 44 jets in the quarter, and for the total of 130 deliveries in the year (at the midpoint of the original guidance). In comparison with 2023, growth in these business units was +14% and +13%, respectively. Last, but not least, Defence & Security also surpassed the previous year's result with the delivery of 3 new C-390 Millennium in 2024 versus 2 in 2023.

\*\*\*\*\* 22 January 2025 – Embraer (NYSE: ERJ / B3: EMBR3), a global leader in the aerospace industry, announced it is working with Florida Power & Light Company (FPL) to expand the use of renewable energy at its U.S. facilities with an onsite solar installation at its campus in Melbourne. The project is Embraer's first and largest onsite solar energy generation project across its global operations. Being developed in Melbourne, Florida, at the headquarters of Embraer Executive Jets, this new, state-of-the-art solar installation will expand the company's use of renewable energy. It will bring Embraer closer to its goal of operating with 100% of its energy generated by renewable sources by 2030 across all global sites. The solar installation, which features over 1,900 panels, will be the first at an Embraer U.S. facility to help offset energy consumption onsite. The solar installation has the capacity to supply up to 1,800 MWh/year – most of the energy needed to power the company's Customer Centre facility. The onsite solar installation will bring emissions-free energy to the Embraer Executive Jets campus upon its expected start of operations by the end of 2025.

\*\*\*\*\* 28 January 2025 – Registration is open for Embraer Social Tech Careers, a free career acceleration program in technology offered by Embraer (NYSE: ERJ / B3: EMBR3). The initiative aims to encourage more women and people with disabilities to enter this market, which is why it is exclusive to these groups. With 70 available spots, the course focuses on data analysis and the simplified development of applications and other computer systems using programming techniques that are accessible for beginners. "The market is increasingly seeking more skilled individuals in the technology field, and more professionals are interested in working with data

science. With Social Tech, we hope to contribute to increasing the pool of these professionals and meet the growing demand from companies," says Embraer's Vice President of People, ESG, and Corporate Communications, Andreza Alberto. "At the same time, the course encourages diversity in the technology field, so that people from different backgrounds and life experiences can expand their skills in this highly relevant area today." Organized in partnership with the edtech SoulCode, Social Tech Careers aligns with the public's desire for quick courses that cater to those with limited time or a sense of urgency to enter the tech market. Throughout the program, students learn to work with low-code platforms, covering programming languages like Python and creating dashboards in Power BI, for example. The classes will take place between March and June 2025, in an online format. They will be broadcast live from Monday to Thursday, from 7 PM to 10 PM. Of the total number of scholarships offered, 60 will be available to the general public, and the remaining 10 will be for Embraer employees. Registration to apply for one of these scholarships must be done by March 9 through the link <https://soulcode.com/embraer-social-tech-careers>. The selection process includes logic and basic computer tests, a short personal introduction video, and a group dynamic. Created in 2021, Social Tech Careers has already selected over 1,600 professionals in four editions dedicated to underrepresented groups – women, people with disabilities, and Black/Brown individuals. Upon completing the training, students become part of Embraer Group's talent pool, shortening the distance to new job opportunities.

**GULFSTREAM AEROSPACE CORP.** – 6 January 2025 — Gulfstream Aerospace Corp. announced the delivery of two additional Gulfstream G700 aircraft to the growing Qatar Executive fleet. The two new aircraft, both delivered using a blend of sustainable aviation fuel (SAF), increase the total number of G700 aircraft in the Qatar Executive fleet to six with an additional four scheduled. "The unprecedented speed with which the team has been able to deliver this remarkable aircraft is a true testament to the quality and maturity of the G700 program," said Mark Burns, president, Gulfstream. "Qatar Executive has been a long-standing, valued partner of Gulfstream for many years and we are pleased to continue that partnership by adding more of these exceptional aircraft to their growing fleet." The newest Gulfstream G700 aircraft, delivered in December 2024, will join Qatar Executive's existing fleet of four Gulfstream G700 and 15 Gulfstream G650ER aircraft.

\*\*\*\*\* 9 January 2025 — Gulfstream Aerospace Corp. announced the official opening of its newest Customer Support service centre at Mesa Gateway Airport in Mesa, Arizona. To mark the occasion, state and local dignitaries, community partners, and Gulfstream leaders and employees gathered for a ceremonial ribbon-cutting to formally welcome customers to the new Mesa Service Centre. Gulfstream has invested more than \$130 million in the 225,000-square-foot/20,908-square-meter maintenance, repair and overhaul facility in Mesa, which was originally announced in 2021. To meet customer demand ahead of Mesa Service Centre's completion, Gulfstream opened a facility and began offering service in 2022, adding more hangar space in the fall of 2023. Mesa Service Centre can accommodate up to 13 large-cabin Gulfstream aircraft simultaneously with the capability to support maintenance and avionics services, inspections and drop-in support for all Gulfstream models. This is in addition to Gulfstream's existing Mesa west campus, which can hold up to 10 large- and mid-cabin aircraft. Gulfstream's Mesa operations have already brought more than 250 new jobs to the region, with an additional 100 more expected this year. To help develop the workforce of the future, Gulfstream has partnered with local educational institutions to offer training including apprenticeship and internship programs. Gulfstream Customer Support's extensive service network also includes modernized facilities in Van Nuys, California; Appleton, Wisconsin; Fort Worth, Texas; Palm Beach, Florida; Farnborough, England; and the recently completed Savannah Service Centre East.

**JETZERO** – Is developing an ultra-efficient Blended Wing Body jet with unprecedented performance. Working with the US Air Force, NASA and the FAA for entry-into-service by 2030.

The JetZero Blended Wing is the biggest leap in commercial aircraft design since the beginning of the jet age and the best first step toward the ultimate goal of zero-carbon emissions aviation. The aircraft will launch in 2030 with 100% SAF compatibility, and the internal volume to accommodate zero-carbon hydrogen. Our aircraft dramatically improves aerodynamic efficiency over traditional tube-and-wing designs which are fundamentally unstable and require large tail surfaces, creating yet more weight and drag. The Blended Wing is a naturally stable design requiring no tail surfaces, which eliminates unnecessary complexity. A shorter, wider fuselage is blended together mimicking the wing to provide lift. This reduces the surface needed, creating a lighter aircraft with less drag. The beauty of efficiency is that it compounds. With less drag and weight, the size of the engines is reduced, which further reduces drag and weight. The result is an aircraft with the passenger capacity and range of a small wide body that uses the engines of existing narrow-body planes. This breakthrough fills the mid-market gap with an aircraft that achieves half the fuel burn and emissions of the aging fleet it will replace. Our design allows the JetZero BWB to serve many missions. Already engaged with commercial airlines and freight companies, JetZero offers the best path toward achieving their ambitious sustainability goals. The US Air Force has also laid out its climate impact goals and has supported our development of a commercial jet with capability to provide a military variant as a tanker or freighter.

\*\*\*\*\* 6 January 2025 - During **SIEMENS'** press conference at the Consumer Electronics Show CES 2025, the company announced an agreement with JetZero, a pioneering aviation startup working to build the future of sustainable air travel, to collaborate on the development and production of JetZero's revolutionary blended wing aircraft. The innovative blended wing design aims to improve fuel efficiency by 50 percent, reduce noise and deliver the promise of zero carbon emissions by 2035. JetZero will leverage the Siemens Xcelerator open digital business platform to design, manufacture and operate their new aircraft. JetZero is planning to build "Factory of the Future", a new greenfield factory in the United States where they intend to tightly integrate Siemens' automation hardware, software and services to help it achieve its remarkably ambitious vision encompassing electrification, automation and digitalization of both the aircraft and its production. The JetZero aircraft and its associated manufacturing operations will be simulated virtually using comprehensive digital twins – enabling the company to de-risk the manufacturing process, validate the approach and scale processes long before any ground is broken or jets take to the skies. "Siemens is giving us the confidence to take a leap, not just a step, in revolutionizing air travel," said JetZero CEO Tom O'Leary. "Their digital twin and industrial metaverse technologies will be instrumental in helping us design, build and operate the world's first fully digital aircraft, delivering a better experience for passengers and airlines while also reducing fuel consumption by 50 percent." **CES will be back in Las Vegas, 6-9 January 2026.**

**NASA** – 13 January 2025 – A small business called Near Earth Autonomy developed a time-saving solution using drones for pre-flight checks of commercial airliners through a NASA Small Business Innovation Research (SBIR) program and a partnership with The Boeing Company. Before commercial airliners are deemed safe to fly before each trip, a pre-flight inspection must be completed. This process can take up to four hours and can involve workers climbing around the plane to check for any issues, which can sometimes result in safety mishaps as well as diagnosis errors. With NASA and Boeing funding to bolster commercial readiness, Near Earth Autonomy developed a drone-enabled solution, under their business unit Proxim, that can fly around a commercial airliner and gather inspection data in less than 30 minutes. The drone can autonomously fly around an aircraft to complete the inspection by following a computer-programmed task card based on the Federal Aviation Administration's rules for commercial aircraft inspection. The card shows the flight path the drone's software needs to take, enabling aircraft workers with a new tool to increase safety and efficiency. "NASA has worked with Near Earth Autonomy on autonomous inspection challenges in multiple domains," says Danette

Allen, NASA senior leader for autonomous systems. “We are excited to see this technology spin out to industry to increase efficiencies, safety, and accuracy of the aircraft inspection process for overall public benefit.” The photos collected from the drone are shared and analysed remotely, which allows experts in the airline maintenance field to support repair decisions faster from any location. New images can be compared to old images to look for cracks, popped rivets, leaks, and other common issues. The user can ask the system to create alerts if an area needs to be inspected again or fails an inspection. Near Earth Autonomy estimates that using drones for aircraft inspection can save the airline industry an average of \$10,000 per hour of lost earnings during unplanned time on the ground. Over the last six years, Near Earth Autonomy completed several rounds of test flights with their drone system on Boeing aircraft used by American Airlines and Emirates Airlines. NASA’s Small Business Innovation Research / Small Business Technology Transfer program, managed by the agency’s Space Technology Mission Directorate, aims to bolster American ingenuity by supporting innovative ideas put forth by small businesses to fulfil NASA and industry needs. These research needs are described in annual SBIR solicitations and target technologies that have significant potential for successful commercialization. **Small business concerns with 500 or fewer employees, or small businesses partnering with a non-profit research institution such as a university or a research laboratory can apply to participate in the NASA SBIR/STTR program.**

**PIPER** – 31 January 2025 – Piper Aircraft announced a new fleet agreement with FTEJerez (Flight Training Europe) for the acquisition of 20 new Piper Archer DX aircraft, delivering the first 10 units in December of 2024. The addition of these aircraft enhances FTE’s training fleet, further solidifying its position as a leader in professional pilot training. Based in Jerez, Spain, FTEJerez is recognized for its world-class pilot training programs and close partnerships with major airlines, including Aer Lingus, British Airways, Etihad, Iberia, Ryanair, and others. Training cadets from around the globe, the academy consistently delivers industry-ready pilots equipped to meet the demands of commercial aviation.

**RADIA** – Catching up – 20 November 2024 – Radia is pleased to announce that Italian aerospace company MAGROUP Magnaghi Aerospace will be developing the landing system for the WindRunner aircraft. Magnaghi joins a growing list of suppliers that will develop various on-board systems for WindRunner, including Leonardo in Italy who will develop the fuselage. For over 85 years, Magnaghi has been a leading provider of landing gear systems internationally. They have provided the aerospace industry with over 20,000 systems on more than 7,000 aircraft and will bring their expertise in development, qualification, production, and maintenance to support the development of the landing system for WindRunner. WindRunner is the world’s largest aircraft being developed to transport offshore sized wind turbine blades to develop high-capacity onshore wind farms. These high-capacity onshore wind farms are called “GigaWind” – a segment that Radia is also working to develop.

**ROLLS-ROYCE** – 9 January 2025 – Rolls-Royce (LSE: RR., ADR: RYCEY) Announced it has signed an agreement with STARLUX Airlines for 10 Trent XWB-97 engines to power five Airbus A350F aircraft, firming up the options it made at the Singapore Airshow in February 2024. The Trent XWB-97 has proven its reliability and durability over six years of service and more than three million engine flying hours. As versatile as it is reliable, the Trent XWB has already shown it is equally efficient at powering short-haul or long-haul flights, which makes it the ideal solution for passenger and freighter operators with a varied network. As the world’s most efficient large aero engine in service, the Trent XWB will also help fast track STARLUX’s sustainability journey. Rolls-Royce is investing more than £1bn in a programme that will deliver further improvements to the Trent engine family. For the Trent XWB-97, it’s receiving a series of technology packages that will improve durability across all operations as well as doubling time on wing on the harshest of missions. The engine is certified to operate on a 50% Sustainable Aviation Fuel (SAF) blend today and has been proven to be compatible with 100% SAF for the future.

**TECNAM** – 14 January 2025 – Tecnam Aircraft announced the appointment of Aerocorp as its exclusive dealer for sales and service in Costa Rica, Guatemala and El Salvador. Tecnam's rich aviation heritage and Italian sophistication will enhance Aerocorp's industry standing and ability to deliver quality products to its aviation clientele throughout Central America. Aerocorp will market the range of Light Sport Aircraft as well as the P2010 and P2006T series and the P-Mentor to flight schools and private owners.

\*\*\*\*\* 17 January 2025 – Costruzioni Aeronautiche TECNAM is proud to announce the delivery of two P2012 Traveller Continental aircraft to RORAIMA Airways in Guyana. Upon performing the aircraft acceptance in the Tecnam premises in Capua, Italy, the first aircraft has been transferred to Guyana in a ferry flight that has been performed by a joint team including RORAIMA Airways' Director of Aviation and Chief Pilot Gerald Gouveia Jr., that flew the aircraft from Canada to the new home base in Guyana, where the aircraft will be employed for passenger and medical services. The Government of Guyana is investing heavily in aviation infrastructure and the P2012 will be one of the pillars in the modernisation of Guyana's aviation. RORAIMA Airways will be able to offer charter flights to or from any part of the Caribbean and Northern Brazil to Guyana with ease and the highest level of service, safety and comfort to its customers. Renowned for offering its customers the ultimate in luxury and safety, RORAIMA Airways is the premium provider of air charter services in Guyana and northern Brazil, where multi-engine operations over the varied terrain and over water provide a significant safety advantage for the company's market area. Passenger comfort was a key factor in the operator's decision: all single seats are generously spaced, with individual window and seat amenities, double in-seat USB ports, cup holder, seat pocket, armrest; plus under seat stowage and dual air conditioning (that can be ground operated on DC power to 'pre-cool' the aircraft prior to boarding) offer limousine levels of comfort and convenience. The P2012 Traveller Series also offers very competitive operating costs. The two new aircraft are provided with multi mission configurations that will also enable RORAIMA to offer 24-hour Air Ambulance operations, raising the bar for medical evacuation and air ambulance flights in the country, as well as cargo capability. RORAIMA Airways is the first operator of the P2012 Traveller in the region and Tecnam will continue to work with them and the Guyana Civil Aviation Authority to develop solutions to meet local air travel needs.

\*\*\*\*\* 23 January 2025 – Tecnam Aircraft announced the appointment of GM Aviation as its exclusive distributor for sales and customer support service in Germany and Austria. GM Aviation will offer Tecnam's complete line of Ultralight and Certified Single and Twin-engine aircraft. Germany and Austria are important markets for Tecnam and with GM Aviation new and existing customers can expect the highest level of service. GM Aviation has built a strong reputation for providing high quality maintenance services for piston engine aircraft and has exceptional expertise in Garmin avionics upgrades among a long list of key capabilities. With Tecnam's innovative range of aircraft, GM Aviation will offer a complete package of services including tailored aircraft selection advice, ongoing maintenance support and spare parts distribution. This partnership not only strengthens GM Aviation's capabilities but also enhances the overall experience and satisfaction of our valued customers.

\*\*\*\*\* 31 January 2025 – Tecnam and Viva announced the purchase of six (6) single-engine P2010TDI models and one (1) multi-engine P2006T NG for its Pilot Academy expansion programme. The Six (6) Tecnam P2010TDI and one (1) P2006T NG twin-engine aircraft are scheduled for delivery in 2025. Further aircraft are on option as well as two (2) twin engine Tecnam aircraft and twelve (12) single engine Tecnam aircraft. The aircraft will be used from PPL – Private Pilot License – to advanced commercial pilot training such as CPL(A), IR(A) and MEP(L) as well as for integrated ab-initio commercial pilot training. Viva is an ultra-low-cost Mexican airline and decided to open its own Pilot Academy to provide its students with all the training they need to become highly qualified pilots in a short time. With the first aircraft arriving in the first quarter of 2025, the Academy will start with 2 groups of 25 students per year and grow from

there. This acquisition will also strengthen the existing Viva Pilot Cadet Programme, which will help to meet the airline's growing demand for pilots.

### **MILITARY AVIATION NEWS**

**AIRBUS HELICOPTERS** 17 January 2025 – Announced that it has delivered two H225M helicopters to the French Armament General Directorate (DGA). These helicopters are the first of eight aircraft ordered in 2021. They will be operated by the French Air and Space Force, replacing Pumas currently in service overseas (French Guyana, Djibouti and New Caledonia) and will contribute to the harmonisation of the French Air and Space Force's helicopter fleet. They will be used for operational missions, search and rescue and utility missions. Like all newly built H225Ms, the eight new helicopters ordered by France in 2021 are equipped with state-of-the-art avionics. The French H225Ms, also nicknamed Caracal, are equipped with the Safran Euroflir 410 electro-optical system and the Sigma inertial navigation system. New equipment also includes the Thales VUHF radio TRA6034 and IFF (Identification Friend or Foe) transponder TSC4000.

**BAE SYSTEMS** – 14 January 2025 – In 2024, the U.S. Navy awarded BAE Systems an \$85 million production contract to deliver additional Network Tactical Common Data Link (NTCDL) systems. NTCDL will enable a real-time exchange of voice, data, imagery, and full-motion video from a variety of air, surface, subsurface, and man-portable sources. Systems under the company's current contract are presently being installed on U.S. Navy aircraft carriers and will be installed on new Constellation-class frigates. "We have designed and produced a faster next-generation system to meet the demands of our customers' evolving connectivity mission requirements," said Amber Dolan, director of Adaptive Communications and Sensing at BAE Systems. "BAE Systems is committed to providing the U.S. Navy with a trusted and secure solution to transmit and receive the critical information needed to successfully accomplish its missions across the fleet." NTCDL is a multi-platform solution for all U.S. Navy Common Data Link (CDL) requirements. It is a modular, scalable system designed to increase link capacity and embrace waveform evolution. NTCDL supports multiple, simultaneous, networked operations using currently fielded CDL equipment, as well as next-generation manned and unmanned platforms. It enables operators to simultaneously transmit and receive real-time intelligence, surveillance, and reconnaissance data from multiple sources and exchange command and control information across separate or independent networks. This allows for effective communication among forces to maintain an advantage. This award modifies an existing BAE Systems contract to extend the program's total period of performance by three years. As the original developer and manufacturer of the NTCDL system, BAE Systems has the engineering and production capabilities to meet the program's urgent fielding timeline requirements. Work on this contract is performed at BAE Systems' facilities in Maryland, Colorado, New Jersey, and New York.

\*\*\*\*\* 16 January 2025 – (Included as this ship carries helicopters) Under the docking selected restricted availability (DSRA) contract awarded, BAE Systems will dry-dock the 684-foot-long ship, USS Green Bay, at its San Diego shipyard. The shipyard's employees and industry partners will perform upkeep work on the underwater hull, repair its system of ballast tanks, preserve its amphibious well deck area, and refurbish the living spaces for sailors and Marines onboard. The work is expected to begin in February 2025. "USS Green Bay's DSRA is a major event in the service life of the 15-year-old ship," said Eric Icke, vice president and general manager of BAE Systems San Diego Ship Repair. "Once completed, the DSRA will allow Green Bay to continue executing a wide range of naval missions for many years to come." USS Green Bay is the fourth ship of the San Antonio class and was commissioned in January 2009. It is the second U.S. Navy vessel named after the Wisconsin city. BAE Systems is a leading provider of ship repair, maintenance, modernization, conversion, and overhaul services for the Navy, other government agencies, and select commercial customers. The company's San Diego shipyard has

approximately 700 employees and works with the Navy and several subcontractor companies to accomplish its ship sustainment work.

**BAYKAR MAKINA** - 17 January 2025 - The Bayraktar TB3 UCAV, which recently made history by taking off and landing on a short-runway vessel, has achieved another major milestone in its development by beginning munitions integration tests. On 16 January 2025, the Bayraktar TB3 UCAV departed from the Baykar Flight Training and Test Centre in Keşan, Edirne, with two Roketsan MAM-T munitions onboard. The aircraft successfully launched its first strike using Aselsan's ASELFLIR-500 Electro-Optical Reconnaissance, Surveillance, and Targeting System, hitting its designated target with pinpoint accuracy. Now an armed unmanned aerial vehicle, the Bayraktar TB3 will continue its payload and munitions integration tests as part of its ongoing development process, in line with the predetermined timeline.

\*\*\*\*\* 18 January 2025 – The development of Bayraktar KIZILELMA, Baykar's indigenous and original aircraft, which is set to become Türkiye's first unmanned fighter jet, continues according to the established test timeline. The production prototype of the indigenous unmanned fighter jet, Bayraktar KIZILELMA PT-3 (tail number TC-ÖZB3), successfully completed another flight test at the AKINCI Flight Training and Test Centre in Çorlu, Tekirdağ. During the test, the aircraft also conducted system identification activities. Baykar continues to rapidly develop the Bayraktar KIZILELMA, Türkiye's first unmanned fighter jet. Building on the experience gained from the initial prototypes, the company has made significant modifications to the production prototype, including structural improvements and advancements in the aircraft's avionics architecture. In this context, the Bayraktar KIZILELMA has flown with a successfully integrated afterburner engine alternative. With its new, more powerful engine, the aircraft is set to approach the speed of sound, enabling superior manoeuvrability at higher speeds, thanks to aerodynamic improvements. Equipped with an AESA radar, which provides high situational awareness, the Bayraktar KIZILELMA will be capable of accomplishing even the most challenging missions.

**BOEING** - Defence, Space & Security fourth quarter revenue of \$5.4 billion and operating margin of (41.9) percent reflect the previously announced pre-tax charges of \$1.7 billion on the KC-46A, T-7A, Commercial Crew, VC-25B and MQ-25 programs. In January, the U.S. Air Force announced an updated acquisition approach for the T-7A Red Hawk that allows the company to provide a production-ready configuration to the customer prior to low-rate initial production, which better supports the operational needs of the customer and reduces future production risk. During the quarter, Defence, Space & Security captured an award from the U.S. Air Force for 15 KC-46A Tankers, secured an order for seven P-8A Poseidon aircraft from the U.S. Navy, and delivered the final T-7A Red Hawk engineering and manufacturing development aircraft to the U.S. Air Force. Backlog at Defence, Space & Security was \$64 billion, of which 29 percent represents orders from customers outside the U.S.

\*\*\*\*\* The U.S. Navy is getting closer to fielding the new MQ-25 Stingray unmanned tanker, with Vice Adm. Daniel Cheever, commander of Naval Air Forces, saying he's confident the service will fly it in 2025 and start the integration aboard aircraft carriers in 2026. The development follows the installation of the first Unmanned Air Warfare Centre (UAWC) aboard USS George H.W. Bush (CVN 77) and continued testing of the Unmanned Carrier Aviation Mission Control Station's (UMCS). "We will fly MQ-25 in 25. You can quote me on that. We will fly that platform in 25 and get that thing on a carrier in 26 and start integrating [it]," said Vice Adm. Cheever at the WEST 2025 conference in San Diego. "That unlocks the future of manned-unmanned teaming. We're going after that thing in a big way so we can do manned-unmanned teaming off an aircraft carrier and that is a different world. It opens up the future of sixth-gen collaborative combat aircraft and everything that comes after it." Boeing delivered in early 2024 the first MQ-25 Stingray to the U.S. Navy for testing, with the unmanned aircraft planned to undergo a rigorous airframe integrity evaluation, hinting at it possibly being a static test airframe. In November 2024, Vice Adm. George Wikoff, head of U.S. Naval Forces Central Command, said the Navy

expects to take delivery the MQ-25 in 2025. Vice Adm. Cheever said he's confident about the service's ability to integrate the unmanned asset in the Carrier Air Wing aboard an aircraft carrier. Obviously, there are some challenges in the integration of an Unmanned Aerial System in the highly dynamic environment of an aircraft carrier, but the Navy has been working to mitigate them so it could seamlessly and safely operate it. The MQ-25 will have two roles once in service, of which air refuelling will be the primary one, with the other one being intelligence, surveillance and reconnaissance (ISR) missions. The Navy said that the introduction of the Stingray will allow to reduce the fatigue on the Super Hornets, currently also used for the air refuelling role, as well as making more of them available for combat missions. The MQ-25 is equipped with the Cobham ARS pod, the same currently used by F/A-18s, installed under the wing. The MQ-25 T1 test asset has successfully refuelled the F/A-18 Super Hornet, F-35C Lightning II and E-2D Hawkeye during testing, although it is unclear if further testing will be performed with the CMV-22B Osprey. The latest plans of the U.S. Navy see the MQ-25 reaching the initial operational capability (IOC) in the second half of 2026, with one of the requisites being the delivery of 13 aircraft, according to Flight Global. The service is planning to procure more than 70 MQ-25s to be employed on both its Nimitz- and Ford-class aircraft carriers.

**BOMBARDIER DEFENCE** – 29 January 2025 – Celebrated the official unveiling of armasuisse's new head of state multi-mission global 7500 aircraft. The first Head of State multi-mission Global 7500 aircraft delivered to armasuisse by Bombardier Defence was unveiled to the public on January 29th, in Bern, Switzerland. The platform will be equipped for government and military personnel transport and for emergency evacuation missions. The addition of this next-generation platform to armasuisse's fleet will ensure an increased transportation capacity and protection for government and military officials, and an efficient platform to perform critical humanitarian missions. Bombardier Defence delivered the Global 7500 aircraft to armasuisse in December 2024, and the first deployment by the Federal Air Transport Service is set for early 2025. "The Global 7500 aircraft is a proven and versatile platform that has earned speed records, stood out as the highest performing in its class and has quickly become a customer favourite," said Stephane Leroy, Vice-President of Sales. "Armasuisse's aircraft represents a significant milestone for Bombardier Defence, as it is the first Global 7500 configured for head-of-state multi-mission needs. We are proud to have the trust of armasuisse, and to support them with critical transportation and emergency evacuation missions." According to the armasuisse project manager Samuel Fuhrimann, the collaboration between Bombardier and armasuisse has been excellent. The project is within the contractual agreement concerning requirements, schedule and quality. The self-protection system also is on schedule to be installed in the 2nd half of 2025.

**DASSAULT AVIATION** - 29 January 2025, Saw the presentation of the first United Arab Emirates Rafale: This first F4 Rafale for the UAE, produced in line with the contract schedule, will remain at Dassault Aviation's Flight Test Centre to perform flight tests in view of the first deliveries to the UAE Air Force & Air Defence which are scheduled at the end of 2026.

**DE HAVILLAND AIRCRAFT OF CANADA** (DHC) – 21 January 2025 (Calgary, AB) – In May 2024, the Canadian Government announced that SkyAlyne, a joint venture between CAE and KF Aerospace, was the successful bidder to deliver the Future Aircrew Training (FAcT) program for the Royal Canadian Air Force (RCAF). The FAcT program will provide Aircrew training services for the RCAF to help maintain a multi-purpose and combat capable air force. It will include Pilot training, as well as Aircrew training for Air Combat Systems Officers (ACSO) and Airborne Electronic Sensor Operators (AES Op). De Havilland Aircraft of Canada (DHC) is pleased to support this program with the delivery of three Dash 8-400 aircraft to SkyAlyne over the coming years. DHC will also support the FAcT program by providing airworthiness engineering and in-service engineering support once the aircraft are inducted into the program. "De Havilland Canada aircraft have been part of the RCAF for almost as long as the Royal Canadian Air Force has been flying," said Ryan DeBrusk, Vice-President of Sales and Marketing for DHC. "We have

been producing aircraft in Canada for the RCAF since 1928, including the DHC-3 Otter and DHC-5 Buffalo which were featured on the commemorative two-dollar coin celebrating the 100th anniversary of the Air Force. Today, the RCAF continues to fly DHC-6 Twin Otters, and we couldn't be more pleased that the Dash 8-400 will be used by the FAcT program to train the aircrews of tomorrow." "The SkyAlyne team is excited to bring the Dash 8-400 aircraft into the FAcT program to support ACSO and AES Op Aircrew training," commented SkyAlyne's senior executive, Kevin Lemke. "The aircraft is a proven Canadian platform that is ideally suited to support SkyAlyne's advanced training operations for RCAF Aircrew."

**EMBRAER** – 14 January 2025 – Embraer (NYSE: ERJ/B3: EMBR3) announced that the Uruguayan Air Force (FAU) and the Uruguayan Ministry of National Defence (MDN) have converted options for five A-29 Super Tucano aircraft into firm orders. The agreement is part of a commitment signed in August 2024, when the FAU has announced a firm order for one aircraft plus the options that have now been converted. The agreement also includes mission equipment, integrated logistics services and a flight simulator. The contract is part of a fleet renew program to expand FAU's operational capacity. With Uruguay and the recent acquisition of the first A-29 in NATO configuration (A-29N) by Portugal, the A-29 Super Tucano reaches 20 operators worldwide, boasting over 290 orders. The number of air forces operating the A-29 Super Tucano steadily expands due to its unmatched combination of features, making it the most cost-effective, accessible, and versatile choice. For Air Forces seeking a proven, comprehensive, efficient, reliable, and cost-effective solution on a single platform, coupled with great operational flexibility, the A-29 Super Tucano offers a wide range of missions such as close air support, air patrol, special operations, air interdiction, JTAC, forward air controller (FAC), air and tactical coordinator (TAC), Armed ISR, border surveillance, reconnaissance, air escort, basic, operational and advanced training, transition to air superiority fighters, JTAC/LIFT and FAC training.

**EUROFIGHTER** - Eurofighter's award-winning YouTube Series, The Fighter Show, started its third season by joining two dedicated military jet photographers as they searched for the perfect snap of the Typhoon jet. The episode delves into the world of plane spotters as show host, Flo Taitsch, battled the terrain and chilly conditions to capture the Typhoon's raw power close-up. Flo joined two of the UK's most experienced fighter jet photographers in their quest to catch a glimpse and photograph the Typhoon, scaling the Lake District for the perfect vantage point. Nathan Daws, a teacher from Blackpool, and Mark Wright, a photographer at BAE Systems, have been hunting combat aircraft for more than 20 years and invited The Fighter Show to join them on their quest. The episode documents their trio's early rise and the ascent up Wasdale Head and includes some unseen footage of the Eurofighter Typhoon and live reaction to the low-level flying. Nathan said: "It was the best Typhoon pass I have seen in 20 years – the footage we captured is incredible. Seeing the jet in all its glory and the sound it made as it approached is something I will never forget." Talking about the episode, Flo said: "In this episode, we wanted to step into the shoes of dedicated Eurofighter Typhoon fans and show a different side of the aviation industry. It was fascinating to see what lengths plane spotters will go to, to see the Eurofighter Typhoon in action. "It took some hard work and a lot of optimism, but we managed to capture some of the best footage that The Fighter Show – and YouTube – has ever seen. You have to see it to believe it!" Since its launch in 2023, The Fighter Show has surpassed 2 million views on YouTube, with viewers of the series enjoying unique access to the world of aviation and defence. The episode – Catch me if you can – Photohunting Eurofighter Typhoon – can be viewed on Eurofighter's YouTube channel.

**LEONARDO** - 26 January 2025 - In the framework of bilateral meetings between Italy and the Kingdom of Saudi Arabia, the Ministry of Investment (MISA) of the Kingdom of Saudi Arabia, the General Authority for Military Industries (GAMI) of the Kingdom and Leonardo announced the signing of a Memorandum of Understanding (MoU) to discuss, develop and evaluate a range of investment and collaboration opportunities further expanding the collaboration in the

aerospace and defence sector. This latest agreement leverages the MoU signed and announced in early 2024 which considered and explored multiple areas of collaboration to include space industry, airframe MRO (Maintenance, Repair and Overhaul), localisation of electronic warfare systems and radars and assembly of helicopters, a focus on Combat Air and Cross-Domain Integration fields, industrialisation processes and human capital development, national supply chain in the Kingdom of Saudi Arabia and the country's role for Leonardo in the region as well as the global value chain. Following the excellent results achieved implementing the agreement signed in 2024, the MoU, now signed, paves the path for a further expansion of the industrial collaboration in the Combat Air and helicopter fields. Over decades, Leonardo has been supplying to the Kingdom platforms, systems, technologies and services including passenger transport, energy support and rescue rotorcraft, electronic systems and sensors, maritime defence and cyber capabilities as well as providing a key contribution in the air defence domain, among others. This latest agreement represents the most recent step of Leonardo to reinforce its activities in the Kingdom, where the company has a dedicated Headquarters. Collaborating with local technological partners, research establishments and end-users, Leonardo will be able to generate sustained development and production in the country. The MoU will significantly contribute to the objectives of the Kingdom's Vision 2030 aimed at the implementation of unprecedented reforms in the public sector, diversifying the economy, empowering citizens and businesses to reach their full potential and creating innovative growth opportunities.

**LOCKHEED MARTIN** – 16 January 2025 – Lockheed Martin [NYSE: LMT] recently approved the use of synthetic aviation turbine fuels (SATF) in the F-35 Lightning II. The new fuel sources will improve readiness by reducing reliance on the extended supply chain. “Lockheed Martin is committed to ensuring the F-35 is always ready for any customer mission,” said Chauncey McIntosh, vice president and general manager of the F-35 program at Lockheed Martin. “Adding new fuel sources helps make this happen by diversifying the supply chain while maintaining operational excellence. As the cornerstone of the joint fleet, the F-35 will continue to lead the U.S. and allied air dominance mission for decades to come.” The approval allows F-35s to operate with synthetic blends at currently approved limits of up to 50 percent, depending on the type of raw materials and production pathway, combined with conventional jet fuel. Lockheed Martin completed comprehensive technical and strategic analysis to ensure SATF meets the strict performance and reliability standards required for the F-35's complex, high-demand missions. The integration of SATF supports the Department of Defence's objectives for energy substitution and diversification while enhancing energy resilience and operational flexibility. SATFs are derived from various raw materials, including fossil-based sources such as coal and natural gas, as well as renewable or sustainable sources like waste oils, agricultural residues and other non-fossil-based sources. More than 1,100 F-35s are currently operational around the globe, and the fleet has surpassed 971,700 flight hours. F-35s operate from 33 bases worldwide, including 10 nations operating on home soil. As adversaries advance and legacy aircraft age, the F-35 is critical to maintaining air dominance for decades to come.

\*\*\*\*\* 16 January 2025 – Lockheed Martin delivered 10 S-70i™ Black Hawk® helicopters in 2024 to the Philippine Department of National Defence (DND), as part of a contract for 32 Sikorsky Black Hawk helicopters under the DND's Additional Utility Helicopters Acquisition Project. The S-70 Black Hawk and the UH-60M Black Hawk share the same rugged, reliable, multi-mission capabilities. “When deliveries are completed, the Philippines will have the largest fleet of S-70i Black Hawks in the world, growing the global fleet of Hawks which supports interoperability and commonality and is a key deterrence and security advantage in the Indo-Pacific.” Signed in 2022, the current contract states that the Philippine Air Force will take delivery of 32 aircraft from Lockheed Martin subsidiary PZL Mielec. This will expand the PAF's current fleet of 15 S-70i Black Hawk helicopters to 47, enhancing their operational capacity. The first five aircraft under this contract were delivered in June 2024; and another five were delivered in December 2024.

The remaining aircraft will be delivered over the next two years. Lockheed Martin continues to bolster its presence in the Philippines by growing operations, partnering with local industry and establishing an in-country office in Manila.

\*\*\*\*\* 22 January 2025 – Lockheed Martin (NYSE: LMT) has received a \$270 million contract from the U.S. Air Force to integrate a system of next-generation infrared defensive sensors on the F-22 Raptor. The F-22 will soon feature a newly developed, distributed set of embedded TacIRST sensors developed by Lockheed Martin to enhance aircraft survivability and lethality, known as the Infrared Defensive System (IRDS). In addition to managing integration of IRDS on the F-22, the company will also support integration on other platforms.

\*\*\*\*\* 29 January 2025 – Sikorsky, a Lockheed Martin company (NYSE: LMT), started its first-ever ground runs on a UH-60M Black Hawk® helicopter equipped with two GE Aerospace T901 Improved Turbine Engines (ITE). During this test, the T901 engine demonstrated its capabilities through a series of rigorous procedures. The initial light off and ground runs were executed by a combined U.S. Army and industry test team and operated by Army and Sikorsky pilots. “Soldiers will rely on Black Hawk helicopters well into the future, and upgrades to the aircraft today will pay dividends for decades, enabling new missions such as deploying and managing launched effects,” said Hamid Salim, vice president of Army and Air Force Systems at Sikorsky. “A modernized Black Hawk fleet will create new operational opportunities for the Army by extending the capabilities of a proven, fielded fleet to travel farther on less fuel and with more troops and cargo.” First flight of the ITE-equipped Black Hawk is anticipated this year. The ground runs on the T901 ITE engines verified system functionality, engine health and test setup for an efficient testing process. The test demonstrated the T901’s start-to-fly progression, including idle and fly modes, with the rotor brake disengaged, marking a significant step toward the program’s goal of delivering a more powerful and efficient engine for the next-generation Black Hawk. The start-to-fly progression tests the functionality of the entire system, from the engine start sequence to the engagement of the main rotor to enable lift-off. The test team verifies that all critical systems, including fuel, electrical, hydraulic, and flight control systems, are functioning as expected. The successful ground test set the stage for more advanced testing, such as hover and forward flight tests. The T901 engine will increase the Black Hawk’s power by 50%, while also improving fuel efficiency and is a critical component of the roadmap to a modernized Black Hawk – a key part of Lockheed Martin’s 21st Century Security® vision. Sikorsky H-60M modernization efforts continue to be primarily focused on ITE, as well as Modular Open Systems Approach/digital backbone and Launched Effects. Digital innovations, such as a new sustainment digital twin, improve safety and mission readiness while reducing costly downtime and unscheduled maintenance.

\*\*\*\*\* 31 January 2025 - Lockheed Martin (NYSE: LMT) announced the delivery of the first F-16 Block 70 jet to Bulgaria, marking a major step forward in the country's efforts to modernize its air force. The delivery was celebrated in a ceremony in Greenville, South Carolina, attended by Bulgaria's Minister of Defence, Atanas Zapryanov, alongside American and Bulgarian leaders. F-16s are built by the Lockheed Martin team in Greenville. Bulgaria has ordered 16 total aircraft. "The F-16 will help the Bulgarian Air Force stay ahead of threats in the region and play a key role in the allied peacekeeping mission in Europe and around the world," said Mike Shoemaker, vice president and general manager – Integrated Fighter Group. "The F-16 has proven its air dominance time and again, and the Block 70 version will give the Bulgarian Air Force a highly capable, combat-proven aircraft." Lockheed Martin has a backlog of 117 F-16 Block 70/72 jets to be produced in Greenville, with 23 already delivered for international partners. The F-16 program supports more than 46,000 American jobs, making it a vital part of the country's industrial base. **NASA** – Press release update 28 January 2025 - NASA completed the first maximum afterburner engine run test on its X-59 quiet supersonic research aircraft on 12 December 2024. The ground test, conducted at Lockheed Martin’s Skunk Works facility in Palmdale, California, marks a significant milestone as the X-59 team progresses toward flight. An afterburner is a component

of some jet engines that generates additional thrust. Running the engine, an F414-GE-100, with afterburner will allow the X-59 to meet its supersonic speed requirements. The test demonstrated the engine's ability to operate within temperature limits and with adequate airflow for flight. It also showed the engine's ability to operate in sync with the aircraft's other subsystems. The X-59 is the centrepiece of NASA's Quesst mission, which seeks to solve one of the major barriers to supersonic flight over land by making sonic booms quieter. The X-59's first flight is expected to occur in 2025.

**TEXTRON AVIATION** – 23 January 2025 Textron Aviation's 2025 Flight Operations Safety Standdown event brought together nearly 300 employees and industry partners in January to reaffirm the company's unwavering commitment to a robust safety culture and continuous improvement. The annual Standdown is a day for teams across the company to learn, connect and focus on continuous improvement. Textron Aviation's flight departments, Quality and Air Safety teams, as well as the FAA and other industry groups all participated. "Nothing is more important than our team's safety – no mission is so important that it has to go," said Ron Draper, president and CEO. "It's critically important that we focus on safety and preventable mishaps." Cumulatively, Textron Aviation's flight departments totalled more than 17,000 flight hours in 2024. If Textron Aviation was a charter or fractional operator, the company would typically rank as one of the top 10 largest operators in North America based on flight hours. The day's agenda covered several safety-related topics, including Citation Jet Pilots (CJP) Safe to Land initiative, Pilot mental health, Risk management begins and ends with culture, Importance of debriefing successes, not just failures. Additionally, the event focused on individual accountability, character, energy and service as the foundation for a team's success. The group was encouraged to continue being transparent in their reporting to ensure that the company's positive safety attitudes and practices are maintained. Trust, it was noted, is foundational to all of this. Russ Meyer, chairman emeritus, Cessna Aircraft Company, spoke on the company's long history of successfully designing innovative and industry-leading products, reiterating that safety in the designs and operation of our products has always been one of our highest priorities.

\*\*\*\*\* 27 January 2025 announced the first international sale of seven of its Beechcraft King Air 260 military multi-engine training aircraft. SkyAlyne and KF Aero selected the King Air 260 in support of the Future Aircrew Training (FAcT) program to prepare mission ready pilots for the Royal Canadian Air Force (RCAF). The FAcT program was awarded to SkyAlyne, a joint venture between CAE and KF Aerospace. King Air 260 deliveries for the FAcT program are expected to begin in the first half of 2028. The versatile and reliable Beechcraft King Air 260 will replace the fleet of Beechcraft King Air C-90B aircraft that has proudly served the RCAF for decades. The King Air 260 training aircraft will be delivered in a fully compliant, FAcT mission-ready configuration from Textron Aviation's King Air production line in Wichita, Kansas. FAcT specific capabilities include factory options for a Night Vision Goggle (NVG) compatible cockpit, TACAN (Air-to-Air), Angle of Attack (AOA), V/UHF radio, digital audio system, engine trend monitoring, condition-based maintenance plus, observer/jump seat, passenger mission seats and full-face oxygen masks. FAcT is a 25-year contract between the Government of Canada and SkyAlyne comprising a comprehensive Pilot and Aircrew training program that provides aircraft, simulators, civilian instructors, and classroom training systems, as well as other essential services.

\*\*\*\*\* 28 January 2025 – Textron Aviation Defence LLC, a Textron Inc. (NYSE:TXT) company, announced in coordination with the Kanematsu Group that the Beechcraft T-6 Texan II Integrated Training System (ITS) has been chosen to modernize pilot training for the Japan Air Self-Defence Force (JASDF). Japan will join 14 other nations that have selected the T-6 Texan II, adding to a fleet of more than 1,000 T-6 aircraft delivered worldwide. The T-6 Texan II was selected after a highly competitive and thorough evaluation of training solutions offered by several bidders. Finalization of the contract is expected during 2025. The JASDF is modernizing

its training program with an integrated solution featuring T-6 Texan II trainer aircraft, a comprehensive Ground Based Training System, training for instructor pilots and aircraft maintainers and long-term logistic and sustainment support. The Beechcraft T-6 Texan II will replace the Fuji/Subaru T-7 aircraft that has been the JASDF's basic trainer for many years.

### **EVTOL AVIATION NEWS**

**AIRBILITY** – 22 January 2025 – Airbility, an advanced air mobility (AAM) company based in South Korea, announced that it has secured 2.5 billion KRW (USD1.7 million) in Pre-Series A funding, bringing its cumulative investment to 3.7 billion KRW (USD2.5 million). The Pre-Series A funding included a new investment from Samho Green Investment and follow-on investments from Base Ventures, Stonebridge Ventures, and Mashup Ventures. “With this funding, Airbility has strengthened its foundation for eVTOL (electric vertical take-off and landing) aircraft commercialization and global market entry,” said the company in a press release. “Particularly notable is the active follow-on participation by initial seed investors, demonstrating strong trust in Airbility’s advanced technological capabilities and market potential. “Airbility plans to use the funds to commercialize its first unmanned eVTOL aircraft, AB-0, for wide-area surveillance and reconnaissance. This 10-foot wingspan eVTOL aircraft flies at 125mph and has more than 2 hours of endurance. Airbility finished prototyping AB-0 and its first flight test last year... The AB-2 is Airbility’s flagship product, a two-seat manned aircraft being developed to meet the MOSAIC rule introduced by the FAA in 2023. The AB-2 is a high-performance, light sports aircraft (LSA) capable of flying 250 miles at 250mph and is targeted for commercialization in 2028. The company was co-founded by a group of experts from the Agency for Defence Development (ADD), Hyundai Motor Company, and LG Electronics in 2023.” Jinmo Lee, Co-CEO of Airbility, stated, “This Pre-Series A funding marks a pivotal step in laying the groundwork for technology commercialization and global market expansion. We aim to create new value in the global aviation market through sustainable mobility solutions.”

**AIRBUS** – 28 January 2025 - Airbus is pausing plans to bring its CityAirbus NextGen eVTOL aircraft to market. Announcing growth in sales of conventional helicopters during 2024, the European aerospace group on Monday said it is deferring plans for a commercial launch following a rethink of both the business case and technology requirements. “We launched this prototype four years ago with the objective to be in position to launch a new program before the end of the decade,” Bruno Even, CEO of Airbus Helicopters explained. "It has been clearly instrumental in advancing our understanding of technologies which are not only relevant for the urban air mobility market but for all our portfolio. At the same time, we see today—and that’s been the result of the strategic review that we performed at the end of 2024—that the conditions to launch a new program are not necessarily there.” Despite applying the brakes to the CityAirbus program, Even said the manufacturer remains firmly committed to innovation. Last year, the CityAirbus NextGen eVTOL made its first flight as did the high-speed compound rotorcraft Racer, which exceeded its 220-knot target speed by flying to 227 knots. Work continues with the three research vehicles, DemonstratorLab, PioneerLab, and DisruptiveLab. “We are convinced that innovation is always the best way to continue to bring value to our customers,” Even commented. Battery Performance is a Barrier - The Airbus engineering team appears to view limitations in available battery technology as a barrier to progress with current eVTOL plans. “The condition to launch a new program, from the technology side...is [first] to be able to perform the mission,” Even stated. “The minimum level of performance and the mission that we see to enter into service...[is] to transport [passengers] for a mission of 80 to 100 kilometres. We clearly see on the battery side the need to continue to improve the performance to reach what we consider the minimum level of performance and mission. It’s really the battery.” Although some flights with the first CityAirbus prototype will still be made this year at the company’s Donauwörth facility in Germany, other program development activity will be suspended. The aerospace group has previously indicated it had ambitions to bring the four-

passenger eVTOL model into commercial service by around 2030. “The urban air mobility economy and launch of a new program depend on many factors—regulation, maturity of the business model, but also maturity of the technology,” Even concluded. “We consider on that perspective, and particularly on some of the key technologies, that some of them need to evolve to be in a position to launch a new program.” Aerospace rival Boeing still retains a stake in the advanced air mobility sector through its ownership of Wisk, which is developing a fully autonomous eVTOL aircraft. Embraer spin-off Eve Air Mobility is also developing a four-passenger eVTOL model. Textron's eAviation division is working on an eVTOL program called Nexus, with a prototype now being built at a facility in Wichita.

**EVE AIR MOBILITY** – 21 January 2025 – Eve Air Mobility ("Eve") (NYSE: EVEX; EVEXW) and JetSetGo, a private aircraft charter and fractional ownership company, headquartered in New Delhi, India, have entered into an agreement to explore and advance the use of Vector, Eve's cutting-edge agnostic Urban ATM (air traffic management) software solution in India. The announcement, which was made during the Bharat Mobility AAM Conference, makes JetSetGo Eve's 14th Vector customer and its second customer in India, as interest in the Eve's Vector agnostic urban air traffic management software solution continues to grow globally. Eve's Urban ATM software solution is a key enabler to the efficient implementation and scalability of urban air mobility (UAM) by providing services for air navigation service providers, urban authorities, fleet operators, vertiport operators, and other UAM stakeholders. The solution includes UAM flight coordination, vertiport automation airside support, airspace flow management and conformance management. As part of the agreement, the two companies will collaborate in several different ways including promoting Urban Air Mobility in India as JetSetGo explores new opportunities in urban air mobility. Unlocking the potential of this new form of transportation includes preparing the air space for travel alongside the production and certification of the actual electric vertical take-off and landing (eVTOL) aircraft.

**NALWA AERO** – Founded by Kuljeet S. Sandhu CEO in India, Nalwa Aero is in the business of designing and manufacturing long-range passenger electric vertical take-off and landing (eVTOL) aircraft for advanced air mobility (AAM). The company's mission is to transform the future of air transportation in India and beyond. The company works with Nelson Salas, the CEO of the Grug Group, and they together are developing NALWA 5X to provide aircraft services as the first eVTOL passenger aircraft in India. The company is seeking investors. MALWA eVTOL is a patent applied, India's first 5-seater electric vertical take-off and landing (eVTOL) aircraft developed by Nalwa Aero (P) Limited in collaboration with leading international aviation companies. It ushers in the future of Advanced Air Mobility (AAM) through its optimal fusion of efficiency, versatility, safety and autonomous capabilities. “Nalwa's tagline, 'Never Let You Down' reflects its unwavering commitment to aircraft safety and boasts advanced propulsion systems, innovative features, and a robust design. Nalwa is designed with World's Compact Dimensions in the five-seater category, slightly larger than an SUV, setting a new standard for space efficiency. The NALWA is a highly promising solution with distinct advantages over comparable aircraft. Its potential uses are diverse, ranging from military operations such as troop transport and surveillance to commercial and civil applications in transportation, delivery services, medical evacuation, tourism, and agriculture. The exceptional capabilities, coupled with its versatility and adaptability, make it a compelling choice for operators seeking a reliable and multifunctional aircraft solution. Nalwa Aero Private Limited (the name comes from Hari Singh Nalwa, commander-in-chief of the 19th Century Sikh Empire) has partnered with companies in the US, Germany, Australia and Spain to support development of the Nalwa 5X.

**NASA** – 23 January 2025 - As air taxis, drones, and other innovative aircraft enter U.S. airspace, systems that communicate an aircraft's location will be critical to ensure air traffic safety. The Federal Aviation Administration (FAA) requires aircraft to communicate their locations to other aircraft and air traffic control in real time using an Automatic Dependent Surveillance-Broadcast (ADS-B) system. NASA is currently evaluating an ADS-B system's ability to prevent

collisions in a simulated urban environment. Using NASA's Pilatus PC-12 aircraft, researchers are investigating how these systems could handle the demands of air taxis flying at low altitudes through cities. When operating in urban areas, one particular challenge for ADS-B systems is consistent signal coverage. Like losing cell-phone signal, air taxis flying through densely populated areas may have trouble maintaining ADS-B signals due to distance or interference. If that happens, those vehicles become less visible to air traffic control and other aircraft in the area, increasing the likelihood of collisions. To simulate the conditions of an urban flight area and better understand signal loss patterns, NASA researchers established a test zone at NASA's Armstrong Flight Research Centre in Edwards, California, on 23-24 September 2024. Flying in the agency's Pilatus PC-12 in a grid pattern over four ADS-B stations, researchers collected data on signal coverage from multiple ground locations and equipment configurations. Researchers were able to pinpoint where signal dropouts occurred from the strategically placed ground stations in connection to the plane's altitude and distance from the stations. This data will inform future placement of additional ground stations to enhance signal boosting coverage. "Like all antennas, those used for ADS-B signal reception do not have a constant pattern," said Brad Snelling, vehicle test team chief engineer for NASA's Air Mobility Pathfinders project. "There are certain areas where the terrain will block ADS-B signals and depending on the type of antenna and location characteristics, there are also flight elevation angles where reception can cause signal dropouts," Snelling said. "This would mean we need to place additional ground stations at multiple locations to boost the signal for future test flights. We can use the test results to help us configure the equipment to reduce signal loss when we conduct future air taxi flight tests." The September flights at NASA Armstrong built upon earlier tests of ADS-B in different environments. In June, researchers at NASA's Glenn Research Centre in Cleveland flew the Pilatus PC-12 and found a consistent ADS-B signal between the aircraft and communications antennas mounted on the roof of the centre's Aerospace Communications Facility. Data from these flights helped researchers plan out the recent tests at NASA Armstrong. In December 2020, test flights performed under NASA's Advanced Air Mobility National Campaign used an OH-58C Kiowa helicopter and ground-based ADS-B stations at NASA Armstrong to collect baseline signal information. NASA's research in ADS-B signals and other communication, navigation, and surveillance systems will help revolutionize U.S. air transportation. Air Mobility Pathfinders researchers will evaluate the data from the three separate flight tests to understand the different signal transmission conditions and equipment needed for air taxis and drones to safely operate in the National Air Space. NASA will use the results of this research to design infrastructure to support future air taxi communication, navigation, and surveillance research and to develop new ADS-B-like concepts for uncrewed aircraft systems.

\*\*\*\*\* 31 January 2025 – NASA is collaborating with the wildfire community to provide tools for some of the most challenging aspects of firefighting – particularly aerial nighttime operations. In the future, agencies could more efficiently use drones, both remotely piloted and fully autonomous, to help fight wildfires. NASA recently tested technologies with teams across the country that will enable aircraft – including small drones and helicopters outfitted with autonomous technology for remote piloting – to monitor and fight wildfires 24 hours a day, even during low-visibility conditions. Current aerial firefighting operations are limited to times when aircraft have clear visibility – otherwise, pilots run the risk of flying into terrain or colliding with other aircraft. NASA-developed airspace management technology will enable drones and remotely piloted aircraft to operate at night, expanding the window of time responders have to aerially suppress fires. "We're aiming to provide new tools – including airspace management technologies – for 24-hour drone operations for wildfire response," said Min Xue, project manager of the Advanced Capabilities for Emergency Response Operations (ACERO) project within NASA's Aeronautics Research Mission Directorate. "This testing will provide valuable data to inform how we mature this technology for eventual use in the field." Over the past year,

ACERO researchers developed a portable airspace management system (PAMS) drone pilots can use to safely send aircraft into wildfire response operations when operating drones from remote control systems or ground control stations. Each PAMS, roughly the size of a carry-on suitcase, is outfitted with a computer for airspace management, a radio for sharing information among PAMS units, and an Automatic Dependent Surveillance-Broadcast receiver for picking up nearby air traffic – all encased in a durable and portable container. NASA software on the PAMS allows drone pilots to avoid airborne collisions while remotely operating aircraft by monitoring and sharing flight plans with other aircraft in the network. The system also provides basic fire location and weather information. A drone equipped with a communication device acts as an airborne communication relay for the ground-based PAMS units, enabling them to communicate with each other without relying on the internet. To test the PAMS units' ability to share and display vital information, NASA researchers placed three units in different locations outside each other's line of sight at a hangar at NASA's Ames Research Centre in California's Silicon Valley. Researchers stationed at each unit entered a flight plan into their system and observed that each unit successfully shared flight plans with the others through a mesh radio network. Next, researchers worked with team members in Virginia to test an aerial communications radio relay capability. Researchers outfitted a long-range vertical take-off and landing aircraft with a camera, computer, a mesh radio, and an Automatic Dependent Surveillance-Broadcast receiver for air traffic information. The team flew the aircraft and two smaller drones at NASA's Langley Research Centre in Hampton, Virginia, purposely operating them outside each other's line of sight. The mesh radio network aboard the larger drone successfully connected with the small drones and multiple radio units on the ground. NASA researchers then tested the PAMS units' ability to coordinate through an aerial communications relay to simulate what it could be like in the field. At Monterey Bay Academy Airport in Watsonville, California, engineers flew a winged drone with vertical take-off and landing capability by Overwatch Aero, establishing a communications relay to three different PAMS units. Next, the team flew two smaller drones nearby. Researchers tested the PAMS units' ability to receive communications from the Overwatch aircraft and share information with other PAMS units. Pilots purposely submitted flight plans that would conflict with each other and intentionally flew the drones outside preapproved flight plans. The PAMS units successfully alerted pilots to conflicting flight plans and operations outside preapproved zones. They also shared aircraft location with each other and displayed weather updates and simulated fire location data. The test demonstrated the potential for using PAM units in wildfire operations. "This testing is a significant step towards improving aerial coordination during a wildfire," Xue said. "These technologies will improve wildfire operations, reduce the impacts of large wildfires, and save more lives," Xue said. This year, the team will perform a flight evaluation to further mature these wildfire technologies. Ultimately, the project aims to transfer this technology to the firefighting community. This work is led by the ACERO project under NASA's Aeronautics Research Mission Directorate and supports the agency's Advanced Air Mobility mission.

**VERTICAL AEROSPACE LTD.** ("Vertical" or the "Company") (NYSE: EVTL; EVTLW), 8 January 2025 – a global aerospace and technology company that is pioneering electric aviation, has taken another significant step in its testing programme by successfully completing its first piloted thrustborne flight manoeuvres. The milestone was achieved after the business received approval from the UK Civil Aviation Authority (CAA) to expand its Permit to Fly, enabling Vertical to progress from piloted thrustborne hover to piloted thrustborne low-speed flight manoeuvres at altitude. The latest flight included roll, yaw and spot turn manoeuvres and was flown by Simon Davies, Vertical's Chief Test Pilot. Completing the initial piloted thrustborne manoeuvres at its Flight Test Centre made Vertical only the second company worldwide to achieve this critical step using a full scale vectored thrust eVTOL aircraft.

\*\*\*\*\* 24 January 2025 - Vertical Aerospace (Vertical) (NYSE: EVTL) Announces the closing of its previously announced underwritten public offering (the "Offering") for total gross proceeds of

\$90 million, before deducting underwriting discounts and commissions and other offering expenses. The amount raised was increased from an initial launch target of \$75 million, reflecting strong investor demand. The \$90 million raise includes over \$60 million from new investors, as well as \$25 million from Mudrick Capital, following the signing of the investment agreement on December 20, 2024 (the “Investment Agreement”). The Investment Agreement, aimed at strengthening Vertical’s balance sheet and accelerating the Company’s Flightpath 2030 strategy, also included the conversion of \$130 million of debt into equity. In the Offering, Vertical sold 15 million units at \$6.00 per unit. Each unit comprises one ordinary share and one-half of one Tranche A warrant and one-half of one Tranche B warrant. The exercise of the warrants would generate additional proceeds of approximately \$101 million. Vertical intends to use the proceeds from this Offering to fund its research and development expenses as Vertical continues to develop the VX4 and its expenditures in the expansion of its testing and certification capacities, as well as for general working capital and other general corporate purposes. Specifically, the Company expects the funds will be used to progress Vertical’s operational targets for 2025 and enable an acceleration of spending in the second half of the year compared to prior plans. This approach supports Vertical’s delivery of its Flightpath 2030 plan, including its target to achieve certification in 2028.

### **AVIATION INCIDENT NEWS**

The **ASN SAFETY DATABASE** recorded 281 minor/major occurrences with 161 fatalities in January 2025. Visit <https://asnc.flightsafety.org/asndb/year/2025/1> for further information on these. Anyone with **accurate** information on any aviation incident can help supply this excellent site with details, see the site for more information on how to do this. I won’t make any speculative comments, far too many online “keyboard investigators” already doing this on social media sites, which in my mind is disrespectful to the families and friends of those involved, and also to the actual trained investigators that face these horrendous incidents with expert knowledge and establish the actual facts of the situation using their expertise and all true findings, which then appear in the final reports upon conclusion of the investigation, which in most cases are available online on their official sites. I also will not attempt to cover all of the aircraft incidents here, with the exception of those I receive through **official media releases** through my communication links. Also in this section, I cover other situations affecting aviation, again through official sources.

\*\*\*\*\* Press Release: **F-35 aircraft crash update** - Published 29 January 2025 by 354th Fighter Wing Public Affairs **EIELSON AIR FORCE BASE**, Alaska -- An F-35A Lightning II aircraft crash occurred on Eielson Air Force Base, Alaska, at 12:49pm 28 January 2025. The aircraft was preparing to land during a training flight when an in-flight emergency occurred. The pilot successfully ejected prior to the crash in accordance with emergency procedures. The pilot was transported to Bassett Army Hospital in Fairbanks for further evaluation and has been released. Emergency response personnel secured the site. “We are grateful that the pilot is safe. Our team’s professional and expeditious response to the crash was instrumental in mitigating risk to personnel,” said Col. Paul Townsend, 354th Fighter Wing commander. “We appreciate all of the support we are receiving and remain committed to supporting U.S. Air Force investigation efforts.” Local traffic was advised not to stop on Richardson Highway adjacent to Eielson AFB as this posed a safety risk and may impede recovery efforts. Additionally, Federal Law prohibits photography along this stretch of highway per USC 18 section 795. Crash recovery operations are currently underway to support the Accident Investigation Board and remediation efforts.

\*\*\*\*\* 30 January 2025 – All flights from a major European airport were suspended following a so-called 'glitch' which caused huge technical issues. At the time, Brussels Airport confirmed that there was "no air traffic" in the entire country. A statement read: "Due to a technical problem at air traffic control, no air traffic is currently possible in Belgium. We have no idea yet how long this will last. Further updates will follow as soon as more information is available." A

worker at Brussels Airport said that it became clear at about 3pm local time that the air traffic control system used to manage Belgian airspace was "not functioning properly." The spokesperson also said all planes, helicopters and other aircraft operating within the airspace controlled by Skeyes at the time of the glitch were rerouted to neighbouring countries. In emergencies, they have back-up systems, which aid pilots in these situations.

**ONE FINAL WORD** on the two major incidents in America at the end of January, I'm sure I speak on behalf of all the LAASI team when I say that we all send our condolences to the families, friends and associates of those lost in these tragic incidents. Please also spare a thought for all of the emergency services that responded to these locations, as they do in a professional manner to all aviation, and other major, incidents, no matter where in the world, and are often the first professionals to see the aftermath of them. Please do not spread misinformation about any major incidents, LAASI Aviation Ltd prides itself on reporting facts. Thank you.